



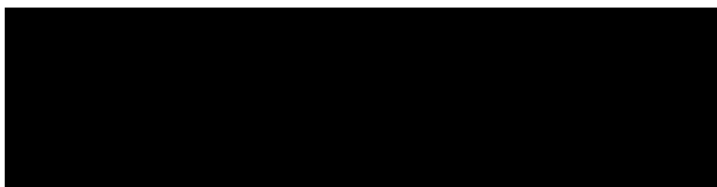
# **Land at Stakers Farm, Yapton**

Ground Investigation – Interpretative Report  
A112666

Dandara Ltd

28 May 2019

Prepared on behalf of WYG Group Limited.



# Land at Stakers Farm, Yapton

## Ground Investigation – Interpretative Report



### Document control

|              |                                                                                                                                                               |
|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Document:    | Land at Stakers Farm, Yapton – Ground Investigation Interpretative Report                                                                                     |
| Project:     | Land at Stakers Farm, Yapton                                                                                                                                  |
| Client:      | Dandara Ltd                                                                                                                                                   |
| Job Number:  | A112666                                                                                                                                                       |
| File Origin: | \\CARDIFF31\dataold\Environmental\projects\A112666 - Land at Stakers Fm, Yapton\Report\Working & For Internal Review\A112666 Stakers Farm - Yapton FINAL.docx |

|                                                                           |                                                                                |                                                        |  |
|---------------------------------------------------------------------------|--------------------------------------------------------------------------------|--------------------------------------------------------|--|
| Revision:                                                                 | Draft                                                                          |                                                        |  |
| Date:                                                                     | 5 <sup>th</sup> April 2019                                                     |                                                        |  |
| Prepared by:<br>Charlotte Main<br><b>Geo Environmental<br/>Consultant</b> | Checked by:<br>Caroline Anderson<br><b>Principal Geotechnical<br/>Engineer</b> | Approved By:<br>Ian Viney<br><b>Associate Director</b> |  |
| Description of revision:<br>Draft for Client Review                       |                                                                                |                                                        |  |

|                                                                           |             |                                                                                |                                                        |
|---------------------------------------------------------------------------|-------------|--------------------------------------------------------------------------------|--------------------------------------------------------|
| Revision:                                                                 | Final       |                                                                                |                                                        |
| Date:                                                                     | 28 May 2019 |                                                                                |                                                        |
| Prepared by:<br>Charlotte Main<br><b>Geo Environmental<br/>Consultant</b> |             | Checked by:<br>Caroline Anderson<br><b>Principal Geotechnical<br/>Engineer</b> | Approved By:<br>Ian Viney<br><b>Associate Director</b> |
| Description of revision:<br>Final                                         |             |                                                                                |                                                        |



# Land at Stakers Farm, Yapton

## Ground Investigation – Interpretative Report



### Contents

|        |                                                          |   |
|--------|----------------------------------------------------------|---|
| 1.     | Introduction.....                                        | 1 |
| 1.1    | Instruction .....                                        | 1 |
| 1.2    | Proposed Development.....                                | 1 |
| 1.3    | Brief .....                                              | 1 |
| 1.4    | Report Scope .....                                       | 2 |
| 1.5    | Limitations .....                                        | 2 |
| 2.     | Site Information & Environmental Setting.....            | 3 |
| 2.1    | Location .....                                           | 3 |
| 2.2    | Site description and Current Use .....                   | 3 |
| 2.3    | Historical Development .....                             | 3 |
| 2.3.1  | Site Development .....                                   | 3 |
| 2.3.2  | Off-site Development .....                               | 3 |
| 2.4    | Anticipated Geology.....                                 | 4 |
| 2.4.1  | Made Ground.....                                         | 4 |
| 2.4.2  | Superficial Deposits.....                                | 4 |
| 2.4.3  | Solid Geology .....                                      | 4 |
| 2.5    | Mining and Mineral Extraction .....                      | 4 |
| 2.6    | Ground Stability Hazards.....                            | 5 |
| 2.7    | Hydrogeology.....                                        | 5 |
| 2.7.1  | Aquifer Classification .....                             | 5 |
| 2.7.2  | Groundwater Abstractions .....                           | 5 |
| 2.7.3  | Groundwater Discharges .....                             | 6 |
| 2.8    | Hydrology .....                                          | 6 |
| 2.8.1  | Surface Water Abstractions .....                         | 6 |
| 2.8.2  | Surface Water Discharges .....                           | 6 |
| 2.8.3  | Flooding .....                                           | 7 |
| 2.9    | Pollution Incidents.....                                 | 7 |
| 2.10   | Waste Treatment and Disposal.....                        | 7 |
| 2.10.1 | Landfill Sites.....                                      | 7 |
| 2.10.2 | Waste Management and Transfer Facilities.....            | 8 |
| 2.10.3 | Local Authority Pollution Prevention and Control .....   | 8 |
| 2.10.4 | Integrated Pollution Prevention and Control (IPPC) ..... | 8 |
| 2.10.5 | Control of Major Accident Hazards (COMAH) Reports .....  | 8 |
| 2.10.6 | Potentially Infilled Land .....                          | 8 |
| 2.11   | Sensitive Land Use .....                                 | 8 |

# Land at Stakers Farm, Yapton

## Ground Investigation – Interpretative Report



|       |                                                             |    |
|-------|-------------------------------------------------------------|----|
| 2.12  | Ecology.....                                                | 8  |
| 2.13  | Unexploded Ordnances (UXO).....                             | 8  |
| 2.14  | Radon9                                                      |    |
| 2.15  | Previous Investigations.....                                | 9  |
| 3.    | Site Investigation .....                                    | 10 |
| 3.1   | Scope of Investigation Works.....                           | 10 |
| 3.2   | Gas and Groundwater Monitoring .....                        | 10 |
| 3.3   | Laboratory Analysis .....                                   | 11 |
| 3.3.1 | Geotechnical Laboratory Testing.....                        | 11 |
| 3.3.2 | Environmental Laboratory Testing.....                       | 11 |
| 4.    | Ground Investigation Findings .....                         | 13 |
| 4.1   | Ground Conditions.....                                      | 13 |
| 4.2   | Groundwater.....                                            | 14 |
| 4.3   | Ground Gas Observations .....                               | 14 |
| 4.4   | In Situ Testing .....                                       | 15 |
| 4.4.1 | Standard Penetration Testing .....                          | 15 |
| 5.    | Geotechnical Assessment.....                                | 16 |
| 5.1   | Soil and Rock Properties .....                              | 16 |
| 5.1.1 | Topsoil.....                                                | 16 |
| 5.1.2 | Superficial Deposits (River Terrace Deposits) – Fine.....   | 16 |
| 5.1.3 | Superficial Deposits (River Terrace Deposits) – Coarse..... | 17 |
| 5.1.1 | White Chalk.....                                            | 18 |
| 6.    | Geotechnical Design Considerations.....                     | 19 |
| 6.1   | Introduction.....                                           | 19 |
| 6.2   | Shallow Foundations.....                                    | 19 |
| 6.3   | Floor Slabs.....                                            | 20 |
| 6.4   | Chemical Attack on Buried Concrete .....                    | 20 |
| 6.5   | Pavements.....                                              | 20 |
| 6.6   | Temporary Works.....                                        | 21 |
| 6.7   | Drainage.....                                               | 21 |
| 6.8   | Dissolution Features .....                                  | 22 |
| 7.    | Conceptual Site Model .....                                 | 23 |
| 8.    | Ground Contamination Assessment – Human Health .....        | 25 |
| 8.1   | Methodology and Relevant Assessment Criteria.....           | 25 |

# Land at Stakers Farm, Yapton

## Ground Investigation – Interpretative Report



|        |                                                           |    |
|--------|-----------------------------------------------------------|----|
| 8.2    | Assessment Criteria .....                                 | 25 |
| 8.2.1  | Soils.....                                                | 25 |
| 8.3    | Characterisation and Assessment .....                     | 27 |
| 8.3.1  | Soils.....                                                | 27 |
| 8.3.2  | Asbestos Screening .....                                  | 27 |
| 9.     | Generic Quantitative Assessment – Controlled Waters ..... | 28 |
| 9.1    | Methodology .....                                         | 28 |
| 9.2    | Water Quality Standards .....                             | 28 |
| 9.3    | Assessment of Soil-Leachate Potential .....               | 28 |
| 9.4    | Assessment of Groundwater.....                            | 29 |
| 10.    | Generic Quantitative Assessment – Ground Gas Risks.....   | 30 |
| 10.1   | Background .....                                          | 30 |
| 10.2   | Assessment Criteria .....                                 | 31 |
| 10.3   | Characterisation .....                                    | 31 |
| 10.4   | Gas Assessment .....                                      | 32 |
| 11.    | Qualitative Risk Assessment .....                         | 33 |
| 11.1   | Introduction.....                                         | 33 |
| 12.    | Conclusions and Recommendations.....                      | 36 |
| 12.1   | Ground Contamination Assessment .....                     | 36 |
| 12.1.1 | Human Health .....                                        | 36 |
| 12.1.2 | Controlled Waters .....                                   | 36 |
| 12.1.3 | Ground Gas .....                                          | 36 |
| 12.2   | Geotechnical Assessment.....                              | 36 |
| 13.    | Notes .....                                               | 37 |
|        | Abbreviations .....                                       | 39 |
|        | Figures .....                                             | 40 |
|        | Appendices .....                                          | 41 |

### Figures

Figure 1 – Site Location Plan

Figure 2 – Exploratory Layout Plan

# Land at Stakers Farm, Yapton

## Ground Investigation – Interpretative Report



### **Appendices**

Appendix A - Report Conditions

Appendix B - Exploratory Hole Logs & Photographic Plates

Appendix C - Soakaway Test Results

Appendix D - CBR Test Results

Appendix E - Geotechnical Laboratory Testing Results

Appendix F - Environmental Laboratory Testing Results

Appendix G - Groundwater and Gas Monitoring Records

Appendix H - Envirocheck Report (January 2019)

Appendix I - CIRIA C552 Qualitative Risk Assessment Matrix

# Land at Stakers Farm, Yapton

## Ground Investigation – Interpretative Report



### Executive Summary

#### Introduction

The site forms undeveloped farmland part of Stakers Farm, which is proposed to be developed. Two planning consents are in place for the development of 108No. dwellings, consisting of 2No. planning consents (38 and 70 units respectively), with two areas of public open space subject to discharge of a number of conditions under reserved matters. To address the planning application conditions a geotechnical and ground contamination desk top study with a subsequent ground investigation was proposed.

This report presents the factual desk top study, ground investigation findings and subsequent interpretation and an environmental and geotechnical assessment.

#### Site Location and Status

The site is located off North End Road in Yapton, approximately 4.7 km to the southwest of Arundel and occupies an area of approximately 4.6 ha centred on National Grid Reference 497628, 103673. The site is currently undeveloped and occupied by two agricultural fields separated by an electric fence. The electric fence was removed prior to commencement of site works.

#### Historical Site Development

The earliest historical map pertaining to the site is dated 1876-1877 (OS Map - 1:2,500) and shows the site as undeveloped agricultural land with two footpaths mapped in the northern field. There is little change to the site until 1982 (OS Map - 1:2,500) where a building is shown in the south-east of the site as part of Stakers Farm (off-site). There are no further changes of note within the site boundary between 1982 and the recent 2019 OS Map (1:10,000).

#### Anticipated Geology

**Made Ground** - Based on the historical development of the site (Section 2.3) a significant thickness of Made Ground is not anticipated.

**Superficial Deposits** - The British Geological Survey (BGS) online map viewer indicates the site is underlain by River Terrace deposits composed of sands, silts and clays. Historic borehole logs available online indicate superficial deposits were encountered beneath a thin layer (0.30m – 0.50m) of topsoil to depths of between 3.30m and 3.90m bgl. Deposits generally comprised a layer of silty clay underlain by sands and gravels.

**Solid Geology** - The BGS online map viewer indicates the bedrock beneath the site is the Lewes Nodular Chalk Formation, Seaford Chalk Formation, Newhaven Chalk Formation, Culver Chalk Formation and Portsdown Chalk Formation (undifferentiated).

#### Hydrogeology

The Chalk Formations (bedrock) and River Terrace deposits (superficial) underneath the site are classified by the Environment Agency (EA) as a Principal Aquifer and Secondary A Aquifer, respectively. There are 4No. groundwater abstractions within 1km of the site, the closest is located adjacent to the northern site boundary and pertains to agricultural use.

#### Hydrology

No major surface water bodies are located within 500m of the site boundary, the closest appears to be a surface drain or ditch feature located 161m west.

A Flood risk assessment (Version 1.1, June 2017) for the site was prepared by the Civil Engineering Practice (CEP) and notes the site is located within 'Flood Zone 1' and is not at risk of flooding from rivers or the sea from anything less extreme than a 1 in 1000 year flood event. The Envirocheck 2019 report indicates there is the potential for groundwater flooding of property situated below ground level within the site boundary. This is confirmed as a low risk by the CEP 2017 report. The report also indicates there is a low risk of surface water flooding within the site.

#### Ground Investigation

The site investigation was undertaken between the 7<sup>th</sup> and 8<sup>th</sup> March 2019 and included the following:

- Review of above and below-ground infrastructure plans;
- GPR clearance of exploratory hole positions in addition to Cable Avoidance Tool (CAT) and Genny prior to breaking ground;

# Land at Stakers Farm, Yapton

## Ground Investigation – Interpretative Report



- 9No. Machine-excavated trial pits (TP01 to TP04, TP06 to TP10) excavated to a maximum depth of 3.60m bgl (TP09);
- Soakaway Testing in 3No. trial pits (TP03, TP08 and TP09) undertaken in general accordance with BRE365;
- 9No. Windowless sample boreholes (WS01, WS02, WS04 to WS10) hand-excavated to a maximum depth of 1.2mbgl and drilled to a maximum of 6.00m bgl;
- 6No. boreholes were installed with 50mm diameter ground gas / groundwater standpipes with response zones in the base of the superficial River Terrace Deposits into Chalk bedrock;
- Two subsequent soil gas and groundwater monitoring visits;
- CBR testing using a TRL probe in 5No. locations; and
- Collection of soil samples for subsequent chemical and geotechnical analysis.

All exploratory holes were logged and sampled by a suitably qualified and experienced WYG Engineer.

### Encountered Ground Conditions

**Surface Cover** - Topsoil comprising brown slightly gravelly sandy clay with frequent rootlets.

Made Ground was not encountered.

**Superficial Deposits** - River terrace deposits were encountered beneath topsoil and generally comprised firm to stiff orange brown clay with varying sand and gravel content. Gravel is noted to be sub-angular to angular flint. Bands of clayey gravelly fine to coarse sand were encountered in TP01, TP03, TP06, TP07, in thicknesses between 0.20m and 0.80m.

**Bedrock** - highly weathered chalk underlain by structureless chalk generally recovered as silty gravel with occasional flint.

**Groundwater** - During the site investigation groundwater strikes were recorded between 3.80m and 5.20m bgl in chalk. During the return monitoring groundwater was recorded between 3.79m and 4.25m bgl in installations screening chalk bedrock and at 2.55m bgl in boreholes screening the superficial river terrace deposits.

**Ground gas** - Methane was recorded at a maximum of 0.3% v/v in borehole WS09. Carbon dioxide was detected at concentrations between 1.9% v/v (WS5) and 3.7% v/v (WS01). Oxygen was measured at its lowest concentration (15.6.0% v/v) in WS01. Flow was measured at a maximum of 0.2l/hr.

### Geotechnical Risk Assessment

The River Terrace Deposits were generally identified as a fine grained (cohesive) soil comprising soft to firm, orangish brown gravelly sandy clay. The characteristic value of undrained shear strength derived for the cohesive River Terrace Deposits is 25kN/m<sup>2</sup>. Coarse grained (granular) layers were encountered at depth within the River Terrace Deposits and were found to be variable in composition; typically sand with variable quantities of clay, silt, gravel and cobbles. No easily discernible trend in depth and thickness of the coarse grained soil across the site. Chalk was encountered at depths ranging between 2.6m and 4.9m bgl and generally comprised structureless Grade Dm chalk.

### Conceptual Site Model

Information from the recently completed phase of fieldwork has been used to refine the Conceptual Site Model (CSM) and forms the basis of subsequent phases of risk assessment.

The following **sources** of potential contamination were identified:

- Agricultural use of the site (past and current)
- On-site building (unknown use)
- Asbestos
- Off-site farm (Unknown agricultural practices and associated fuel storage, buildings to the east of the site, agricultural land north, west and south)

**Human Health Receptors:** Current site workers; Public Open Space users; Future residents; Future site workers including those in excavations; Off-site residents and workers.

**Controlled Waters Receptors:** Principal Bedrock Aquifer; Secondary A Superficial Aquifer

**Human Health Pathways:** Direct dermal contact or ingestion of soils; Inhalation of dust / fibres; Migration and accumulation of gases

# Land at Stakers Farm, Yapton

## Ground Investigation – Interpretative Report



**Controlled Waters Pathways:** Leaching and lateral migration of mobile contamination.

### Generic Quantitative Risk Assessment – Human Health

Soils were screened against residential (with plant uptake) generic assessment criteria considered to be suitably protective of the current use of the site and future residential redevelopment of the site. The gQRA identified one exceedance of pH in WS05, 0.2m bgl. No further exceedances were identified, and no visual or olfactory evidence of contamination observed during the site investigation.

**Asbestos:** 16No. samples were analysed for the presence of asbestos. Asbestos was not identified in any sample.

### Generic Quantitative Risk Assessment – Controlled Waters

3No. Soil-leachate samples were screened against relevant water quality standards (WQS). The CW-gQRA identified slight exceedances of heavy metals in the topsoil samples taken from WS02 and WS06. No Groundwater samples have been taken to date.

### Generic Quantitative Risk Assessment – Ground Gas

Ground gas monitoring data (2No. rounds) was assessed against the revised Wilon and Card methodology presented in CIRIA 665 and Health and Safety Executive work place exposure limits. Based on this assessment a Characteristic Situation 1 was calculated for all boreholes which represents a very low risk from ground gas.

### Contaminated Land Conclusions and Recommendations

**Human Health:** Following the quantitative risk assessment, the human health pollutant linkages have been evaluated as low to very low risk. Asbestos remains at a Moderate/low risk on the basis of the building on site which has the potential to represent a source of ACMs. A survey of the building should be undertaken prior to demolition. No further works or assessment is recommended at this time. Future contractors working on the development should consider including the potential risk in their risk assessments.

**Controlled Waters:** The assessment has identified a Moderate/ Low risk to the Principal bedrock aquifer and Secondary A superficial Aquifer beneath the site from the off-site farm. Groundwater sampling and a review of the controlled water risk assessment following the analysis results is recommended.

**Ground Gas:** A very low risk has been assessed such that gas protection measures are unlikely to be required, however, this was based on monitoring during high atmospheric pressure on two occasions only and further monitoring is likely to be required during falling atmospheric pressure to confirm this classification..

### Geotechnical Conclusions and Recommendations

Traditional shallow foundations founded within the River Terrace Deposits at a minimum depth of 1.0m bgl may be designed for a net allowable bearing pressure of 60kN/m<sup>2</sup>, which will limit settlements to less than 25mm. Due to the variable nature of the River Terrace Deposits, founding at a deeper level, such as 2m will only result in a marginal increase in the net allowable bearing pressure (70kN/m<sup>2</sup>). It is recommended that additional investigation be undertaken once the layout of the development is known to give increase confidence in the geotechnical parameters for the shallow soils. Ground bearing floor slabs should be possible where placed onto the River Terrace Deposits for load no greater than 8kN/m<sup>2</sup>. However, where housing plots are within the influence of existing or proposed trees, floor slabs will need to be suspended. The Design Sulphate Class for the shallow soils has been determined to be DS1, in accordance BRE Special Digest 1. For the fine-grained, intermediate plasticity River Terrace Deposits (with PI up to 28%) a predicted CBR of 2 to 2.5% is recommended. Whilst the ground investigation did not encounter the presence of dissolution features, their presence cannot be discounted.



## **1. Introduction**

### **1.1 Instruction**

WYG Environment Planning Transport Ltd (WYG) was commissioned by Dandara Ltd, to undertake an intrusive ground investigation to inform a geotechnical and contamination risk assessment at the land at Stakers Farm off North End Road in Yapton hereon referred to as 'the site'.

The location of the site is shown on **Figure 1**.

### **1.2 Proposed Development**

The site forms undeveloped farmland part of Stakers Farm, which is proposed to be developed. Two planning consents are in place for the development of 108No. dwellings with two areas of public open space subject to discharge of a number of conditions under reserved matters. Condition 11 of planning application (Reference Y/44/17/OUT) relates to previous site uses and potential associated contaminants and requires completion of a number of items for the approval of the planning authority. These include:

- A preliminary risk assessment which has identified:
  - All previous uses
  - Potential contaminants associated with those uses
  - A conceptual model of the site indicating sources, pathways and receptors
  - Potentially unacceptable risks arising from contamination at the site.
- A site investigation scheme;
- Risk assessment, remediation options appraisal and remediation strategy;
- A verification plan to demonstrate that remedial works are complete.

### **1.3 Brief**

To address the planning application conditions a geotechnical and ground contamination desk top study with a subsequent ground investigation was proposed. The scope of works is set out in our technical and commercial proposal of 29th January 2019 (Ref: Yapton – 290119).



# Land at Stakers Farm, Yapton

## Ground Investigation – Interpretative Report



### 1.4 Report Scope

This report summarises the work undertaken and includes the following key elements:

- A review of desk-based information pertaining to the site, collated from available online resources and an Envirocheck Report (2019);
- Full factual records of the site works carried out;
- Ground conditions encountered;
- In-situ testing results;
- Geotechnical and environmental laboratory testing results; and
- Interpretation of all in-situ, geotechnical and chemical testing results.

### 1.5 Limitations

This report has been prepared in accordance with the requirements of Dandara Ltd. It is subject to the report conditions contained in Appendix A – **Report Conditions**.

The information contained in this report is intended for the use of the Dandara Ltd. WYG can take no responsibility for the use of this information by any third party or for uses other than that described in this report.



## 2. Site Information & Environmental Setting

### 2.1 Location

The site is located off North End Road in Yapton, approximately 4.7 km to the southwest of Arundel and occupies an area of approximately 4.6 ha centred on National Grid Reference 497628, 103673.

A site location plan is presented in **Figure 1**.

### 2.2 Site description and Current Use

The site is currently undeveloped and occupied by two agricultural fields separated by an electric fence. The electric fence was removed prior to commencement of site works. The northern field is roughly rectangular, and the larger southern field is irregular in shape. The site slopes generally towards the northern and western boundaries with a high point in the south-eastern corner. The site is between 5.80m and 7.00m Above Ordinance Datum (AOD).

Access to the site is afforded via a gateway on the eastern site boundary off North End Road. The site has two stiles at the eastern and western perimeter of the northern field indicating a public right of way exists across the site.

Yapton CE Primary School is located to the east of the site with agricultural land to the north, west and south, and Stakers Farm to the immediate south-east.

The layout of the site is shown on **Figure 2**.

### 2.3 Historical Development

#### 2.3.1 Site Development

The earliest historical map pertaining to the site is dated 1876-1877 (OS Map - 1:2,500) and shows the site as undeveloped agricultural land with two footpaths mapped in the northern field. There is little change to the site until 1938-1939 (OS Map - 1:2,500) when the eastern area of the southern field has been divided into plots. The size and shape of the plots change slightly and by 1982 (OS Map - 1:2,500) a building is shown within the site boundary in the south-east of the site as part of Stakers Farm (off-site). There are no further changes of note within the site boundary between 1982 and the recent 2019 OS Map (1:10,000).

#### 2.3.2 Off-site Development

The earliest map dated 1876-1877 shows the site is located in the town of Yapton. The wider area is largely agricultural and comprises farm buildings with associated agricultural fields, residential buildings and notably a School located on the eastern site boundary of the site and Stakers Farm immediately to the south-east of the site. At this time a number of wells are mapped within 250m of the site, the closest is approximately 80m

# Land at Stakers Farm, Yapton

## Ground Investigation – Interpretative Report



south-west. A smithy is located approximately 250m south-east of the site. Further to the north-west of the site (c. 900m) a flour windmill is mapped which is no longer shown in 1980.

By 1899, a brick yard has been established approximately 450m south-east of the site, this is later mapped as a Brick Works (c. 1913) with an associated brick field and is no longer shown in 1951.

The 1951 OS Map (1: 10,000 scale) shows an embankment labelled as 'Old Canal' approximately 300m south of the site. This was previously mapped as a footpath. The number of buildings in Yapton has increased by this time and larger farms are shown between 500m and 1.5km from the site.

By 1980 Yapton has extended southwards with numerous residential developments, the area remains largely unchanged on the subsequent OS Maps dated 1992 to 2019.

## 2.4 Anticipated Geology

The anticipated general succession of ground conditions as determined from publications by the British Geological Survey (BGS) is summarised below.

### 2.4.1 Made Ground

WYG are not aware of any previous ground investigations undertaken on site. Based on the historical use of the site (Section 2.3) a significant thickness of Made Ground is not anticipated.

### 2.4.2 Superficial Deposits

The BGS online map viewer accessed on 28<sup>th</sup> March 2019 indicates the site is underlain by River Terrace deposits composed of sands, silts and clays. Historic borehole logs available online indicate superficial deposits were encountered beneath a thin layer (0.30m – 0.50m) of topsoil to depths of between 3.30m and 3.90m bgl. Deposits generally comprised a layer of silty clay underlain by sands and gravels.

### 2.4.3 Solid Geology

The BGS online map viewer indicates the bedrock beneath the site is the Lewes Nodular Chalk Formation, Seaford Chalk Formation, Newhaven Chalk Formation, Culver Chalk Formation and Portsdown Chalk Formation. This succession forms the White Chalk Sub Group and is herein referred to as the White Chalk.

## 2.5 Mining and Mineral Extraction

The Envirocheck report (February, 2019) held in Appendix H – **Envirocheck Report (February 2019)**, indicates that there are 3 No. BGS recorded mineral sites within 1km of the site boundary, the closest is 473m south of the site. All records relate to the Burndell Brick Yard and the opencast mining (Unknown Operator) of common clay and shale, operations now ceased.

# Land at Stakers Farm, Yapton

## Ground Investigation – Interpretative Report



The Coal Authority interactive map (available online) indicated the site is not in an area affected by coal mining.

### 2.6 Ground Stability Hazards

The Envirocheck report (February, 2019) identified the following hazards relating to ground stability within the site boundary:

- Collapsible Ground, Running Sand, Shrinking or Swelling Clay – Low Hazard
- Ground Dissolution, Landslide – Very Low Hazard

No hazard was identified related to compressible ground.

### 2.7 Hydrogeology

#### 2.7.1 Aquifer Classification

The Chalk Formations (bedrock) and River Terrace deposits (superficial) underneath the site are classified by the Environment Agency (EA) as a Principal Aquifer and Secondary A Aquifer, respectively. Principal aquifers are described as having high intergranular permeability and therefore provide a high level of water storage and may support water supply and/or river base flow on a strategic scale. Secondary A aquifers are described as having a high groundwater vulnerability. These aquifers are typically characterised by permeable layers capable of supporting supplies at local level rather than on a strategic scale and may provide important base flow to rivers.

The site is not located within a groundwater Source Protection Zone (SPZ) relating to drinking water supply, and there are no source protection zones within 1km of the site.

#### 2.7.2 Groundwater Abstractions

**Table 2.1: Groundwater Abstraction Consents within 1km of the site**

| Operator                | Reference number | Abstraction                                                                                         | Location from site                                 | Issue Date                  |
|-------------------------|------------------|-----------------------------------------------------------------------------------------------------|----------------------------------------------------|-----------------------------|
| Mr A Clay Esq           | 10/41/411007     | Agriculture: Horticultural Watering – water may be abstracted from a single point                   | 17m NE<br>(adjacent to the northern site boundary) | 18 <sup>th</sup> July 1979  |
| Eric Wall Holdings Ltd. | 10/441/542208    | Horticulture and Nurseries: Spray irrigation (direct) – water may be abstracted from a single point | 921 NW                                             | 10 <sup>th</sup> June 2009  |
| Keith Langmead          | 10/41/412007     | General agriculture: Spray                                                                          | 950 E                                              | 31 <sup>st</sup> March 2016 |

# Land at Stakers Farm, Yapton

## Ground Investigation – Interpretative Report



| Operator            | Reference number | Abstraction                                                                                  | Location from site | Issue Date                |
|---------------------|------------------|----------------------------------------------------------------------------------------------|--------------------|---------------------------|
| Ltd.                |                  | irrigation (direct) – water may be abstracted from a single point                            |                    |                           |
| Mr A C Langmead Esq | 10/41/412007     | General agriculture: Spray irrigation (direct) – water may be abstracted from a single point | 950 E              | 30 <sup>th</sup> May 1989 |

### 2.7.3 Groundwater Discharges

There are no groundwater discharges within 1km of the site boundary.

## 2.8 Hydrology

The Envirocheck report (2019) indicates there are several water bodies within 500m of the site including 'West Streams' located 161m west, however, these appear to be field drains and are not major water bodies.

There is no formal drainage system for the site and surface water drainage is expected to infiltrate through the surface of the field into the sub-surface and bedrock aquifers.

### 2.8.1 Surface Water Abstractions

There are no surface water abstractions within 500m of the site boundary. The nearest surface water abstraction is located 607m north-east of the site boundary and relates to the operator Adviserate T/A Southdown Flowers for spray irrigation, no other information is supplied.

### 2.8.2 Surface Water Discharges

There is one surface water discharge consent within 500m of the site boundary. Details are provided in Table 2.2 below.

**Table 2.2: Surface Water Discharge Consents within 500m of the site**

| Operator         | Reference number | Discharge Type                                                 | Receiving Water | Location from site | Issue Date                |
|------------------|------------------|----------------------------------------------------------------|-----------------|--------------------|---------------------------|
| Micham Tyre Mart | P11155           | Sewage Discharges – Final/Treated Effluent – Not Water Company | Soakaway        | 493 N              | 8 <sup>th</sup> July 2003 |

# Land at Stakers Farm, Yapton

## Ground Investigation – Interpretative Report



### 2.8.3 Flooding

A Flood risk assessment (Version 1.1, June 2017) for the site was prepared by the Civil Engineering Practice (CEP) to support the planning application submitted for the aforementioned development. The report notes the site is located within 'Flood Zone 1' and is not at risk of flooding from rivers or the sea from anything less extreme than a 1 in 1000 year flood event.

The report notes the Environment Agency and West Sussex County Council hold no information relating to records of flooding of the site.

The Envirocheck 2019 report indicates there is the potential for groundwater flooding of property situated below ground level within the site boundary. This is confirmed as a low risk by the CEP 2017 report. The report also indicates there is a low risk of surface water flooding within the site.

CEP (2017) note that there is not anticipated to be significant runoff from the site based on the topography. In addition, any water accumulation is likely to be along the north-western site boundary.

### 2.9 Pollution Incidents

The Envirocheck 2019 report indicates there is one pollution incident to controlled waters, located 543m north of the site boundary. The incident was identified as a Category 3 (minor) incident where surcharging sewage was noted to be flooding gardens and running along road. The cause of the incident was 'Water Company STW' dated 7<sup>th</sup> January 1998. No further information is provided.

### 2.10 Waste Treatment and Disposal

#### 2.10.1 Landfill Sites

There is one historical landfill site located within 500m of the site boundary. The site is 233m south-west of the site in Barnham, Sussex dated 31st December 1970. The waste was 'deposited waste included inert waste' no other information is provided, and the licence holder is not supplied.

There are no Local Authority recorded landfill sites within 500m of the site boundary. The closest is located 771m south-east of the site at 'Old Canal, East of Downview Road – Yapton. No further information, including the waste type, is supplied.

There are no registered landfill sites within 500m of the site boundary. The closest is located 790m south-east of the site and is registered to A C Langmead (Ref: 5/AP/79) dated 10th December 1979. Construction and demolition wastes accepted with contaminated rubble and soil prohibited. The licence status is 'lapsed / cancelled'.

# Land at Stakers Farm, Yapton

## Ground Investigation – Interpretative Report



### 2.10.2 Waste Management and Transfer Facilities

There are no active waste management facilities within 500m of the site.

### 2.10.3 Local Authority Pollution Prevention and Control

There are no LPPC licensed facilities located with 500m of the site.

### 2.10.4 Integrated Pollution Prevention and Control (IPPC)

No IPPC licences are located within 500m of the site.

### 2.10.5 Control of Major Accident Hazards (COMAH) Reports

There are no Control of Major Accident Hazards (COMAH) relating to or within 500m of the site.

### 2.10.6 Potentially Infilled Land

There following records of potentially infilled land were identified in the Envirocheck 2019 report:

| Infilled land Type | Use                                                          | Date of mapping | Location from site                                                             |
|--------------------|--------------------------------------------------------------|-----------------|--------------------------------------------------------------------------------|
| Non-water          | Unknown filled ground (pit, quarry etc)                      | 1992            | 418m SE<br>Location of the former<br>Brick works and<br>associated brick field |
| Water              | Unknown filled ground (Pond, marsh, river, stream, dock etc) | 1962            | 171m S                                                                         |

### 2.11 Sensitive Land Use

There are no Sites of Special Scientific Interest (SSSI) located within 500m of the site. Stakers Farmhouse (Reference 1274601) is a grade II listed building (England) located to the east of the site boundary.

The site is located within a Nitrate Vulnerable Zone.

### 2.12 Ecology

There are no designated nature conservation sites within, or immediately adjacent to the site boundary.

### 2.13 Unexploded Ordnances (UXO)

The Zetica website identified the site at low risk from unexploded bombs.

# Land at Stakers Farm, Yapton

## Ground Investigation – Interpretative Report



### 2.14 Radon

The UK maps of radon are available online via Public Health England and indicate the site is in the lowest band of radon potential with less than 1% of homes above the action level. The Envirocheck report (February, 2019) for the site indicates that no radon protective measures are necessary in the construction of new dwellings or extensions.

### 2.15 Previous Investigations

GTA Civils Ltd carried out a SUDS report (report ref 5836/2.3, dated 10th June 2015). WYG understand that Dandara Ltd do not have reliance on the reports outlined above and as such the data is presented for information only.

The assessment identified the following geotechnical conclusions:

- The use of the site may have involved the use of chemical fertilisers, weed killers and other substances.
- 4 no. window sample boreholes were advanced to depths of between 3.0m and 6.0m and were located across the northern half of the site.
- Borehole records indicate topsoil extended to a maximum depth of 0.5m in a single borehole in the north-eastern corner of the site only. Soft to firm light brown silty clay with flint gravel and occasional chalk fragments with occasional bands of medium subangular flint gravel extended below this to the full depth of all boreholes.
- Borehole records also indicate that groundwater was encountered within BH04 at a depth of 4.0m during drilling.
- Subsequent continuous groundwater monitoring indicated the depths to groundwater to vary between 2.5m and 4.8m over an approximately 11 week period were carried out between January and April 2015.
- 4 no. soakaway tests were carried out within the boreholes and the results show variable soakage between  $8 \times 10^{-8}$  m/s (negligible) and  $6 \times 10^{-6}$  m/s (slow).

The report concluded that the results will need to be examined by a drainage engineer to consider whether infiltration drainage is feasible.





### 3. Site Investigation

The intrusive site investigation was undertaken by WYG on the 7<sup>th</sup> and 8<sup>th</sup> March 2019.

#### 3.1 Scope of Investigation Works

The scope of the site investigation included the following:

- Review of above and below-ground infrastructure plans;
- GPR clearance of exploratory hole positions in addition to Cable Avoidance Tool (CAT) and Genny prior to breaking ground;
- 9No. Machine-excavated trial pits (TP01 to TP04, TP06 to TP10) excavated to a maximum depth of 3.60m bgl (TP09);
- Soakaway Testing in 3No. trial pits (TP03, TP08 and TP09) undertaken in general accordance with BRE365;
- 9No. Windowless sample boreholes (WS01, WS02, WS04 to WS10) hand-excavated to a maximum depth of 1.2mbgl and drilled to a maximum of 6.00m bgl;
- 6No. boreholes were installed with 50mm diameter ground gas / groundwater standpipes with response zones in the base of the superficial River Terrace Deposits into Chalk bedrock;
- Two subsequent soil gas and groundwater monitoring visits;
- CBR testing using a TRL probe in 5No. locations; and
- Collection of soil samples for subsequent chemical and geotechnical analysis.

All exploratory holes were logged and sampled by a suitably qualified and experienced WYG Engineer.

The locations of all exploratory holes were surveyed by Intersect Surveys Ltd following the completion of intrusive works and are shown on **Figure 2**.

#### 3.2 Gas and Groundwater Monitoring

The gas and groundwater monitoring of the recently installed WYG 2019 boreholes (WS01, WS04, WS05, WS06, WS09 and WS10) was completed on the 20<sup>th</sup> March 2019 and 12<sup>th</sup> April 2019.

# Land at Stakers Farm, Yapton

## Ground Investigation – Interpretative Report



Monitoring included the measurement of groundwater levels using a dual phase dip meter in all well installations. A gas monitor (GA5000) was used to obtain ground gas and vapour measurements, respectively (CH<sub>4</sub>, CO<sub>2</sub>, O<sub>2</sub>, H<sub>2</sub>S and CO) from all borehole monitoring wells.

Results from monitoring are included in Appendix G – **Groundwater and Gas Monitoring Results**.

### 3.3 Laboratory Analysis

#### 3.3.1 Geotechnical Laboratory Testing

Geotechnical testing was scheduled by WYG and undertaken by GSTL Ltd, an approved supplier in accordance with the requirements of WYG'S quality system and UKAS accredited for a range of geotechnical tests. The test procedures used in each case are given in Table 3.1 below. The results of these analyses are included as Appendix E – **Geotechnical Laboratory Testing Results**.

**Table 3.1 Summary of Geotechnical Testing**

| Test                               | Standard (BS1377:1990) and Accreditation              | No. |
|------------------------------------|-------------------------------------------------------|-----|
| PSD Dry Sieve Method               | BS1377:1990 Part2:9.2                                 | 3   |
| Intact dry density                 | ASTM (non-accredited test)                            | 8   |
| Saturated Moisture Content (Chalk) | ASTM (non-accredited test)                            | 8   |
| Moisture Content                   | BS1377:1990 Part 2:3.2                                | 4   |
| Atterberg Limits                   | BS1377:1990 Part 2:4.3&5.3                            | 4   |
| pH and sulphate                    | BS1377:1990 Part 3 & BRE CP2/79 (non-accredited test) | 4   |

\* 2No geotechnical test results are outstanding and will be reported as an addendum to this report.

#### 3.3.2 Environmental Laboratory Testing

Analytical testing was undertaken by ALS Environmental Laboratories in Deeside, a UKAS and MCERTS accredited laboratory. The testing was scheduled by WYG and is summarised in Table 3.2.

A full set of the chemical analytical results is presented in Appendix F – **Environmental Laboratory Testing Results**.

# Land at Stakers Farm, Yapton

## Ground Investigation – Interpretative Report



**Table 3.2 - Summary of environmental testing**

| Test suite                    | No. |
|-------------------------------|-----|
| <b>Soil Analysis</b>          |     |
| Asbestos Screen               | 16  |
| FOC                           | 16  |
| Free Cyanide                  | 16  |
| pH                            | 16  |
| Heavy Metals                  | 16  |
| Total Phenol                  | 16  |
| EPH (>C10 – C40)              | 8   |
| Speciated TPH                 | 8   |
| PAHs                          | 16  |
| Pesticides and Organics       | 3   |
| <b>Soil Leachate Analysis</b> |     |
| pH                            | 3   |
| Heavy Metals                  | 3   |
| Total Phenol                  | 3   |
| EPH (>C10 – C40)              | 3   |
| PAHs                          | 3   |



## 4. Ground Investigation Findings

### 4.1 Ground Conditions

A summary description of the ground conditions encountered during the 2019 ground investigation is presented below, exploratory hole logs and photographic plates are provided in Appendix B. The exploratory hole location plan is presented as **Figure 2**.

- **Surface Cover:** Topsoil comprising brown slightly gravelly sandy clay with frequent rootlets.
- Made Ground was not encountered.
- **Superficial Deposits:** River Terrace Deposits generally comprised firm to stiff orange brown clay with varying sand and gravel content. Gravel is noted to be sub-angular to angular flint. Bands of clayey gravelly fine to coarse sand were encountered in TP01, TP03, TP06, TP07, in thicknesses between 0.20m and 0.80m.
- **Bedrock:** weathered structureless (Grade Dm) White Chalk generally recovered as silty chalk gravel with occasional flint.

A summary of the depth of each stratum is provided in Table 4.1 below.

**Table 4.1 Summary of Strata Depths for all Exploratory Holes**

| Exploratory Hole | Topsoil (m bgl) | River Terrace Deposits (m bgl) | White Chalk (m bgl) |
|------------------|-----------------|--------------------------------|---------------------|
| TP01             | GL – 0.05       | 0.05 – 3.50*                   | Not Encountered     |
| TP02             | GL – 0.05       | 0.05 – 2.30*                   | Not Encountered     |
| TP03             | GL – 0.05       | 0.05 – 2.30*                   | Not Encountered     |
| TP04             | GL – 0.05       | 0.05 – 3.50*                   | Not Encountered     |
| TP06             | GL – 0.10       | 0.10 – 3.00                    | 3.00 – 3.20*        |
| TP07             | GL – 0.20       | 0.20 – 3.20                    | 3.20 – 3.30*        |
| TP08             | GL – 0.15       | 0.15 – 2.20*                   | Not Encountered     |
| TP09             | GL – 0.10       | 0.10 – 3.20                    | 3.20 – 3.60*        |
| TP10             | GL – 0.10       | 0.10 – 2.90                    | 2.90 – 3.50*        |
| WS01             | GL – 0.40       | 0.40 – 2.90                    | 2.90 – 6.00*        |
| WS02             | GL – 0.30       | 0.30 – 4.00                    | 4.00 – 6.00*        |
| WS04             | GL – 0.30       | 0.30 – 3.60                    | 3.60 – 6.00*        |
| WS05             | GL – 0.30       | 0.30 – 2.90                    | 2.90 – 6.00*        |
| WS06             | GL – 0.45       | 0.45 – 3.80                    | 3.80 – 5.00*        |
| WS07             | GL – 0.35       | 0.35 – 4.90                    | 4.90 – 5.00*        |
| WS08             | GL – 0.50       | 0.50 – 2.60                    | 2.60 – 6.00*        |
| WS09             | GL – 0.40       | 0.40 – 2.60                    | 2.60 – 6.00*        |
| WS10             | GL – 0.40       | 0.40 – 3.60                    | 3.60 – 6.00*        |

# Land at Stakers Farm, Yapton

## Ground Investigation – Interpretative Report



\* Base of stratum not proven

### 4.2 Groundwater

A summary of groundwater observations made during the 2019 ground investigation and follow up monitoring is presented below in Table 4.2 Full details of each monitoring round are provided in Appendix G – **Groundwater and Gas Monitoring Results**.

**Table 4.2 Summary of Groundwater Observations (2019)**

| Exploratory Hole | Screened Strata*    | Depth of Water Strike during Investigation |      |        | Groundwater Level during Monitoring |           |        |
|------------------|---------------------|--------------------------------------------|------|--------|-------------------------------------|-----------|--------|
|                  |                     | mbgl                                       | mAOD | Strata | mbgl                                | mAOD      | Strata |
| WS01             | RTD + Top of Chalk  | No strike                                  |      |        | DRY                                 |           |        |
| WS02             | Not installed       | 5.20                                       | 1.68 | Chalk  | Not installed                       |           |        |
| WS04             | RTD                 | No strike                                  |      |        | DRY                                 |           |        |
| WS05             | Chalk               | 5.00                                       | 1.35 | Chalk  | 3.89-4.25                           | 2.46-2.1  | Chalk  |
| WS06             | RTD                 | 3.80                                       | 1.41 | Chalk  | DRY-2.55                            | DRY-2.66  | RTD    |
| WS08             | Not installed       | 4.00                                       | 2.62 | Chalk  | Not installed                       |           |        |
| WS09             | Base of RTD + Chalk | 4.20                                       | 2.34 | Chalk  | 3.79-4.16                           | 2.75-4.90 | Chalk  |
| WS10             | RTD                 | 4.20                                       | 2.46 | Chalk  | DRY                                 |           |        |

RTD = River Terrace Deposits

### 4.3 Ground Gas Observations

A summary of ground gas readings from the 6No. installed standpipes recorded during the initial monitoring event is presented in Table 4.3 below, with full details presented on the gas monitoring data sheets held in Appendix C – **Soakaway Test Results**.

**Table 4.3: Ground gas monitoring summary**

| Exploratory Hole | Response Zone (mbgl) | Strata Monitored   | % v/v <sup>1</sup>    |                       |                      | ppm <sup>3</sup>       |          |           | Max. Flow <sup>1</sup> (l/hr) |
|------------------|----------------------|--------------------|-----------------------|-----------------------|----------------------|------------------------|----------|-----------|-------------------------------|
|                  |                      |                    | CH <sub>4</sub> (max) | CO <sub>2</sub> (max) | O <sub>2</sub> (min) | H <sub>2</sub> S (max) | CO (max) | PID (max) |                               |
| WS01             | 1.00 – 3.00          | RTD + Top of Chalk | 0.2                   | 3.7                   | 15.6                 | 0                      | 0        | -         | 0.0                           |
| WS04             | 1.00 – 3.00          | RTD                | 0.2                   | 2.3                   | 18.3                 | 0                      | 0        | -         | -0.2                          |
| WS05             | 5.00 – 6.00          | Chalk              | 0.2                   | 1.9                   | 16.2                 | 0                      | 3        | -         | 0.1                           |

# Land at Stakers Farm, Yapton

## Ground Investigation – Interpretative Report



| Exploratory Hole | Response Zone (mbgl) | Strata Monitored    | % v/v <sup>2</sup>    |                       |                      | ppm <sup>3</sup>       |          |           | Max. Flow <sup>1</sup> (l/hr) |
|------------------|----------------------|---------------------|-----------------------|-----------------------|----------------------|------------------------|----------|-----------|-------------------------------|
|                  |                      |                     | CH <sub>4</sub> (max) | CO <sub>2</sub> (max) | O <sub>2</sub> (min) | H <sub>2</sub> S (max) | CO (max) | PID (max) |                               |
| WS06             | 1.00 – 3.00          | RTD                 | 0.2                   | 2.4                   | 17.9                 | 0                      | 2        | -         | 0.0                           |
| WS09             | 2.00 – 6.00          | Base of RTD + Chalk | 0.3                   | 2.8                   | 16.0                 | 0                      | 0        | -         | -0.1                          |
| WS10             | 1.00 – 3.00          | RTD                 | 0.2                   | 2.1                   | 17.1                 | 0                      | 0        | -         | 0.0                           |

Note: <sup>1</sup>Maximum magnitude of flow rate given irrespective of whether it was positive or negative.

<sup>2</sup>Volume by volume

<sup>3</sup>Parts per million

Methane was recorded at a maximum of 0.3% v/v in borehole WS09. Carbon dioxide was detected at concentrations between 1.9% v/v (WS5) and 3.7% v/v (WS01). Oxygen was measured at its lowest concentration (15.6% v/v) in WS01. Flow was measured at a maximum of 0.2l/hr. Atmospheric conditions during the two monitoring visits were recorded to be 1034 (rising) and 1027 (rising).

## 4.4 In Situ Testing

### 4.4.1 Standard Penetration Testing

Standard Penetration Tests (SPTs) were undertaken in all boreholes. The results are presented on the exploratory logs included in Appendix B.



## 5. Geotechnical Assessment

### 5.1 Soil and Rock Properties

Encountered ground conditions compared well to those described in published literature and previous investigation and comprised turf and topsoil over superficial deposits (River Terrace Deposits) overlying the structureless White Chalk.

Groundwater was encountered at depths ranging between 3.80m and 5.20m bgl.

Detailed description of the soils encountered are presented on the Engineering Logs (Appendix B).

To aid in the selection of characteristic geotechnical parameters the ranges of the various soil and rock properties measured are discussed in the following sections. It is noted that appropriate design values will depend on the specific design criteria being considered, and where characteristic values are indicated, these are reasonably conservative estimates of a measured or assessed properties representing the overall behaviour of the material. Design values will also need to consider the ground-structure interaction for a given structure.

#### 5.1.1 Topsoil

The topsoil ranged in thickness between 0.1m and 0.4m and was relatively uniform in composition consisting of predominantly fine soils.

No in-situ or laboratory assessment was undertaken on the Topsoil which was described as predominantly fine soil, consisting of slightly gravelly, sandy clay with roots and rootlets.

#### 5.1.2 Superficial Deposits (River Terrace Deposits) – Fine

Although coarse soil horizons were noted at deeper levels as described in Section Ground Conditions, the superficial deposits were generally identified as fine soils (cohesive).

The consistency of these soils was generally described by the engineer as soft to firm, and typically firm or occasionally stiff from by a depth of 2.00m bgl. This was generally confirmed by SPT N values ranging from 4 to 12 in the upper 2m of soil.

Using the relationship  $\text{Shear Strength (Cu)} = 4.5 \times N$ , equates to an undrained shear strength ranging between 18 and 54kN/m<sup>2</sup>.

Cu was generally observed to increase with depth, however soft soil horizons were also noted to be present by the engineer at deeper levels as indicated in Table 5.1 below.

# Land at Stakers Farm, Yapton

## Ground Investigation – Interpretative Report



**Table 5.1 Summary of the Depth and Location of Soft Fine Soil Horizons**

| Location | Depth Top (m bgl) | Depth Base (m bgl) |
|----------|-------------------|--------------------|
| WS05     | 2.30              | 2.90               |
| WS08     | 2.30              | 2.60               |
| WS09     | 2.30              | 2.60               |

Based on the limited information available and factoring in the presence of soft soil horizons at deeper levels, which showed no clear lateral consistency across the site, a characteristic  $C_u$  of the Superficial Deposits is considered to be **25kN/m<sup>2</sup>**.

Atterberg Limits were determined on four representative samples of the superficial deposits (TP4 at 1.50, WS10 at 1.20m bgl, WS07 at 2.00m bgl and WS201 at 1.0m bgl), with moisture contents of 18 to 24%, liquid limits of 34 to 48%, plastic limits of 21 to 23% and plasticity indices of 13 and 28% respectively. With 100% of the sample passing the 425µm sieve, the plasticity index (PI) also equates to the modified Plasticity Index (PI'). These results indicate that the clay soils are of low to intermediate plasticity.

### 5.1.3 Superficial Deposits (River Terrace Deposits) – Coarse

Predominantly coarse soil horizons were noted at deeper levels within the Superficial Deposits as indicated in Table 5.2 below.

**Table 5.2 Summary of the Depth and Location of Coarse Soil Horizons**

| Location | Depth Top (m bgl) | Depth Base (m bgl) | Thickness (m) |
|----------|-------------------|--------------------|---------------|
| TP01     | 2.20              | 3.40               | 1.20          |
| TP03     | 1.50              | 1.70               | 0.20          |
| TP06     | 2.70              | 3.00               | 0.30          |
| TP07     | 1.80              | 2.00               | 0.20          |
| TP08     | 1.80              | >2.20              | >0.40         |
| TP09     | 2.50              | 3.20               | 0.70          |
| WS06     | 1.30              | 1.70               | 0.50          |
| WS07     | 1.80              | 1.90               | 0.10          |
| WS07     | 3.20              | 3.30               | 0.10          |
| WS10     | 2.30              | 2.50               | 0.20          |

No easily discernible trend in the depth and thickness of the coarse soil horizons across the site has been established, and it is noted that some horizons were intercalated with deeper fine soil horizons.

Coarse superficial deposits were variable in composition, consisting of fine to coarse sand with lesser variable quantities of clay, silt, and flint gravel and cobbles. The engineer's soils descriptions were confirmed by Particle Size Distributions testing on four samples.



# Land at Stakers Farm, Yapton

## Ground Investigation – Interpretative Report



### 5.1.1 White Chalk

The White Chalk was encountered in thirteen of the exploratory holes at depths ranging between 2.60 and 4.90m bgl. The variable depth of the chalk surface is typical of karstic environments and arises via the weathering of the chalk surface through dissolution.

The White Chalk was relatively uniform in composition and comprised structureless chalk recovered as chalk and flint gravel and cobbles within a sandy silt matrix.

Weathering grades of the chalk, assessed in accordance with CIRIA 574, have been assigned to the chalk horizons encountered within the exploratory holes as detailed on the engineering log strata descriptions.

8No. Laboratory Saturation Moisture Content assessments were undertaken on selected cobbles of chalk and results are summarised in Table 5.3 below.

**Table 5.3 Summary of Laboratory Saturation Moisture Content**

| Sample Location | Depth from (m) | Intact Dry Density (Mg/m <sup>3</sup> ) | Saturated Moisture Content (%) |
|-----------------|----------------|-----------------------------------------|--------------------------------|
| TP6             | 3.20           | 1.48                                    | 31                             |
| TP7             | 3.20           | 1.60                                    | 25                             |
| TP9             | 3.50           | 1.59                                    | 26                             |
| TP10            | 3.20           | 1.67                                    | 23                             |
| WS1             | 4.00           | 1.65                                    | 24                             |
| WS4             | 5.00           | 1.66                                    | 23                             |
| WS5             | 6.00           | 1.57                                    | 27                             |
| WS7             | 5.00           | 1.60                                    | 26                             |

Based on the engineer's description of the recovered soils and SPT N Values which ranged between 11 and 50, a CIRIA C574 Weathering grade of Dm and Dc has been assigned for structureless chalk as indicated on the Engineering Logs.

It is recommended that unless the presence of Grade Dc chalk can be confirmed in local areas, the more conservative parameters of the Grade Dm chalk should be considered for overall characterisation of the site.



## 6. Geotechnical Design Considerations

### 6.1 Introduction

It is understood that the proposed development is to consist of up to 108 conventional residential buildings, consisting of 2No. planning consents (38 and 70 units respectively), with associated landscaped areas (as summarised in Section 1.2). At the time of compiling this report details of proposed structural loadings were not available, and therefore the following discussion provides an in principal assessment of the most viable foundation options for foundation loads considered typical for this kind of development.

### 6.2 Shallow Foundations

Due to the lateral and vertical variability of the Superficial Deposits it is recommended that foundations are assessed on the basis of the more conservative characteristic parameters of the fine soil horizons.

The near surface soils were typically of lower and more variable consistency, potentially giving rise to unacceptable total or differential settlements under load. The NHBC recommended minimum foundation depths of 1.00m bgl would reduce the risk of unacceptable settlements, however, due to the variability, it is recommended that lower bound values are adopted for preliminary assessments. Less conservative local parameters can be reviewed and used if appropriate once the layout / footprint of individual structures is confirmed.

On this basis, illustrative calculations of allowable bearing pressures have been calculated for foundations constructed at various depths on soft soils are summarised in Table 6.1 below. These calculations have been undertaken, limiting settlements to less than 25mm and assume an average groundwater level of 2.5m.

**Table 6.1 Estimates of Allowable Bearing Pressures based on 1.0m wide strip footings bearing onto the fine superficial deposits.**

| Depth of Foundation (mbgl) | Net Allowable Bearing Pressure (kN/m <sup>2</sup> ) |
|----------------------------|-----------------------------------------------------|
| 1.0                        | 60                                                  |
| 1.5                        | 70                                                  |
| 2.0                        | 70                                                  |

It is noted that positive contributions to bearing capacity from coarse soil horizons have not been considered in the assessment in Table 6.1.

Structural loads higher than those accommodated by the foundation depths assessed in Table 6.1 may need to consider piled foundations as pressure bulbs would likely be extended into the weathered chalk horizon where settlements are difficult to predict.



It is recommended that the bases of all foundations are inspected by a qualified engineer prior to construction and where necessary any identified areas of any particularly soft or loose soils be replaced with a suitably compacted coarse-grained fill. It is also recommended that the inside faces of external foundations are protected with proprietary void former or compressible material in order to protect against potential swelling.

### 6.3 Floor Slabs

In the absence of specific information relating to likely floor slab loadings it has been assumed that these are unlikely to be greater than 8kN/m<sup>2</sup>, consistent with other typical two-storey residential developments. Based on this approximation of maximum floor loadings it is considered that ground bearing floor slabs, bearing onto the soft Superficial Deposits would not generate settlements in excess of anticipated slab tolerances, provided that the upper layer of soft/loose topsoil has been removed.

The formation level should also be proof rolled using a heavy vibrating roller and inspected by a suitably-experienced engineer or inspector. Any material such as soft clay, deleterious material containing weak or degradable contaminants, or other unsuitable material, should be excavated and replaced by well-compacted granular fill.

Where housing plots are within the zone of influence of existing or proposed trees, floor slabs should be suspended in accordance with NHBC Chapter 4.2.

### 6.4 Chemical Attack on Buried Concrete

Chemical tests show low levels of water-soluble sulphates and near neutral conditions.

Based on these conditions, it is recommended that for all concrete, the Design Sulphate Class for the site, as defined in BRE Special Digest 1, be taken as DS1, and the Aggressive Chemical Environment for Concrete (ACEC) site classification be taken as AC-1, assuming mobile water conditions. The recommendations of BRE Special Digest 1 should be followed for concrete foundations and ground bearing floor slabs.

### 6.5 Pavements

In situ CBR values in the upper 1m beneath existing ground level have been derived from the TRRL DCP data using the TRL Road Note 31 and 8 test procedures. TRL Road Note 31 recommends the following interpretative method:

$$\text{Log}_{10}(\text{CBR}) = 2.480 - 1.057 \times \text{Log}_{10}(T)$$

Where  $T$  = mm per blow with TRL DCP

Plots derived from the TRL software using this correlation are given in Appendix D – **CBR Test Results**.

# Land at Stakers Farm, Yapton

## Ground Investigation – Interpretative Report



CBR at a minimum of 3 to 4 was recorded between depths of 400mm – 800mm below ground level.

Equilibrium CBR values have been assessed with reference to the Highways Agency design guidance HD25/94 (Table 2 “Equilibrium Subgrade CBR Estimation” within Volume 7 of the Department of Transport Design Manual for Roads and Bridges). For the fine-grained low to medium plasticity Superficial Deposits (with PI up to 28%) a predicted CBR of 2 to 2.5% is suggested for high water table and average conditions.

The in situ CBR data is representative of the soil conditions at the time of testing and pavement design should always be considered against equilibrium CBR values as discussed above. Assuming that all topsoil will be removed prior to pavement construction, it is recommended that a CBR value of 2.5% is adopted for preliminary design for an average pavement thickness for internal access roads and pavements.

As with good construction practice it is recommended the formation level be inspected and that any areas of soft/loose deleterious strata are replaced with an appropriately compacted coarse-grained medium. Proof rolling/compaction of the formation level should be carried out prior to laying of new pavement.

### 6.6 Temporary Works

Excavated pits generally remained open and stable during the investigation and it is considered that most shallow excavation for foundations and service runs should remain stable in the short term. However, where soft or variable materials are encountered some collapse may occur, requiring localised support or battering to a safe angle of repose. All excavations requiring man entry should be fully supported to prevent unexpected collapse.

It is considered unlikely that groundwater will be encountered within shallow excavations, and any perched water should be manageable using small scale pumps and sumps, although it should be noted that groundwater levels can vary seasonally.

### 6.7 Drainage

Soil infiltration rates of the superficial deposits were not established due to the low infiltration rate during the soakaway testing (Appendix C – **Soakaway Test Results**) indicating negligible permeability. Therefore, soakaways at the depths assessed during the investigation are not considered to be a viable drainage option.

Subject to regulatory approval, deep bore soakaways into the underlying White Chalk could be considered, however infiltration rates of these soils would need to be confirmed via borehole infiltration testing. It is also noted that concentrated ingress of water into chalk can initiate new dissolution features, particularly in low-density chalk. Soakaways boreholes should therefore be sited a minimum of 10m away from any structure or foundation in line with CIRIA Guidance.



## **6.8 Dissolution Features**

The ground investigation did not encounter any features that would indicate the presence of dissolution features on the site (or signs of metastability within the superficial deposits potentially associated with underlying chalk dissolution). However, given the susceptibility of calcium carbonate in chalk to dissolution by water containing carbon dioxide and the random occurrence of such features, their presence cannot be discounted. Should dissolution features be encountered during construction, treatment options will need to be implemented and may comprise infilling or bridging the feature. The design of any remedial measures should be undertaken following an appropriate assessment of the feature.



## 7. Conceptual Site Model

Information from the recently completed phase of fieldwork has been used to refine the Conceptual Site Model (CSM) and forms the basis of subsequent phases of risk assessment. Component sources, pathways and receptors based upon the current and potential future residential use of the land and surrounding area are summarised below.

### Sources:

- Agricultural use of the site (past and current) – Herbicides, pesticides, possible hydrocarbons
- On-site building (unknown use) – potential for Asbestos, TPH, PAHs
- Off-site farm – Unknown agricultural practices and associated fuel storage, buildings to the east of the site, agricultural land north, west and south – potential for herbicides, pesticides, Hydrocarbons, heavy metals

Other potentially contaminative sources identified during the historical use review (Section 2.3) such as the former Brick Works (450m south-east), landfill (232m south) and potentially infilled land (171m south-east) have been assessed as likely to be too great a distance from the site to have a significant impact on the subject site.

### Pathways:

- Direct dermal contact or ingestion of soils
- Inhalation of dust / fibres
- Leaching and lateral migration of mobile contamination, and;
- Migration and accumulation of gases through permeable sub-surface materials and/or preferential pathways.

### Receptors:

- Current site workers - farm workers;
- Public Open Space users - members of the public using the right of way in the north of the site
- Future residents – residents of the planned development
- Future site workers – ground workers including those in excavations (utilities installation)
- Off-site residents and workers – residents in the surrounding area and pupils, parents and teachers of the primary school adjacent to the site
- Principal Bedrock Aquifer / Secondary A Superficial Aquifer

# Land at Stakers Farm, Yapton

## Ground Investigation – Interpretative Report



The desk-based review indicated that no major surface water body is located within 1km of the site boundary and therefore no viable surface water receptors have been identified as part of the CSM.



## 8. Ground Contamination Assessment – Human Health

### 8.1 Methodology and Relevant Assessment Criteria

A Generic Quantitative Risk Assessment (gQRA) has been undertaken by comparing recorded contaminant concentrations in soil to Generic Assessment Criteria (GAC) to identify the contaminants of concern that have the potential to adversely affect the health of site users. Generic assessment criteria are contaminant concentration values used for comparison purposes to assess the risk associated with contaminant concentrations found on site and are derived using non-site-specific information. If the observed concentration of a particular contaminant is below the GAC for a pollutant linkage then the risk is generally considered to be acceptable and does not generally warrant further assessment. Furthermore, a substance recorded in excess of a particular GAC does not necessarily indicate that a particular risk is present to an extent that would require remediation. Where the GAC is exceeded, further appraisal is recommended to assess the significance in line with the current UK tiered risk assessment framework.

The following sections introduce the derivation of the GAC used to identify contaminants of concern at the site and the statistical methods by which localised areas of contamination at the site can be isolated if applicable. In addition, it provides a review of the soil, soil vapour, soil-leachate and groundwater analytical results at the site and a discussion of the distribution of the soil and water contamination.

### 8.2 Assessment Criteria

#### 8.2.1 Soils

In order to assess the soil analysis results with regard to potential human health risks, WYG have sourced Tier 1 Soil Screening Values (SSV) principally from Category 4 Screening Levels (C4SL) derived by DEFRA with CL:AIRE (Contaminated Land: Assessment in Real Environment)<sup>1</sup>. Where C4SLs are unavailable Suitable For Use Levels (S4ULs) developed by LQM/CIEH (2015)<sup>2</sup> have been used. Both these sets of screening values are consistent with the updated CLEA v1.071 Model.

C4SLs have been published for arsenic, benzene, benzo(a)pyrene, cadmium, chromium VI and lead<sup>3</sup> for soil using the CLEA Model. The C4SLs are considered suitable by DEFRA for use for Part 2A decisions and planning, i.e. change of use. Contaminant concentrations below C4SLs are considered to pose an acceptably low risk to human health. The LQM/CIEH S4ULs provide GACs based on minimal or tolerable risk intended

---

<sup>1</sup> DEFRA, 2014. SP1010: Development of Category 4 Screening Levels for Assessment of Land Affected by Contamination – Policy Companion Document

<sup>2</sup> LQM/CIEH (3<sup>rd</sup> Edition) "Suitable for Use Levels (S4ULs) for Human Health Risk Assessment (2015)"

<sup>3</sup> Arsenic, benzene, benzo(a)pyrene, cadmium, chromium VI, lead assuming 6% SOM (1% SOM C4SL also published for benzene)



# Land at Stakers Farm, Yapton

## Ground Investigation – Interpretative Report



to be protective of human health for individual or mixtures of substances. It is considered conservative and appropriate to use these values for contaminants for which C4SLs are unavailable.

SSV for volatile and semi-volatile organic compounds (VOC and SVOC) not presented in the S4UL document are sourced from CL:AIRE "Soil Generic Assessment Criteria for Human Health Risk Assessment" (January 2010). These SSV have been generated using the CLEA v1.06 model. The input parameters included in the CLEA v1.06 Model are generally considered to be more conservative than those in the updated CLEA v1.071 Model therefore the use of these SSV are deemed conservatively appropriate.

An Easily Liberatable Cyanide SSV has been generated by WYG considering short term exposure risks from inorganic cyanide using an approach consistent with that used by the UK Health Protection Agency.

Soil Organic Matter (SOMs) have been assumed for the purposes of screening, a mean SOM of 1.57% was calculated for samples taken from the topsoil and a mean SOM of 0.72% was calculated for samples taken in superficial river terrace deposits. For this reason, GACs corresponding to a SOM of 1% have been used for the screening of the samples.

For each contaminant, SSV have been derived for various land use types. These include:

- Residential with plant uptake;
- Residential without plant uptake;
- Commercial;
- Allotment
- Public Open Space Residential (POS<sub>resi</sub>)
- Public Open Space Park (POS<sub>park</sub>)

In consideration of the ultimate residential end use of the site SSVs protective of a residential with plant uptake have been applied.

The derivation of SSV is an ongoing developing process and as such, methodologies and input parameter values may alter as new guidance is published. This may result in temporary inconsistencies in the SSV and regular updates as research and development work progresses.



## 8.3 Characterisation and Assessment

### 8.3.1 Soils

In order to identify potential contaminants of concern, 8No. samples of topsoil and 8No. samples of river terrace deposits collected during the WYG 2019 ground investigation have been screened against GACs derived to be protective of human health, as detailed in Section 8.2 above. The results of the screening exercise is presented in Table 8.1 below.

**Table 8.1: HH-gQRA Screening Results**

| Contaminant                   | Units    | GAC   | No. Samples | No. > GAC | Exceedance Concentration | Location and depth of exceedance |
|-------------------------------|----------|-------|-------------|-----------|--------------------------|----------------------------------|
| pH                            | pH Units | 5 – 9 | 16          | 1         | 4.69                     | WS05, 0.2m bgl<br>(Topsoil)      |
| No further exceedances to GAC |          |       |             |           |                          |                                  |

The exceedance of pH is considered as an isolated marginal exceedance and is not considered to present a risk to human health. Based on the 8No. topsoil samples taken it is considered that it would be suitable to reuse the topsoil on site as part of any future development.

No further exceedances were identified, and no visual or olfactory evidence of contamination observed during the site investigation.

### 8.3.2 Asbestos Screening

16No. samples were analysed for the presence of asbestos including 14No. taken between 0.30m and 0.5m bgl and a further 2No. samples taken below 1m bgl across the site. Asbestos was not identified in any sample.



## 9. Generic Quantitative Assessment – Controlled Waters

### 9.1 Methodology

The potential for soil contamination to impact the controlled waters receptors has been assessed by comparing analytical data from soil leaching tests directly against relevant WQS.

### 9.2 Water Quality Standards

The CSM identifies a plausible migration pathway from the site soils to the aquifers beneath the site. The aquifers underlying the site are classified as a Secondary A (superficial) and Principal (bedrock) Aquifers and there are 4No. recorded groundwater abstraction within 1km of the site, the nearest is located adjacent to the northern site boundary which relates to the abstraction of groundwater for agricultural use. As detailed in section 7 no viable surface water receptor has been identified. In recognition of sensitive groundwater receptors in the vicinity of the site, the most conservative criteria applicable have been chosen for screening of soil leachate.

The adopted water quality targets are principally taken from Water Framework Directive (WFD 2015) Environmental Quality Standards (EQS)<sup>4</sup> and Drinking Water Standards<sup>5</sup>. Soil-leachate samples and groundwater samples have been assessed against freshwater EQS and in the absence of this have been screened against the most conservative of River Water EQS, Freshwater EQS, Transitional and Coastal Waters EQS and Drinking Water Standards.

### 9.3 Assessment of Soil-Leachate Potential

A total of 3No. soil-leachate preparations were analysed, 2No. from topsoil and 1No. from the superficial deposits. It is noted that contaminants identified in concentrations less than the analytical limit of detection (LOD), but exceeding the relevant WQS, are not considered to present a significant risk to Controlled Waters in the context of the site and are not included below.

The distribution and concentration of contaminants of concern recorded in excess of the WQS in soil-leachate samples are summarised below in Table 9.1.

---

<sup>4</sup> Where WFD 2015 are not presented revoked WFD 2010 standards are used

<sup>5</sup> WHO 2005; WHO 2008; UK Water Supply Regulations 2010 and 1989 Regulations. Priority given to UK drinking water standards

# Land at Stakers Farm, Yapton

## Ground Investigation – Interpretative Report



**Table 9.1: CW gQRA Screening Results**

| Contaminant | Units | WQS    | No. Samples | No. > GAC | Maximum Exceedance Concentration | Minimum Exceedance Concentration | Location and depth of exceedance |
|-------------|-------|--------|-------------|-----------|----------------------------------|----------------------------------|----------------------------------|
| Copper      | mg/l  | 0.001  | 3           | 1         | 0.0327                           | 0.0327                           | WS02, 0.3m bgl                   |
| Nickel      | mg/l  | 0.004  | 3           | 1         | 0.00726                          | 0.00726                          |                                  |
| Zinc        | mg/l  | 0.0109 | 3           | 2         | 0.0146                           | 0.0112                           | WS02, 0.3m bgl<br>WS06, 0.4m bgl |

The leachate analysis essentially provides a worst-case scenario regarding the contaminants that have the potential to leach from the soil.

The CW-gQRA has identified exceedances of heavy metals in the topsoil samples taken from WS02 and WS06. The exceedances are considered marginal and are not considered to present a significant risk to the underlying Principal and Secondary A Aquifers.

### 9.4 Assessment of Groundwater

No visual or olfactory evidence of groundwater contamination was observed during the monitoring visit (20<sup>th</sup> March) nor during the ground investigation. No groundwater samples have been taken to date.

Whilst the soil-leachate results (Section 9.3) indicate the soils within the site are unlikely to present a significant risk to the underlying Principal and Secondary A Aquifers it is recommended that further groundwater samples are taken from the recently installed WYG boreholes (where possible), to provide information on the quality of groundwater in order to provide further clarity on the potential risk from off-site sources (Section 7).



## 10. Generic Quantitative Assessment – Ground Gas Risks

### 10.1 Background

Ground gases including methane, carbon dioxide and small concentrations of trace gases can occur naturally in soils containing organic material and are produced in greatest concentrations in soils with high organic content such as peat and Alluvial soils. These gases can also be generated from the degradation of buried organic materials. Methane is the principal hazardous gas associated with the degradation of organic material in both natural organic soils and from any organic fraction within Made Ground. Methane is biochemically reactive and is readily oxidised to carbon dioxide under aerobic conditions. Carbon dioxide can also be generated directly in soils. High methane and carbon dioxide concentrations may also be evidence of leaks from gas mains and/or equipment.

The risks posed from ground gases are primarily from explosion or inhalation, both following accumulation in a confined space. The risks to site users from ground gas in areas of open space are not normally deemed to be significant.

Explosion of ground gases can only occur if the following elements are present:-

1. A source of flammable gas;
2. A confined or enclosed space;
3. A source of ignition; and
4. Sufficient oxygen to support combustion.

The flammability of a particular gas mixture is dependent on a number of factors including composition, temperature and pressure. The potential flammability of methane in a mixture increases with the relative concentration of oxygen. In addition, the presence of carbon dioxide within a gas mixture will change the potential flammability as it will alter the upper explosive limit of methane.

Methane is a low toxicity gas and carbon dioxide a high toxicity gas. Adverse health effects of carbon dioxide include headaches and shortness of breath (3% v/v), increased heart rates, dizziness and rapid loss of unconscious (6 to 11%) and death (>22%).

Any gas or mixture of gases will cause physiological effects if it displaces oxygen in a confined space, to an extent when oxygen concentrations fall below 18 % v/v. This begins with impairment of judgement (17% oxygen in air), followed by anoxia and abnormal fatigue (10–16%), nausea and unconsciousness (6–10%)

# Land at Stakers Farm, Yapton

## Ground Investigation – Interpretative Report



leading to death (<6 %). Physiological effects can be more severe if carbon dioxide is the cause of oxygen depletion.

### 10.2 Assessment Criteria

A generic ground gas risk assessment has been undertaken to assess the risks to site workers occupying the site within Section 11 below. The assessment of carbon dioxide and methane levels has been undertaken in accordance with the principles set out in the CIRIA guidance (Assessing risk posed by hazardous ground gases to buildings, CIRIA C659, 2006 now revised as CIRIA C665).

The assessment has been undertaken against the Modified Wilson and Card Classification as set out in C665 based on a commercial/ industrial end use. The guidance provided in Tables 5.5a and 5.5b of C665 regarding typical/idealised periods and frequency of monitoring indicate an insufficient amount of data is available to undertake a complete gas risk assessment. Consequently, the following assessment is indicative only and further monitoring would be necessary should a more comprehensive assessment be required.

It should be noted that the site is occupied on a part time basis and so there is only limited use of buildings on site. The ground investigation was designed primarily to assess the risks from land contamination to environmental receptors. The data used to address risks from ground gases has generally been obtained from exploratory hole positions to target pathways and receptors associated with control waters.

Gas Screening Values (GSVs) have been calculated using the formula:

$$\text{GSV} = \text{borehole flow rate (l/hr)} \times \text{gas concentration (v/v \%)} / 100$$

This calculation has been applied to the maximum methane, carbon dioxide and flow rates recorded over the monitoring period to reflect a worst-case-scenario. The GSV is compared with the Characteristic Situation (Modified Wilson and Card classification) as detailed in the CIRIA guidance from which the risk is evaluated.

Carbon monoxide and hydrogen sulphide levels have been assessed against Workplace Long Term Exposure Limits (LTEL), relating to an 8 hours' exposure period, published in the Health and Safety Executive in 2005 in "Guidance Note EH40: Occupational Exposure". The LTEL for carbon monoxide is 30ppm and for hydrogen sulphide is 5ppm.

### 10.3 Characterisation

A summary of gas readings recorded is presented in Table 10.1 below. Full details of the gas monitoring rounds are contained on the gas monitoring data sheets held in Appendix G – Groundwater and Gas Monitoring Results.

# Land at Stakers Farm, Yapton

## Ground Investigation – Interpretative Report



**Table 10.1 Ground Gas Monitoring Results**

| Exploratory Hole           | Response Zone (mbgl) | Strata Monitored    | % v/v <sup>2</sup>    |                       |                      | Max. Flow <sup>1</sup> (l/hr) | CH <sub>4</sub> Gas Screening Value (l/hr) | CO <sub>2</sub> Gas Screening Value (l/hr) | Characteristic Situation (CIRIA C665) |
|----------------------------|----------------------|---------------------|-----------------------|-----------------------|----------------------|-------------------------------|--------------------------------------------|--------------------------------------------|---------------------------------------|
|                            |                      |                     | CH <sub>4</sub> (max) | CO <sub>2</sub> (max) | O <sub>2</sub> (min) |                               |                                            |                                            |                                       |
| WS01                       | 1.00 – 3.00          | RTD + Top of Chalk  | 0.2                   | 3.7                   | 15.6                 | 0.0                           | 0.0                                        | 0.0                                        | 1<br>Very Low Risk                    |
| WS04                       | 1.00 – 3.00          | RTD                 | 0.2                   | 2.3                   | 18.3                 | -0.2                          | 0.0004                                     | 0.0046                                     | 1<br>Very Low Risk                    |
| WS05                       | 5.00 – 6.00          | Chalk               | 0.2                   | 1.9                   | 16.2                 | 0.1                           | 0.0038                                     | 0.0019                                     | 1<br>Very Low Risk                    |
| WS06                       | 1.00 – 3.00          | RTD                 | 0.2                   | 2.4                   | 17.9                 | 0.0                           | 0.0                                        | 0.0                                        | 1<br>Very Low Risk                    |
| WS09                       | 2.00 – 6.00          | Base of RTD + Chalk | 0.3                   | 2.8                   | 16.0                 | -0.1                          | 0.0003                                     | 0.0028                                     | 1<br>Very Low Risk                    |
| WS10                       | 1.00 – 3.00          | RTD                 | 0.2                   | 2.1                   | 17.1                 | 0.0                           | 0.0                                        | 0.0                                        | 1<br>Very Low Risk                    |
| <b>Worst Case Scenario</b> |                      |                     | 0.3                   | 3.7                   | 15.6                 | 0.2                           | 0.0006                                     | 0.0074                                     | 1<br><b>Very Low Risk</b>             |

Atmospheric conditions during the two monitoring visits were recorded to be 1034 (rising) and 1027 (rising).

### 10.4 Gas Assessment

Based on the Modified Wilson and Card assessment a worst-case Characteristic Situation of 1 was calculated for the site, corresponding to a very low risk to human-health receptors. The calculation is based on a conservative scenario with maximum methane and carbon dioxide concentrations and highest flow rates.

However, the assessment is based on two rounds of monitoring data, taken during high atmospheric pressure which is unlikely to represent worst case conditions. CIRIA guidance recommends that assessment should normally be based on at least 6 rounds of monitoring including monitoring undertaken during a period of falling atmospheric pressure. Consideration should be given to undertaking additional monitoring to confirm the classification. These requirements should be discussed with the planning authority.



## 11. Qualitative Risk Assessment

### 11.1 Introduction

The pollutant linkages derived from the CSM set out in Section 7 and a qualitative risk assessment are presented in the table below. The risk assessment considers the site within an area context and assesses potential risks to identified receptors in relation to the existing site setting and the proposed development. CIRIA C552 has been used to define the risk rating presented in the Qualitative Risk Assessment matrix, methodology for which is presented in Appendix I – **CIRIA C552 Qualitative Risk Assessment Matrix**.



# Land at Stakers Farm, Yapton

## Ground Investigation – Interpretative Report



**Table 11.1 CIRIA C552 Qualitative Risk Assessment**

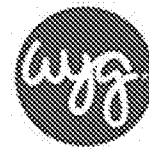
| Source                                                                                                                                       | Pathway                                                         | Receptor                                                                                                        | Consequence of risk being realised | Probability of risk being realised | Risk Classification | Potential risk management requirements                                                                                                                                                                                                                                                                                                                                            |
|----------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|------------------------------------|------------------------------------|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Agricultural use of the site - Past and Present</b><br>Potential for Pesticides, herbicides and other contaminants including hydrocarbons | Leaching/ dissolution from contaminated soils                   | Principal and Secondary A Aquifers                                                                              | Medium                             | Unlikely                           | Low Risk            | Low pH was identified in one topsoil sample with marginal exceedances of heavy metals identified in soil-leachate preparations of the topsoil.<br>All other analysed contaminants were identified as below the relevant screening criteria.<br>To provide a suitably robust controlled waters risk assessment groundwater samples will be taken during the next monitoring round. |
|                                                                                                                                              | Direct dermal contact or ingestion of soils, Inhalation of Dust | Current site workers, public open space users, future residents, off-site worker/residents, future site workers | Mild                               | Unlikely                           | Very Low risk       | Low pH was identified in one topsoil sample. All other measured contaminants were identified as below the relevant screening criteria. From the results there is thought to be a very low risk to all human health receptors.                                                                                                                                                     |
|                                                                                                                                              | Migration and accumulation of gas                               | Future residents                                                                                                | Medium                             | Unlikely                           | Low Risk            | The ground gas risk assessment identified a very low risk to human health receptors. However this is based on only two monitoring rounds during high atmospheric pressure which is unlikely to represent worst case conditions. Consideration should be given to undertaking additional monitoring, subject to planning authority requirements.                                   |
| <b>Asbestos</b>                                                                                                                              | Inhalation of fibres                                            | Current site workers, public open space users, future residents, off-site worker/residents                      | Severe                             | Unlikely                           | Moderate/Low Risk   | Asbestos was not detected in any soil samples (16No.) collected during the ground investigation.<br>There is no information available pertaining to the on-site building or off-site farm buildings – for example an Asbestos survey and this therefore remains a potential source.<br>No risk mitigation required at present.                                                    |

# Land at Stakers Farm, Yapton

## Ground Investigation – Interpretative Report



| Source                                                                                                                                                | Pathway                                                            | Receptor                                                                                                        | Consequence of risk being realised | Probability of risk being realised | Risk Classification | Potential risk management requirements                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|------------------------------------|------------------------------------|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                       |                                                                    | Future site workers                                                                                             | Severe                             | Unlikely                           | Moderate/Low Risk   | <p>Asbestos was not detected in any soil samples (16No.) collected during the ground investigation.</p> <p>There is no information available pertaining to the on-site building or off-site farm buildings – for example an Asbestos survey there therefore remains a potential source.</p> <p>Future workers, including those in excavations will be disturbing the soils, whilst unlikely, there remains a limited potential for exposure to asbestos fibres.</p> <p>It is recommended that consideration of the potential presence of previously unidentified asbestos is included in the risk assessment for future ground works, however no risk mitigation required at present.</p> |
| <b>On site building</b><br>Potential for PAHs, hydrocarbons, other contaminants                                                                       | Direct dermal contact or ingestion of soils,<br>Inhalation of Dust | Current site workers, public open space users, future residents, off-site worker/residents, future site workers | Mild                               | Unlikely                           | Very Low Risk       | Low pH was identified in one topsoil sample, no other contaminants were identified as exceeding relevant screening criteria. From the results there is thought to be a very low risk to human health receptors despite the unknown use of the building.                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Off-site Farm</b><br>Unknown fuel storage and agricultural practices. Potential for PAHs, hydrocarbons, herbicides, pesticides, other contaminants | Leaching/ dissolution from contaminated soils                      | Principal and Secondary A Aquifers                                                                              | Medium                             | Low Likelihood                     | Moderate / Low Risk | Groundwater samples are recommended to determine groundwater quality.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |



## **12. Conclusions and Recommendations**

### **12.1 Ground Contamination Assessment**

#### **12.1.1 Human Health**

Following the quantitative risk assessment, the human health pollutant linkages have been evaluated as low to very low risk (Table 8.1) with the exception of Asbestos, which remains at a Moderate/low Risk based on the severity of consequence of inhalation of asbestos fibres. No further works or assessment as part of these works is recommended, however, future contractors working on the development should consider including the potential risk in their risk assessments.

#### **12.1.2 Controlled Waters**

The assessment has identified a Moderate/ Low risk to the Principal bedrock aquifer and Secondary A superficial Aquifer beneath the site from the off-site farm. Groundwater sampling and a review of the controlled water risk assessment following the analysis results is recommended.

#### **12.1.3 Ground Gas**

Based on the initial ground gas monitoring, the site has been classified as Characteristic Situation 1 (Very Low Risk) as such land gas protection measures are not required for new developments on the site. Monitoring under falling atmospheric pressure conditions and a review of the gas risk assessment is recommended.

The site is located in a lower probability radon area (<1% of homes are above the action level), as such no radon protection measures are required for new developments.

### **12.2 Geotechnical Assessment**

Traditional shallow foundations founded within the River Terrace Deposits at a minimum depth of 1.0m bgl may be designed for a net allowable bearing pressure of 60kN/m<sup>2</sup>, which will limit settlements to less than 25mm. Due to the variable nature of the River Terrace Deposits, founding at a deeper level, such as 2m will only result in a marginal increase in the net allowable bearing pressure (70kN/m<sup>2</sup>).

Whilst the ground investigation did not encounter the presence of dissolution features, their presence cannot be discounted. It is recommended that additional investigation be undertaken once the layout of the development is known to give increase confidence in the geotechnical parameters for the shallow soils.



## 13. Notes

### Standards

All boring operations, sampling of soils, in situ testing and geotechnical laboratory testing have been carried out in accordance with the recommendations of the British Standards BS 5930 (2015)(1), BS 1377 (1990)(2) and BS10175 (2001)(3).

Soil and rock descriptions follow the recommendations of BS 5930. Where descriptions or classifications are based on other documents (e.g. BS 8004 (1986) or CIRIA Project Report 11 (1993)), this is stated in the report text.

### Site methods

Unless specifically stated otherwise, the following methods are used for exploratory holes.

- Holes described as cable percussive are bored using a light cable percussive rig. Standard penetration tests are carried out where appropriate, as shown in the logs. Disturbed and undisturbed samples are taken from the exploratory holes at the depths on the records.
- Window sampling generally uses the windowless sampling method, using a tracked Geotool.
- Dynamic probes are usually heavy dynamic probes, using the same tracked Geotool used for window sampling.

### Definitions and abbreviations

The following terms are used in the exploratory hole logs

#### Samples

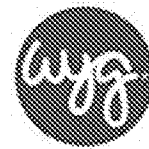
|     |                                                                         |
|-----|-------------------------------------------------------------------------|
| U   | Undisturbed 102mm dia. sample                                           |
| TW  | Thin Walled undisturbed 102mm dia. sample                               |
| B   | Bulk sample                                                             |
| D   | Small disturbed sample                                                  |
| W   | Water sample                                                            |
| CBR | California Bearing Ratio test or CBR value obtained from Mexiprobe test |

#### In situ tests

|     |                                                                  |
|-----|------------------------------------------------------------------|
| S   | Standard penetration test (SPT)                                  |
| N   | SPT N value (blows/300mm)                                        |
| HP  | Hand penetrometer – shear strength                               |
| SV  | Hand shear vane – shear strength                                 |
| VOC | Volatile organic compounds (ppm)                                 |
| PID | Photo-ionisation detector – used to detect the presence of VOCs. |

# Land at Stakers Farm, Yapton

## Ground Investigation – Interpretative Report



### Core recovery and rock quality

|     |                              |
|-----|------------------------------|
| TCR | Total core recovery (%)      |
| SCR | Solid core recovery (%)      |
| RQD | Rock quality designation (%) |
| FI  | Fracture index               |
| NR  | No recovery                  |
| NI  | Not intact                   |

### Rotary drilling sizes

| Index letter | Nominal diameter (mm) |      |
|--------------|-----------------------|------|
|              | Borehole              | Core |
| N            | 75                    | 54   |
| H            | 99                    | 76   |
| P            | 120                   | 92   |
| S            | 146                   | 113  |

### Water strikes

|   |                                                                         |
|---|-------------------------------------------------------------------------|
| ▽ | Level of water strike                                                   |
| ▼ | Water level rose to this level (see Remarks at foot of log for details) |

Depth means depth below existing ground level unless otherwise specified. Values specified in soil descriptions given in the exploratory hole logs are depths unless otherwise specified.

# Land at Stakers Farm, Yapton

## Ground Investigation – Interpretative Report



### Abbreviations

|       |                                                   |
|-------|---------------------------------------------------|
| AOD   | above Ordnance Datum                              |
| bgl   | below ground level                                |
| BGS   | British Geological Survey                         |
| BTEX  | Benzene, Toluene, Ethylbenzene and Xylenes        |
| C4SL  | Category 4 Screening Levels                       |
| CIEH  | Chartered Institute of Environmental Health       |
| CLEA  | Contaminated Land Exposure Assessment             |
| CoC   | Constituent of Concern                            |
| CSM   | Conceptual Site Model                             |
| DEFRA | Department of Environment, food and Rural Affairs |
| DQRA  | Detailed Quantitative Risk Assessment             |
| DTS   | Desktop Study                                     |
| DRO   | Diesel Range Organics                             |
| DWS   | Drinking Water Standard                           |
| EA    | Environment Agency (England)                      |
| EPH   | Extractable Petroleum Hydrocarbons                |
| EQS   | Environmental Quality Standards                   |
| FOC   | Fraction Organic Carbon                           |
| GPR   | Ground Penetrating Radar                          |
| LOD   | Limit of detection                                |
| LQM   | Land Quality Management                           |
| NRW   | Natural Resources Wales                           |
| OS    | Ordnance Survey                                   |
| PAH   | Polycyclic aromatic hydrocarbon                   |
| PCB   | Polychlorinated biphenyl                          |
| PPE   | Personal Protection Equipment                     |
| ppm   | parts per million                                 |
| PRO   | Petroleum Range Organics                          |
| SGV   | Soil Guideline Values                             |
| SOM   | Soil Organic Matter                               |
| SVOC  | Semi-volatile organic compounds                   |
| TPH   | Total Petroleum Hydrocarbon                       |
| TSV   | Tier 1 Screening Values                           |
| VOC   | Volatile Organic Carbon                           |
| VPH   | Volatile Petroleum Hydrocarbons                   |

# Land at Stakers Farm, Yapton

## Ground Investigation – Interpretative Report



### Figures

**Figure 1 – Site Location Plan**

**Figure 2 – Exploratory Layout Plan**

DO NOT SCALE: CONTRACTOR TO CHECK ALL DIMENSIONS AND  
REPORT ANY OMISSIONS OR ERRORS



Contains Ordnance Survey data ©  
Crown copyright and database right 2018

| REV |          | DESCRIPTION |     | BY  | CHK | APP | DATE |
|-----|----------|-------------|-----|-----|-----|-----|------|
| 001 | PLANNING | 001         | 001 | 001 | 001 | 001 | 001  |
| 002 | 002      | 002         | 002 | 002 | 002 | 002 | 002  |
| 003 | 003      | 003         | 003 | 003 | 003 | 003 | 003  |
| 004 | 004      | 004         | 004 | 004 | 004 | 004 | 004  |
| 005 | 005      | 005         | 005 | 005 | 005 | 005 | 005  |
| 006 | 006      | 006         | 006 | 006 | 006 | 006 | 006  |
| 007 | 007      | 007         | 007 | 007 | 007 | 007 | 007  |
| 008 | 008      | 008         | 008 | 008 | 008 | 008 | 008  |
| 009 | 009      | 009         | 009 | 009 | 009 | 009 | 009  |
| 010 | 010      | 010         | 010 | 010 | 010 | 010 | 010  |
| 011 | 011      | 011         | 011 | 011 | 011 | 011 | 011  |
| 012 | 012      | 012         | 012 | 012 | 012 | 012 | 012  |
| 013 | 013      | 013         | 013 | 013 | 013 | 013 | 013  |
| 014 | 014      | 014         | 014 | 014 | 014 | 014 | 014  |
| 015 | 015      | 015         | 015 | 015 | 015 | 015 | 015  |
| 016 | 016      | 016         | 016 | 016 | 016 | 016 | 016  |
| 017 | 017      | 017         | 017 | 017 | 017 | 017 | 017  |
| 018 | 018      | 018         | 018 | 018 | 018 | 018 | 018  |
| 019 | 019      | 019         | 019 | 019 | 019 | 019 | 019  |
| 020 | 020      | 020         | 020 | 020 | 020 | 020 | 020  |
| 021 | 021      | 021         | 021 | 021 | 021 | 021 | 021  |
| 022 | 022      | 022         | 022 | 022 | 022 | 022 | 022  |
| 023 | 023      | 023         | 023 | 023 | 023 | 023 | 023  |
| 024 | 024      | 024         | 024 | 024 | 024 | 024 | 024  |
| 025 | 025      | 025         | 025 | 025 | 025 | 025 | 025  |
| 026 | 026      | 026         | 026 | 026 | 026 | 026 | 026  |
| 027 | 027      | 027         | 027 | 027 | 027 | 027 | 027  |
| 028 | 028      | 028         | 028 | 028 | 028 | 028 | 028  |
| 029 | 029      | 029         | 029 | 029 | 029 | 029 | 029  |
| 030 | 030      | 030         | 030 | 030 | 030 | 030 | 030  |
| 031 | 031      | 031         | 031 | 031 | 031 | 031 | 031  |
| 032 | 032      | 032         | 032 | 032 | 032 | 032 | 032  |
| 033 | 033      | 033         | 033 | 033 | 033 | 033 | 033  |
| 034 | 034      | 034         | 034 | 034 | 034 | 034 | 034  |
| 035 | 035      | 035         | 035 | 035 | 035 | 035 | 035  |
| 036 | 036      | 036         | 036 | 036 | 036 | 036 | 036  |
| 037 | 037      | 037         | 037 | 037 | 037 | 037 | 037  |
| 038 | 038      | 038         | 038 | 038 | 038 | 038 | 038  |
| 039 | 039      | 039         | 039 | 039 | 039 | 039 | 039  |
| 040 | 040      | 040         | 040 | 040 | 040 | 040 | 040  |
| 041 | 041      | 041         | 041 | 041 | 041 | 041 | 041  |
| 042 | 042      | 042         | 042 | 042 | 042 | 042 | 042  |
| 043 | 043      | 043         | 043 | 043 | 043 | 043 | 043  |
| 044 | 044      | 044         | 044 | 044 | 044 | 044 | 044  |
| 045 | 045      | 045         | 045 | 045 | 045 | 045 | 045  |
| 046 | 046      | 046         | 046 | 046 | 046 | 046 | 046  |
| 047 | 047      | 047         | 047 | 047 | 047 | 047 | 047  |
| 048 | 048      | 048         | 048 | 048 | 048 | 048 | 048  |
| 049 | 049      | 049         | 049 | 049 | 049 | 049 | 049  |
| 050 | 050      | 050         | 050 | 050 | 050 | 050 | 050  |
| 051 | 051      | 051         | 051 | 051 | 051 | 051 | 051  |
| 052 | 052      | 052         | 052 | 052 | 052 | 052 | 052  |
| 053 | 053      | 053         | 053 | 053 | 053 | 053 | 053  |
| 054 | 054      | 054         | 054 | 054 | 054 | 054 | 054  |
| 055 | 055      | 055         | 055 | 055 | 055 | 055 | 055  |
| 056 | 056      | 056         | 056 | 056 | 056 | 056 | 056  |
| 057 | 057      | 057         | 057 | 057 | 057 | 057 | 057  |
| 058 | 058      | 058         | 058 | 058 | 058 | 058 | 058  |
| 059 | 059      | 059         | 059 | 059 | 059 | 059 | 059  |
| 060 | 060      | 060         | 060 | 060 | 060 | 060 | 060  |
| 061 | 061      | 061         | 061 | 061 | 061 | 061 | 061  |
| 062 | 062      | 062         | 062 | 062 | 062 | 062 | 062  |
| 063 | 063      | 063         | 063 | 063 | 063 | 063 | 063  |
| 064 | 064      | 064         | 064 | 064 | 064 | 064 | 064  |
| 065 | 065      | 065         | 065 | 065 | 065 | 065 | 065  |
| 066 | 066      | 066         | 066 | 066 | 066 | 066 | 066  |
| 067 | 067      | 067         | 067 | 067 | 067 | 067 | 067  |
| 068 | 068      | 068         | 068 | 068 | 068 | 068 | 068  |
| 069 | 069      | 069         | 069 | 069 | 069 | 069 | 069  |
| 070 | 070      | 070         | 070 | 070 | 070 | 070 | 070  |
| 071 | 071      | 071         | 071 | 071 | 071 | 071 | 071  |
| 072 | 072      | 072         | 072 | 072 | 072 | 072 | 072  |
| 073 | 073      | 073         | 073 | 073 | 073 | 073 | 073  |
| 074 | 074      | 074         | 074 | 074 | 074 | 074 | 074  |
| 075 | 075      | 075         | 075 | 075 | 075 | 075 | 075  |
| 076 | 076      | 076         | 076 | 076 | 076 | 076 | 076  |
| 077 | 077      | 077         | 077 | 077 | 077 | 077 | 077  |
| 078 | 078      | 078         | 078 | 078 | 078 | 078 | 078  |
| 079 | 079      | 079         | 079 | 079 | 079 | 079 | 079  |
| 080 | 080      | 080         | 080 | 080 | 080 | 080 | 080  |
| 081 | 081      | 081         | 081 | 081 | 081 | 081 | 081  |
| 082 | 082      | 082         | 082 | 082 | 082 | 082 | 082  |
| 083 | 083      | 083         | 083 | 083 | 083 | 083 | 083  |
| 084 | 084      | 084         | 084 | 084 | 084 | 084 | 084  |
| 085 | 085      | 085         | 085 | 085 | 085 | 085 | 085  |
| 086 | 086      | 086         | 086 | 086 | 086 | 086 | 086  |
| 087 | 087      | 087         | 087 | 087 | 087 | 087 | 087  |
| 088 | 088      | 088         | 088 | 088 | 088 | 088 | 088  |
| 089 | 089      | 089         | 089 | 089 | 089 | 089 | 089  |
| 090 | 090      | 090         | 090 | 090 | 090 | 090 | 090  |
| 091 | 091      | 091         | 091 | 091 | 091 | 091 | 091  |
| 092 | 092      | 092         | 092 | 092 | 092 | 092 | 092  |
| 093 | 093      | 093         | 093 | 093 | 093 | 093 | 093  |
| 094 | 094      | 094         | 094 | 094 | 094 | 094 | 094  |
| 095 | 095      | 095         | 095 | 095 | 095 | 095 | 095  |
| 096 | 096      | 096         | 096 | 096 | 096 | 096 | 096  |
| 097 | 097      | 097         | 097 | 097 | 097 | 097 | 097  |
| 098 | 098      | 098         | 098 | 098 | 098 | 098 | 098  |
| 099 | 099      | 099         | 099 | 099 | 099 | 099 | 099  |
| 100 | 100      | 100         | 100 | 100 | 100 | 100 | 100  |

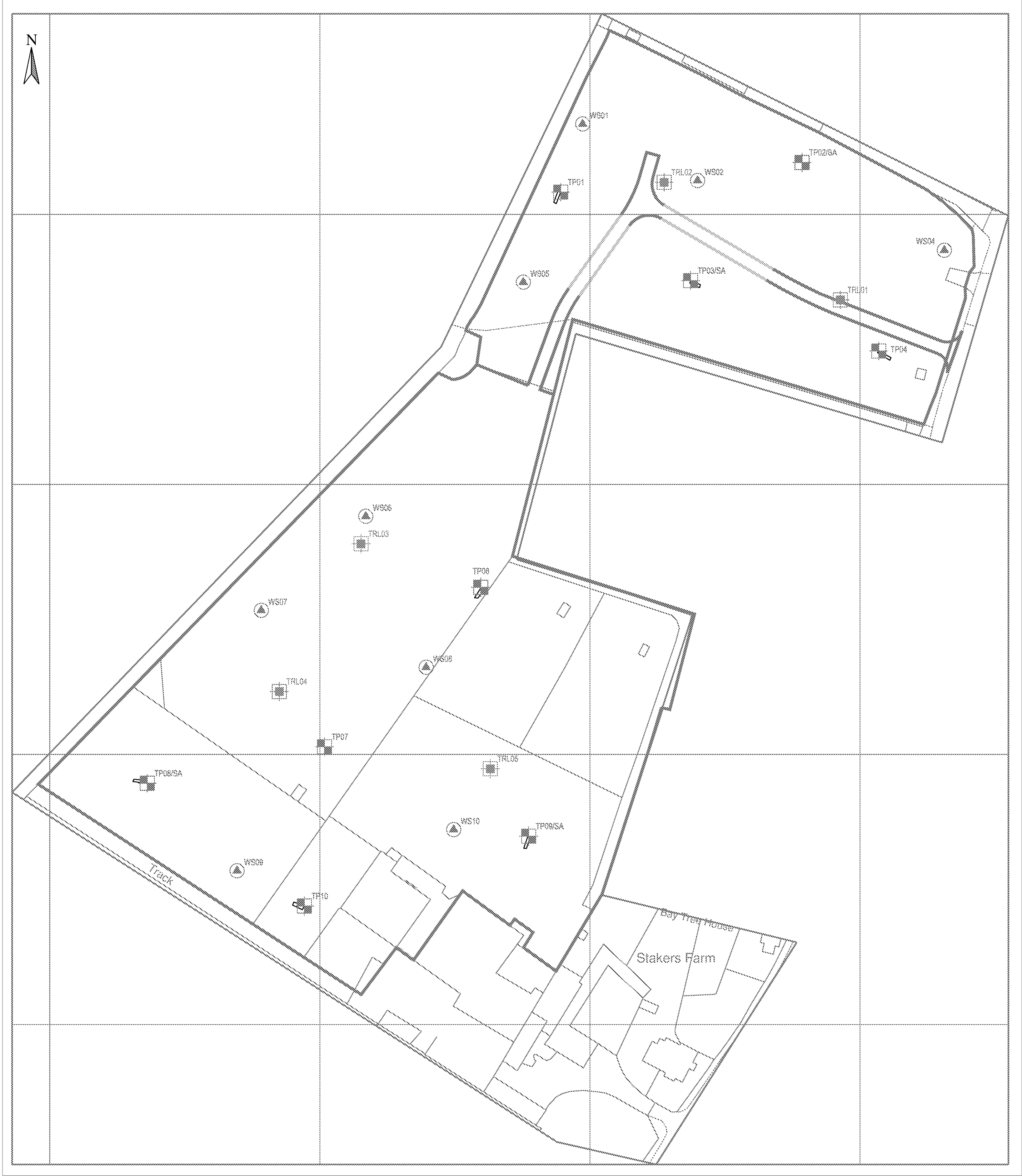


Client: **DANDARA LTD (SOUTHERN)**

Project: **LAND AT STAKERS FARM, YAPTON**  
Drawing Title: **SITE LOCATION PLAN**

|           |           |           |           |
|-----------|-----------|-----------|-----------|
| 000000 00 | 000000 00 | 000000 00 | 000000 00 |
| 00 000000 | 00 000000 | 00 000000 | 00 000000 |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000    | 000000    | 000000    |
| 000000    | 000000</  |           |           |





LEGEND:

- SITE BOUNDARY
- WINDOWLESS SAMPLE LOCATIONS
- TRIAL PIT LOCATIONS
- TRL LOCATIONS

NOTE:  
DRAWING BASED ON INTERSECT SURVEYS  
WINDOW SAMPLE LAYOUT/DRG REF  
19607-001/MARCH 2019.

0 10 20 30 40 50 m  
SCALE 1:1000

**Land at Stakers Farm, Yapton**  
**Ground Investigation – Interpretative Report**



**Appendices**

# Land at Stakers Farm, Yapton

## Ground Investigation – Interpretative Report



### Appendix A – Report Conditions

#### GROUND INVESTIGATION

This report is produced solely for the benefit of Dandara Ltd and no liability is accepted for any reliance placed on it by any other party unless specifically agreed in writing otherwise.

This report refers, within the limitations stated, to the condition of the site at the time of the inspections. No warranty is given as to the possibility of future changes in the condition of the site.

This report is based on a visual site inspection, reference to accessible referenced historical records, information supplied by those parties referenced in the text and preliminary discussions with local and Statutory Authorities. Some of the opinions are based on unconfirmed data and information and are presented as the best that can be obtained without further extensive research. Where ground contamination is suspected but no physical site test results are available to confirm this, the report must be regarded as initial advice only, and further assessment should be undertaken prior to activities related to the site. Where test results undertaken by others have been made available these can only be regarded as a limited sample. The possibility of the presence of contaminants, perhaps in higher concentrations, elsewhere on the site cannot be discounted.

Whilst confident in the findings detailed within this report because there are no exact UK definitions of these matters, being subject to risk analysis, we are unable to give categorical assurances that they will be accepted by Authorities or Funds etc. without question as such bodies often have unpublished, more stringent objectives. This report is prepared for the proposed uses stated in the report and should not be used in a different context without reference to WYG. In time improved practices or amended legislation may necessitate a re-assessment.

The assessment of ground conditions within this report is based upon the findings of the study undertaken. We have interpreted the ground conditions in between locations on the assumption that conditions do not vary significantly. However, no investigation can inspect each and every part of the site and therefore changes or variances in the physical and chemical site conditions as described in this report cannot be discounted.

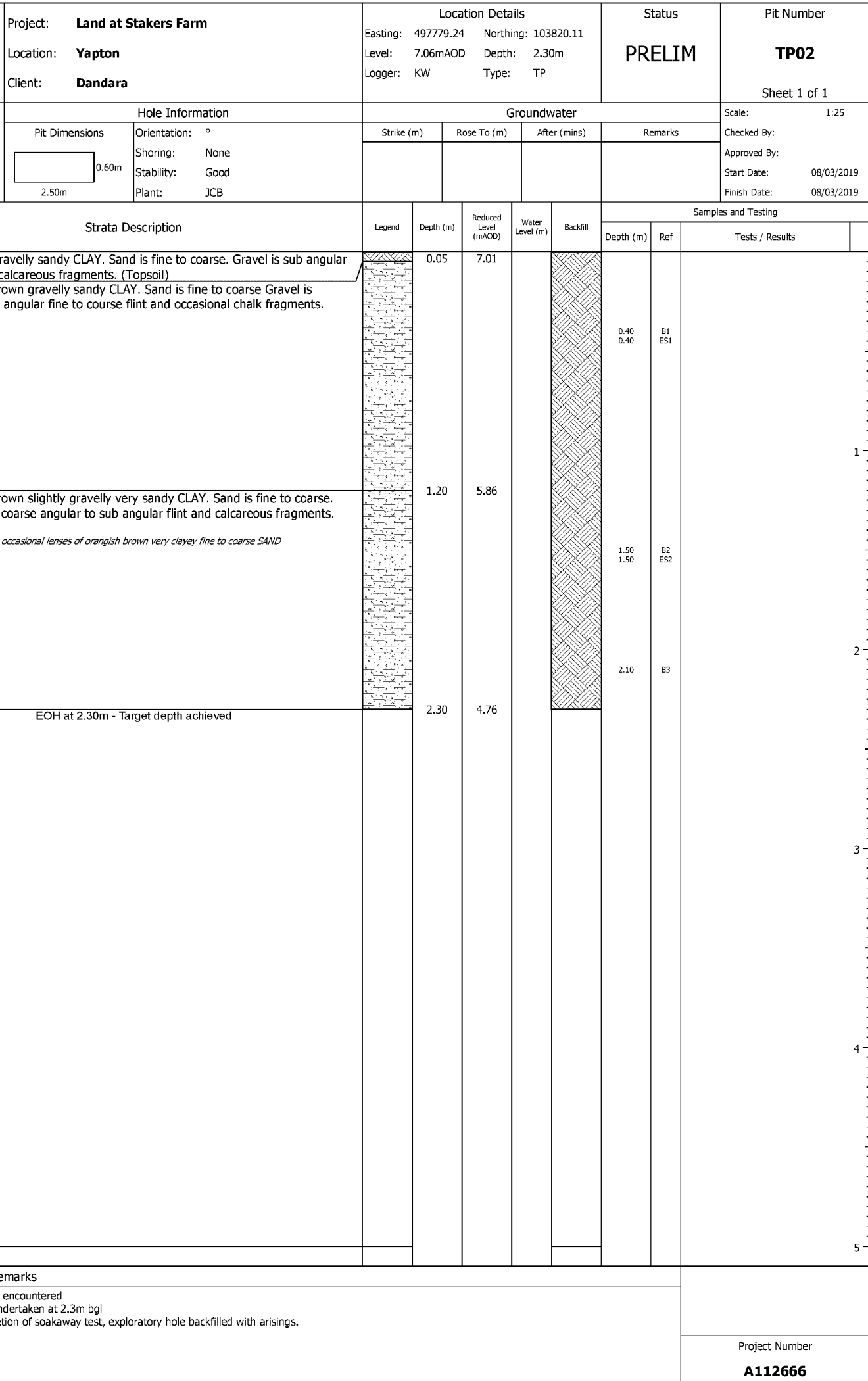
The report is limited to those aspects of land contamination specifically reported on and is necessarily restricted and no liability is accepted for any other aspect especially concerning gradual or sudden pollution incidents. The opinions expressed cannot be absolute due to the limitations of time and resources imposed by the agreed brief and the possibility of unrecorded previous use and abuse of the site and adjacent sites. The report concentrates on the site as defined in the report and provides an opinion on surrounding sites. If migrating pollution or contamination (past or present) exists further extensive research will be required before the effects can be better determined.

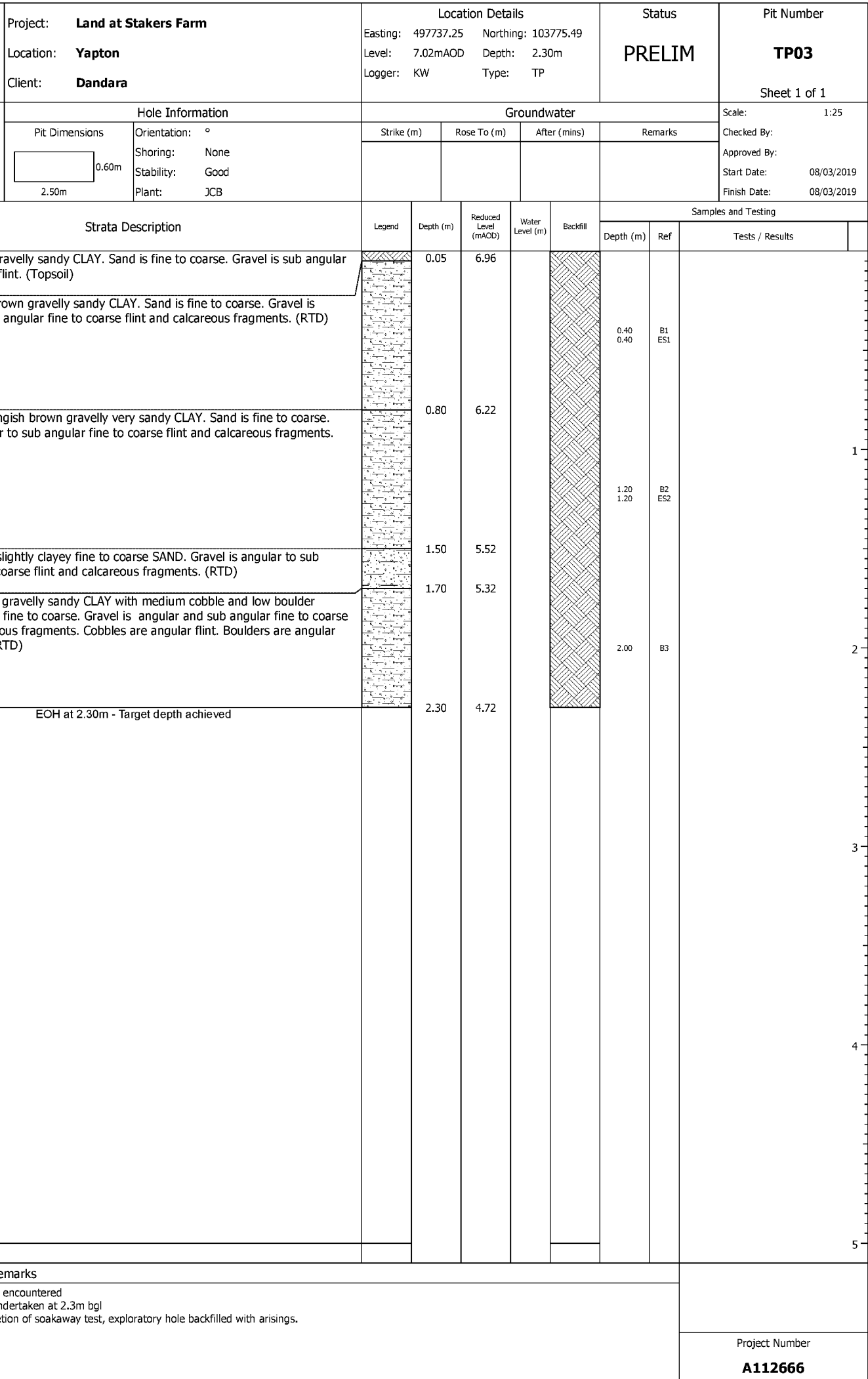
**Land at Stakers Farm, Yapton**  
**Ground Investigation – Interpretative Report**

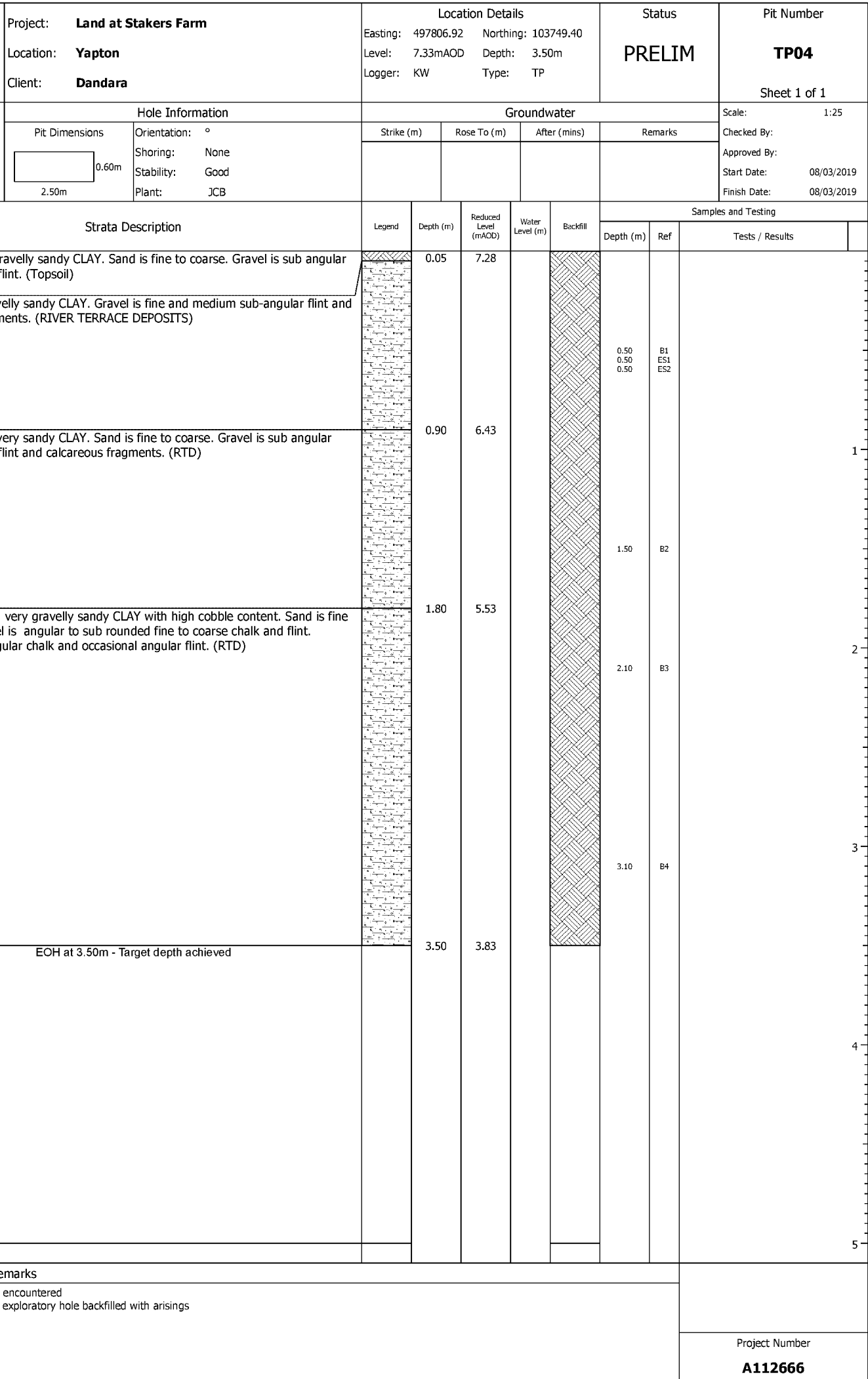


**Appendix B – Exploratory Hole Logs & Photographic Plates**

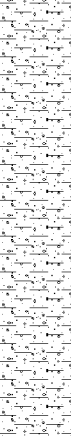
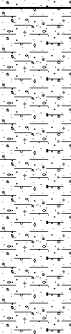
|                                                                                                                                                                                                    |                                      |                                                |                                                                                                        |             |                      |                 |                                                                                     |                                  |             |                 |    |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|------------------------------------------------|--------------------------------------------------------------------------------------------------------|-------------|----------------------|-----------------|-------------------------------------------------------------------------------------|----------------------------------|-------------|-----------------|----|
|                                                                                                                     | Project: <b>Land at Stakers Farm</b> |                                                | Location Details                                                                                       |             |                      |                 | Status                                                                              |                                  | Pit Number  |                 |    |
|                                                                                                                                                                                                    | Location: <b>Yapton</b>              |                                                | Easting: 497689.18    Northing: 103808.24<br>Level: 6.30mAOD    Depth: 3.50m<br>Logger: KW    Type: TP |             |                      |                 | <b>PRELIM</b>                                                                       |                                  | <b>TP01</b> |                 |    |
|                                                                                                                                                                                                    | Client: <b>Dandara</b>               |                                                |                                                                                                        |             |                      |                 |                                                                                     |                                  |             |                 |    |
| Hole Information                                                                                                                                                                                   |                                      |                                                | Groundwater                                                                                            |             |                      |                 |                                                                                     | Scale: 1:25                      |             |                 |    |
| Pit Dimensions                                                                                                                                                                                     |                                      | Orientation: °                                 | Strike (m)                                                                                             | Rose To (m) | After (mins)         | Remarks         | Checked By:                                                                         |                                  |             |                 |    |
| <div><div></div><div>0.60m</div><div>2.50m</div></div>                                                                                                                                             |                                      | Shoring: None<br>Stability: Good<br>Plant: JCB |                                                                                                        |             |                      |                 | Approved By:                                                                        |                                  |             |                 |    |
|                                                                                                                                                                                                    |                                      |                                                |                                                                                                        |             |                      |                 | Start Date: 08/03/2019<br>Finish Date: 08/03/2019                                   |                                  |             |                 |    |
| Strata Description                                                                                                                                                                                 |                                      |                                                | Legend                                                                                                 | Depth (m)   | Reduced Level (mAOD) | Water Level (m) | Backfill                                                                            | Samples and Testing              |             |                 |    |
|                                                                                                                                                                                                    |                                      |                                                |                                                                                                        |             |                      |                 |                                                                                     | Depth (m)                        | Ref         | Tests / Results |    |
| Brown slightly gravelly sandy CLAY. Gravel is fine to medium calcareous fragments. (Topsoil).                                                                                                      |                                      |                                                |                       | 0.05        | 6.25                 |                 |  |                                  |             |                 |    |
| Firm orangish brown gravelly sandy CLAY. Gravel is angular to sub angular fine to coarse flint and calcareous fragments. (RTD)                                                                     |                                      |                                                |                                                                                                        |             |                      |                 |                                                                                     |                                  |             |                 |    |
|                                                                                                                                                                                                    |                                      |                                                |                                                                                                        |             |                      |                 |                                                                                     |                                  |             |                 |    |
|                                                                                                                                                                                                    |                                      |                                                |                                                                                                        |             |                      |                 |                                                                                     |                                  |             |                 |    |
|                                                                                                                                                                                                    |                                      |                                                |                                                                                                        |             |                      |                 |                                                                                     |                                  |             |                 |    |
|                                                                                                                                                                                                    |                                      |                                                |                                                                                                        |             |                      |                 |                                                                                     |                                  |             |                 |    |
| Firm orangish brown gravelly very sandy CLAY. Gravel is sub angular fine to coarse flint and calcareous fragments. (RTD)                                                                           |                                      |                                                |                       | 1.00        | 5.30                 |                 |                                                                                     | 1.00                             | ES2         | 1               |    |
|                                                                                                                                                                                                    |                                      |                                                |                                                                                                        |             |                      |                 |                                                                                     | 1.20                             | B2          |                 |    |
| Stiff orangish brown gravelly very sandy CLAY with low cobble content. Gravel is angular to sub angular fine to coarse flint and calcareous fragments. Cobbles are angular flint. (RTD)            |                                      |                                                |                      | 1.80        | 4.50                 |                 |                                                                                     | 2.00                             | B3          | 2               |    |
|                                                                                                                                                                                                    |                                      |                                                |                                                                                                        |             |                      |                 |                                                                                     | 2.00                             | ES3         |                 |    |
| Orangish brown gravelly clayey fine to coarse SAND with high cobble content. Gravel is sub angular fine to medium flint and calcareous fragments. Cobbles are angular flint. (RTD)                 |                                      |                                                |                     | 2.20        | 4.10                 |                 |                                                                                     | 2.50                             | B4          |                 |    |
|                                                                                                                                                                                                    |                                      |                                                |                                                                                                        |             |                      |                 |                                                                                     |                                  |             |                 |    |
| Light yellowish brown very gravelly fine to medium SAND with high cobble content. Gravel is angular to sub angular fine to coarse flint and chalk. Cobbles are angular to sub angular flint. (RTD) |                                      |                                                |                     | 3.00        | 3.30                 |                 |                                                                                     | 3.10                             | B5          | 3               |    |
|                                                                                                                                                                                                    |                                      |                                                |                                                                                                        |             |                      |                 |                                                                                     |                                  |             |                 |    |
| Light brown very gravelly sandy CLAY. Gravel is sub angular to sub rounded fine to coarse chalk and flint (RTD)                                                                                    |                                      |                                                |                     | 3.40        | 2.90                 |                 |                                                                                     |                                  |             |                 |    |
| EOH at 3.50m - Target depth achieved                                                                                                                                                               |                                      |                                                |                                                                                                        |             | 3.50                 | 2.80            |                                                                                     |                                  | 3.50        |                 | B6 |
|                                                                                                                                                                                                    |                                      |                                                |                                                                                                        |             |                      |                 |                                                                                     |                                  |             | 4               |    |
|                                                                                                                                                                                                    |                                      |                                                |                                                                                                        |             |                      |                 |                                                                                     |                                  |             |                 |    |
|                                                                                                                                                                                                    |                                      |                                                |                                                                                                        |             |                      |                 |                                                                                     |                                  |             |                 |    |
|                                                                                                                                                                                                    |                                      |                                                |                                                                                                        |             |                      |                 |                                                                                     |                                  |             |                 |    |
|                                                                                                                                                                                                    |                                      |                                                |                                                                                                        |             |                      |                 |                                                                                     |                                  |             |                 |    |
|                                                                                                                                                                                                    |                                      |                                                |                                                                                                        |             |                      |                 |                                                                                     |                                  |             | 5               |    |
|                                                                                                                                                                                                    |                                      |                                                |                                                                                                        |             |                      |                 |                                                                                     |                                  |             |                 |    |
|                                                                                                                                                                                                    |                                      |                                                |                                                                                                        |             |                      |                 |                                                                                     |                                  |             |                 |    |
|                                                                                                                                                                                                    |                                      |                                                |                                                                                                        |             |                      |                 |                                                                                     |                                  |             |                 |    |
|                                                                                                                                                                                                    |                                      |                                                |                                                                                                        |             |                      |                 |                                                                                     |                                  |             |                 |    |
| Observations / Remarks                                                                                                                                                                             |                                      |                                                |                                                                                                        |             |                      |                 |                                                                                     | Project Number<br><b>A112666</b> |             |                 |    |
| 1. Groundwater not encountered<br>2. Upon completion exploratory hole backfilled with arisings                                                                                                     |                                      |                                                |                                                                                                        |             |                      |                 |                                                                                     |                                  |             |                 |    |

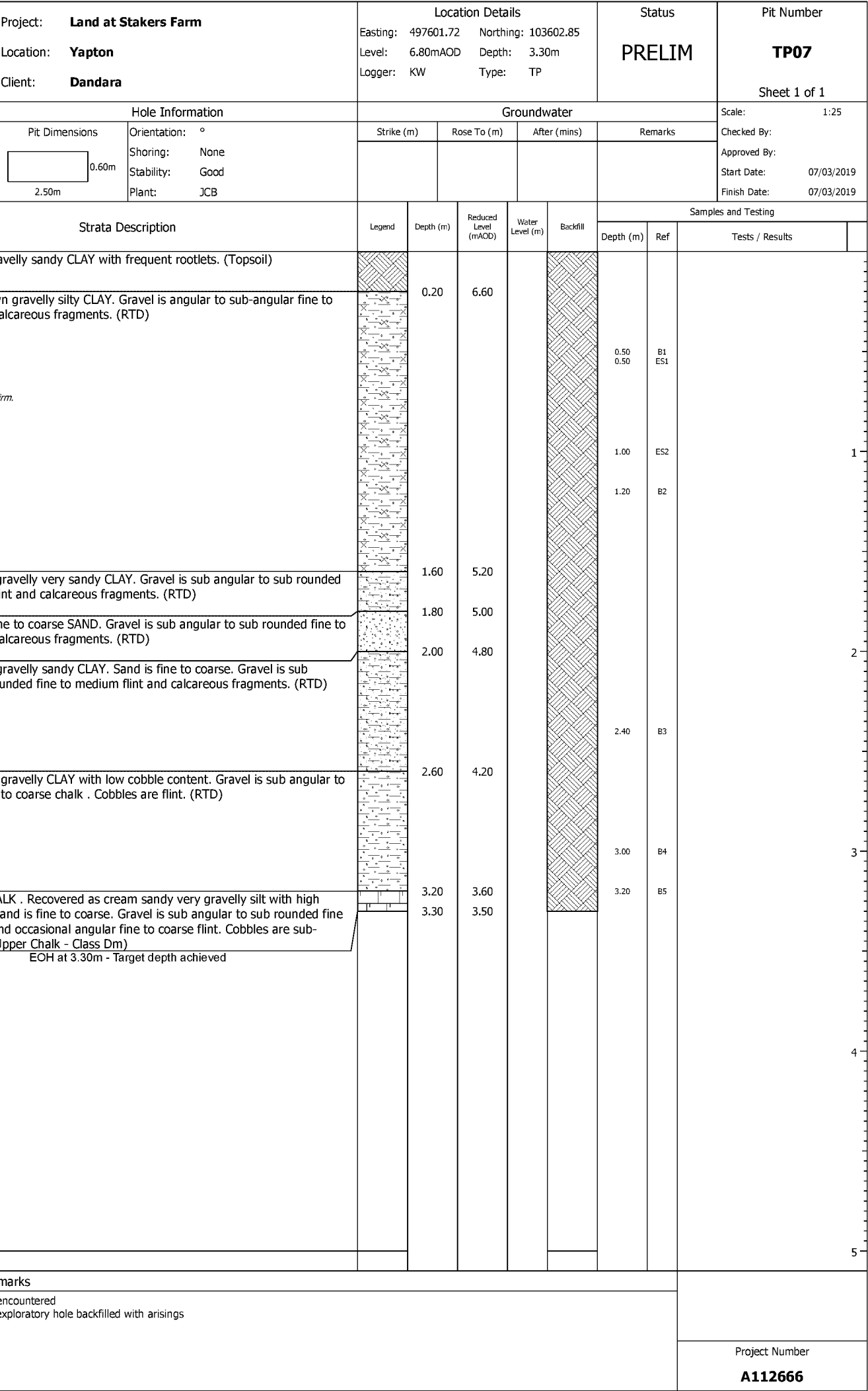


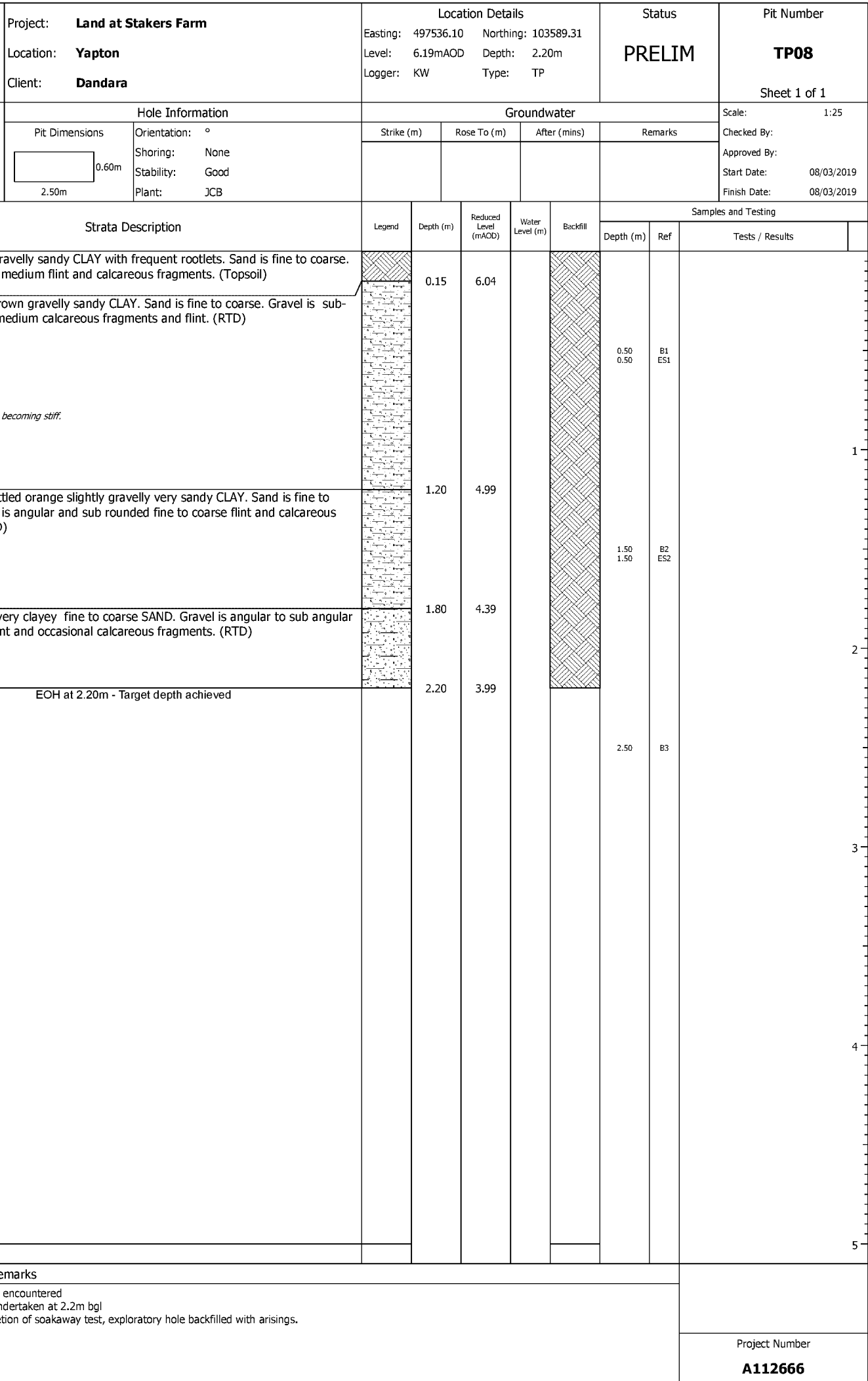






|                                                                                                                                                                                                                                                                               |                                      |                                                |                                                                                                        |             |                      |                 |                                                                                     |                     |                                  |                 |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|------------------------------------------------|--------------------------------------------------------------------------------------------------------|-------------|----------------------|-----------------|-------------------------------------------------------------------------------------|---------------------|----------------------------------|-----------------|
|                                                                                                                                                                                                | Project: <b>Land at Stakers Farm</b> |                                                | Location Details                                                                                       |             |                      |                 | Status                                                                              |                     | Pit Number                       |                 |
|                                                                                                                                                                                                                                                                               | Location: <b>Yapton</b>              |                                                | Easting: 497659.59    Northing: 103661.62<br>Level: 5.80mAOD    Depth: 3.20m<br>Logger: KW    Type: TP |             |                      |                 | <b>PRELIM</b>                                                                       |                     | <b>TP06</b>                      |                 |
|                                                                                                                                                                                                                                                                               | Client: <b>Dandara</b>               |                                                |                                                                                                        |             |                      |                 |                                                                                     |                     |                                  |                 |
| Hole Information                                                                                                                                                                                                                                                              |                                      |                                                | Groundwater                                                                                            |             |                      |                 |                                                                                     | Scale: 1:25         |                                  |                 |
| Pit Dimensions                                                                                                                                                                                                                                                                |                                      | Orientation: °                                 | Strike (m)                                                                                             | Rose To (m) | After (mins)         | Remarks         | Checked By:                                                                         |                     |                                  |                 |
| <div><div></div><div>0.60m</div><div>2.50m</div></div>                                                                                                                                                                                                                        |                                      | Shoring: None<br>Stability: Good<br>Plant: JCB |                                                                                                        |             |                      |                 | Approved By:                                                                        |                     |                                  |                 |
|                                                                                                                                                                                                                                                                               |                                      |                                                |                                                                                                        |             |                      |                 | Start Date: 07/03/2019<br>Finish Date: 07/03/2019                                   |                     |                                  |                 |
| Strata Description                                                                                                                                                                                                                                                            |                                      |                                                | Legend                                                                                                 | Depth (m)   | Reduced Level (mAOD) | Water Level (m) | Backfill                                                                            | Samples and Testing |                                  |                 |
|                                                                                                                                                                                                                                                                               |                                      |                                                |                                                                                                        |             |                      |                 |                                                                                     | Depth (m)           | Ref                              | Tests / Results |
| Dark brown slightly gravelly sandy CLAY with frequent rootlets. (Topsoil) TOP                                                                                                                                                                                                 |                                      |                                                |                       | 0.10        | 5.70                 |                 |  | 0.50<br>0.50        | B1<br>ES1                        |                 |
| Firm orange brown gravelly sandy CLAY. Gravel is angular fine to coarse flint and calcareous fragments. (RIVER TERRACE DEPOSITS) RTD                                                                                                                                          |                                      |                                                |                       |             |                      |                 |                                                                                     | 1.20<br>1.20        | B2<br>ES2                        |                 |
| From 0.80m bgl becoming stiff.                                                                                                                                                                                                                                                |                                      |                                                |                                                                                                        |             |                      |                 |                                                                                     |                     |                                  |                 |
| Orangish brown gravelly very sandy CLAY with high cobble content. Sand is fine to coarse. Gravel is fine to coarse flint. Cobbles are angular to sub angular flint and calcareous fragments. (RTD) RTD                                                                        |                                      |                                                |                      | 1.60        | 4.20                 |                 |                                                                                     | 1.80                | B3                               |                 |
| Light brown gravelly clayey fine to coarse SAND. Gravel is sub-angular to sub-rounded fine to coarse flint and chalk. (RTD) RTD                                                                                                                                               |                                      |                                                |                     | 2.70        | 3.10                 |                 |                                                                                     | 2.80                | B4                               |                 |
| Structureless CHALK. Recovered as whitish brown gravelly sandy SILT with low cobble content. Sand is fine to coarse. Gravel is sub angular fine to coarse chalk and occasional flint. Cobbles are sub-angular. (Upper Chalk - Class Dm). EOH at 3.20m - Target depth achieved |                                      |                                                |                     | 3.00        | 2.80                 |                 |                                                                                     |                     |                                  | 3               |
|                                                                                                                                                                                                                                                                               |                                      |                                                |                     | 3.20        | 2.60                 |                 |                                                                                     | 3.20                | B5                               |                 |
|                                                                                                                                                                                                                                                                               |                                      |                                                |                                                                                                        |             |                      |                 |                                                                                     |                     |                                  | 4               |
|                                                                                                                                                                                                                                                                               |                                      |                                                |                                                                                                        |             |                      |                 |                                                                                     |                     |                                  | 5               |
| Observations / Remarks                                                                                                                                                                                                                                                        |                                      |                                                |                                                                                                        |             |                      |                 |                                                                                     |                     | Project Number<br><b>A112666</b> |                 |
| 1. Groundwater not encountered<br>2. Upon completion exploratory hole backfilled with arisings                                                                                                                                                                                |                                      |                                                |                                                                                                        |             |                      |                 |                                                                                     |                     |                                  |                 |





|                                                                                                                                                                                                                                                                                                                                           |                                      |  |                                                                                                        |           |                      |                 |                                                                                     |                     |              |                 |              |           |                                  |  |                                                   |  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|--|--------------------------------------------------------------------------------------------------------|-----------|----------------------|-----------------|-------------------------------------------------------------------------------------|---------------------|--------------|-----------------|--------------|-----------|----------------------------------|--|---------------------------------------------------|--|
|                                                                                                                                                                                                                                                            | Project: <b>Land at Stakers Farm</b> |  | Location Details                                                                                       |           |                      |                 | Status                                                                              |                     | Pit Number   |                 |              |           |                                  |  |                                                   |  |
|                                                                                                                                                                                                                                                                                                                                           | Location: <b>Yapton</b>              |  | Easting: 497677.04    Northing: 103569.87<br>Level: 6.84mAOD    Depth: 3.60m<br>Logger: KW    Type: TP |           |                      |                 | <b>PRELIM</b>                                                                       |                     | <b>TP09</b>  |                 |              |           |                                  |  |                                                   |  |
|                                                                                                                                                                                                                                                                                                                                           | Client: <b>Dandara</b>               |  |                                                                                                        |           |                      |                 |                                                                                     |                     |              |                 |              |           |                                  |  |                                                   |  |
|                                                                                                                                                                                                                                                                                                                                           |                                      |  | Groundwater                                                                                            |           |                      |                 | Scale: 1:25                                                                         |                     | Sheet 1 of 1 |                 |              |           |                                  |  |                                                   |  |
| Hole Information                                                                                                                                                                                                                                                                                                                          |                                      |  |                                                                                                        |           |                      |                 | Strike (m)                                                                          |                     | Rose To (m)  |                 | After (mins) |           | Remarks                          |  | Checked By:                                       |  |
| Pit Dimensions<br><div><div></div><div>0.50m</div><div>2.30m</div></div>                                                                                                                                                                                                                                                                  |                                      |  | Orientation: °<br>Shoring: None<br>Stability: Good<br>Plant: JCB                                       |           |                      |                 |                                                                                     |                     |              |                 |              |           |                                  |  | Approved By:                                      |  |
|                                                                                                                                                                                                                                                                                                                                           |                                      |  |                                                                                                        |           |                      |                 |                                                                                     |                     |              |                 |              |           |                                  |  | Start Date: 08/03/2019<br>Finish Date: 08/03/2019 |  |
| Strata Description                                                                                                                                                                                                                                                                                                                        |                                      |  | Legend                                                                                                 | Depth (m) | Reduced Level (mAOD) | Water Level (m) | Backfill                                                                            | Samples and Testing |              |                 |              |           |                                  |  |                                                   |  |
|                                                                                                                                                                                                                                                                                                                                           |                                      |  |                                                                                                        |           |                      |                 |                                                                                     | Depth (m)           | Ref          | Tests / Results |              |           |                                  |  |                                                   |  |
| Brown slightly gravelly very sandy CLAY with frequent rootlets. Sand is fine to coarse. Gravel is angular to sub angular fine to coarse flint and calcareous fragments. TOP<br>Firm orangish brown gravelly sandy CLAY. Sand is fine to coarse. Gravel is angular and sub rounded fine to coarse flint and calcareous fragments (RTD) RTD |                                      |  |                       | 0.10      | 6.74                 |                 |  |                     |              |                 | 0.40<br>0.50 | B1<br>ES1 |                                  |  |                                                   |  |
|                                                                                                                                                                                                                                                                                                                                           |                                      |  |                                                                                                        |           |                      |                 |                                                                                     |                     |              |                 |              |           |                                  |  |                                                   |  |
| Brown slightly gravelly sandy CLAY. Sand is fine to coarse. Gravel is angular to sub angular fine to medium calcareous and flint fragments. (RTD) RTD                                                                                                                                                                                     |                                      |  |                       | 0.90      | 5.94                 |                 |                                                                                     |                     |              |                 | 1.00<br>1.20 | ES2<br>B2 | 1                                |  |                                                   |  |
|                                                                                                                                                                                                                                                                                                                                           |                                      |  |                                                                                                        |           |                      |                 |                                                                                     |                     |              |                 |              |           |                                  |  |                                                   |  |
| Brown gravelly very sandy CLAY with low cobble content. Sand is fine to coarse. Gravel is sub angular to sub rounded fine to coarse calcareous and flint fragments. Cobbles are angular flint. (RTD) RTD                                                                                                                                  |                                      |  |                       | 1.50      | 5.34                 |                 |                                                                                     |                     |              |                 | 1.70<br>1.70 | B3<br>ES3 | 2                                |  |                                                   |  |
|                                                                                                                                                                                                                                                                                                                                           |                                      |  |                                                                                                        |           |                      |                 |                                                                                     |                     |              |                 |              |           |                                  |  |                                                   |  |
| Light brown very gravelly sandy CLAY with low cobble content. Sand is fine to coarse. Gravel is sub angular and sub rounded fine to coarse chalk and flint. Cobbles are angular flint. (RTD) RTD                                                                                                                                          |                                      |  |                     | 2.20      | 4.64                 |                 |                                                                                     |                     |              |                 |              |           |                                  |  |                                                   |  |
|                                                                                                                                                                                                                                                                                                                                           |                                      |  |                                                                                                        |           |                      |                 |                                                                                     |                     |              |                 |              |           |                                  |  |                                                   |  |
| Light brown gravelly slightly clayey fine to coarse SAND with low cobble and boulder content. Gravel is sub angular to sub rounded fine to coarse chalk and flint. Cobbles and boulders are angular flint. (RTD) RTD                                                                                                                      |                                      |  |                     | 2.50      | 4.34                 |                 |                                                                                     |                     |              |                 | 2.50<br>3.00 | B4<br>B5  | 3                                |  |                                                   |  |
|                                                                                                                                                                                                                                                                                                                                           |                                      |  |                                                                                                        |           |                      |                 |                                                                                     |                     |              |                 |              |           |                                  |  |                                                   |  |
| Structureless CHALK. Recovered as of cream very gravelly SILT with low cobble content. Gravel is sub angular to sub rounded fine to coarse chalk and occasional angular flint. Cobbles are sub angular chalk. (Upper Chalk - Class Dm)                                                                                                    |                                      |  |                     | 3.20      | 3.64                 |                 |                                                                                     |                     |              |                 | 3.50         | B6        |                                  |  |                                                   |  |
|                                                                                                                                                                                                                                                                                                                                           |                                      |  |                                                                                                        |           |                      |                 |                                                                                     |                     |              |                 |              |           |                                  |  |                                                   |  |
| EOH at 3.60m - Target depth achieved                                                                                                                                                                                                                                                                                                      |                                      |  |                     | 3.60      | 3.24                 |                 |                                                                                     |                     |              |                 |              |           | 4                                |  |                                                   |  |
|                                                                                                                                                                                                                                                                                                                                           |                                      |  |                                                                                                        |           |                      |                 |                                                                                     |                     |              |                 |              |           |                                  |  |                                                   |  |
|                                                                                                                                                                                                                                                                                                                                           |                                      |  |                     |           |                      |                 |                                                                                     |                     |              |                 |              |           | 5                                |  |                                                   |  |
|                                                                                                                                                                                                                                                                                                                                           |                                      |  |                                                                                                        |           |                      |                 |                                                                                     |                     |              |                 |              |           |                                  |  |                                                   |  |
| Observations / Remarks                                                                                                                                                                                                                                                                                                                    |                                      |  |                                                                                                        |           |                      |                 |                                                                                     |                     |              |                 |              |           | Project Number<br><b>A112666</b> |  |                                                   |  |
| 1. Groundwater not encountered<br>2. Upon completion exploratory hole backfilled with arisings                                                                                                                                                                                                                                            |                                      |  |                                                                                                        |           |                      |                 |                                                                                     |                     |              |                 |              |           |                                  |  |                                                   |  |

|                                                                                                                                                                                                                                                                                                                                                                                 |                                      |                                                |                                                                                                        |             |                      |                 |                                                   |                     |                |                 |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|------------------------------------------------|--------------------------------------------------------------------------------------------------------|-------------|----------------------|-----------------|---------------------------------------------------|---------------------|----------------|-----------------|
|                                                                                                                                                                                                                                                                                                  | Project: <b>Land at Stakers Farm</b> |                                                | Location Details                                                                                       |             |                      |                 | Status                                            |                     | Pit Number     |                 |
|                                                                                                                                                                                                                                                                                                                                                                                 | Location: <b>Yapton</b>              |                                                | Easting: 497594.27    Northing: 103543.86<br>Level: 6.60mAOD    Depth: 3.50m<br>Logger: KW    Type: TP |             |                      |                 | <b>PRELIM</b>                                     |                     | <b>TP10</b>    |                 |
|                                                                                                                                                                                                                                                                                                                                                                                 | Client: <b>Dandara</b>               |                                                |                                                                                                        |             |                      |                 |                                                   |                     |                |                 |
| Hole Information                                                                                                                                                                                                                                                                                                                                                                |                                      |                                                | Groundwater                                                                                            |             |                      |                 |                                                   | Scale: 1:25         |                |                 |
| Pit Dimensions                                                                                                                                                                                                                                                                                                                                                                  |                                      | Orientation: °                                 | Strike (m)                                                                                             | Rose To (m) | After (mins)         | Remarks         | Checked By:                                       |                     |                |                 |
| <div><div></div><div>0.60m</div><div>2.50m</div></div>                                                                                                                                                                                                                                                                                                                          |                                      | Shoring: None<br>Stability: Good<br>Plant: JCB |                                                                                                        |             |                      |                 | Approved By:                                      |                     |                |                 |
|                                                                                                                                                                                                                                                                                                                                                                                 |                                      |                                                |                                                                                                        |             |                      |                 | Start Date: 07/03/2019<br>Finish Date: 07/03/2019 |                     |                |                 |
| Strata Description                                                                                                                                                                                                                                                                                                                                                              |                                      |                                                | Legend                                                                                                 | Depth (m)   | Reduced Level (mAOD) | Water Level (m) | Backfill                                          | Samples and Testing |                |                 |
|                                                                                                                                                                                                                                                                                                                                                                                 |                                      |                                                |                                                                                                        |             |                      |                 |                                                   | Depth (m)           | Ref            | Tests / Results |
| <p>Dark brown slightly gravelly sandy CLAY with frequent rootlets. Gravel is sub angular to sub rounded fine to medium flint and calcareous fragments. TOP</p> <p>Firm brown gravelly sandy CLAY. Sand is fine to coarse. Gravel is sub angular to sub rounded fine to medium flint and calcareous fragments. (RTD)</p> <p>RTD</p> <p><i>From 0.70m bgl becoming stiff.</i></p> |                                      |                                                |                                                                                                        | 0.10        | 6.50                 |                 |                                                   | 0.40                | B1             |                 |
|                                                                                                                                                                                                                                                                                                                                                                                 |                                      |                                                |                                                                                                        |             |                      |                 | 0.50                                              | ES1                 |                |                 |
|                                                                                                                                                                                                                                                                                                                                                                                 |                                      |                                                |                                                                                                        |             |                      |                 | 1.00                                              | B2                  |                |                 |
|                                                                                                                                                                                                                                                                                                                                                                                 |                                      |                                                |                                                                                                        |             |                      |                 | 1.00                                              | ES2                 |                |                 |
|                                                                                                                                                                                                                                                                                                                                                                                 |                                      |                                                |                                                                                                        |             |                      |                 | 1.60                                              | ES3                 |                |                 |
| Brown gravelly very sandy CLAY with low cobble content. Sand is fine to coarse. Gravel is angular to sub angular fine to coarse flint and chalk. Cobbles are angular to sub angular flint and chalk. (RTD)                                                                                                                                                                      |                                      |                                                |                                                                                                        | 1.60        | 5.00                 |                 |                                                   | 1.60                | ES3            | 1               |
|                                                                                                                                                                                                                                                                                                                                                                                 |                                      |                                                |                                                                                                        |             |                      |                 | 1.80                                              | B3                  |                |                 |
|                                                                                                                                                                                                                                                                                                                                                                                 |                                      |                                                |                                                                                                        |             |                      |                 |                                                   |                     |                |                 |
|                                                                                                                                                                                                                                                                                                                                                                                 |                                      |                                                |                                                                                                        |             |                      |                 |                                                   |                     |                |                 |
|                                                                                                                                                                                                                                                                                                                                                                                 |                                      |                                                |                                                                                                        |             |                      |                 |                                                   |                     |                |                 |
| Light brown sandy very gravelly CLAY. Sand is fine to coarse. Gravel is sub angular to sub rounded fine to coarse flint and chalk. (RTD)                                                                                                                                                                                                                                        |                                      |                                                |                                                                                                        | 2.40        | 4.20                 |                 |                                                   | 2.50                | B4             | 2               |
|                                                                                                                                                                                                                                                                                                                                                                                 |                                      |                                                |                                                                                                        |             |                      |                 |                                                   |                     |                |                 |
|                                                                                                                                                                                                                                                                                                                                                                                 |                                      |                                                |                                                                                                        |             |                      |                 |                                                   |                     |                |                 |
|                                                                                                                                                                                                                                                                                                                                                                                 |                                      |                                                |                                                                                                        |             |                      |                 |                                                   |                     |                |                 |
|                                                                                                                                                                                                                                                                                                                                                                                 |                                      |                                                |                                                                                                        |             |                      |                 |                                                   |                     |                |                 |
| Structureless CHALK. Recovered as cream very gravelly silt with low cobble content. Gravel is sub angular to sub rounded fine to coarse chalk and occasional angular flints. Cobbles are sub angular chalk. (Upper Chalk - Class Dm)                                                                                                                                            |                                      |                                                |                                                                                                        | 2.90        | 3.70                 |                 |                                                   | 3.20                | B5             | 3               |
|                                                                                                                                                                                                                                                                                                                                                                                 |                                      |                                                |                                                                                                        |             |                      |                 |                                                   |                     |                |                 |
|                                                                                                                                                                                                                                                                                                                                                                                 |                                      |                                                |                                                                                                        |             |                      |                 |                                                   |                     |                |                 |
|                                                                                                                                                                                                                                                                                                                                                                                 |                                      |                                                |                                                                                                        |             |                      |                 |                                                   |                     |                |                 |
|                                                                                                                                                                                                                                                                                                                                                                                 |                                      |                                                |                                                                                                        |             |                      |                 |                                                   |                     |                |                 |
| EOH at 3.50m - Target depth achieved                                                                                                                                                                                                                                                                                                                                            |                                      |                                                |                                                                                                        | 3.50        | 3.10                 |                 |                                                   |                     |                | 4               |
|                                                                                                                                                                                                                                                                                                                                                                                 |                                      |                                                |                                                                                                        |             |                      |                 |                                                   |                     |                |                 |
|                                                                                                                                                                                                                                                                                                                                                                                 |                                      |                                                |                                                                                                        |             |                      |                 |                                                   |                     |                |                 |
|                                                                                                                                                                                                                                                                                                                                                                                 |                                      |                                                |                                                                                                        |             |                      |                 |                                                   |                     |                |                 |
|                                                                                                                                                                                                                                                                                                                                                                                 |                                      |                                                |                                                                                                        |             |                      |                 |                                                   |                     |                |                 |
|                                                                                                                                                                                                                                                                                                                                                                                 |                                      |                                                |                                                                                                        |             |                      |                 |                                                   |                     |                | 5               |
|                                                                                                                                                                                                                                                                                                                                                                                 |                                      |                                                |                                                                                                        |             |                      |                 |                                                   |                     |                |                 |
|                                                                                                                                                                                                                                                                                                                                                                                 |                                      |                                                |                                                                                                        |             |                      |                 |                                                   |                     |                |                 |
|                                                                                                                                                                                                                                                                                                                                                                                 |                                      |                                                |                                                                                                        |             |                      |                 |                                                   |                     |                |                 |
|                                                                                                                                                                                                                                                                                                                                                                                 |                                      |                                                |                                                                                                        |             |                      |                 |                                                   |                     |                |                 |
| Observations / Remarks                                                                                                                                                                                                                                                                                                                                                          |                                      |                                                |                                                                                                        |             |                      |                 |                                                   |                     | Project Number |                 |
| 1. Groundwater not encountered<br>2. Upon completion exploratory hole backfilled with arisings                                                                                                                                                                                                                                                                                  |                                      |                                                |                                                                                                        |             |                      |                 |                                                   |                     |                |                 |
|                                                                                                                                                                                                                                                                                                                                                                                 |                                      |                                                |                                                                                                        |             |                      |                 |                                                   |                     | <b>A112666</b> |                 |

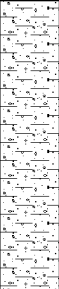
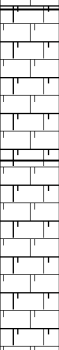
ARUN DISTRICT COUNCIL Y/71/20/RES

|                                                                                                                                                                 |              |                                      |                                       |                                                |                              |                                           |                                                                                     |                  |                      |                 |                 |                     |                |                |                 |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|--------------------------------------|---------------------------------------|------------------------------------------------|------------------------------|-------------------------------------------|-------------------------------------------------------------------------------------|------------------|----------------------|-----------------|-----------------|---------------------|----------------|----------------|-----------------|
|                                                                                  |              | Project: <b>Land at Stakers Farm</b> |                                       |                                                |                              | Location Details                          |                                                                                     |                  |                      | Status          |                 | Borehole Number     |                |                |                 |
|                                                                                                                                                                 |              | Location: <b>Yapton</b>              |                                       |                                                |                              | Easting: 497739.82    Northing: 103812.51 |                                                                                     |                  |                      | PRELIM          |                 | <b>WS02</b>         |                |                |                 |
|                                                                                                                                                                 |              | Client: <b>Dandara</b>               |                                       |                                                |                              | Level: 6.88mAOD    Depth: 6.00m           |                                                                                     |                  |                      |                 |                 |                     |                |                |                 |
|                                                                                                                                                                 |              |                                      |                                       | Logger: KW    Type: WS                         |                              |                                           |                                                                                     | Inclination: 90° |                      |                 |                 |                     |                | Sheet 1 of 1   |                 |
| Method, Plant and Crew                                                                                                                                          |              |                                      |                                       |                                                | Diameter                     |                                           | Casing                                                                              |                  | Groundwater          |                 |                 |                     |                | Scale: 1:50    |                 |
| From (m)                                                                                                                                                        | To (m)       | Type                                 | Plant Used                            | Crew                                           | Depth (m)                    | Diam (mm)                                 | Depth(m)                                                                            | Diam (mm)        | Strike (m)           | Casing (m)      | Sealed (m)      | Rose To (m)         | Time (mins)    | Remarks        | Checked By:     |
| 0.00<br>1.20                                                                                                                                                    | 1.20<br>6.00 | Inspection Pit<br>Window Sampler     | Hand excavated<br>Tracked Terrier Rig | D Horridge & S Walton<br>D Horridge & S Walton | 1.20<br>3.00<br>5.00<br>6.00 | 200<br>87<br>77<br>67                     |                                                                                     |                  | 5.20                 | 0               | -               | 5.20                | 20             |                | Approved By:    |
| Strata Description                                                                                                                                              |              |                                      |                                       |                                                |                              |                                           | Legend                                                                              | Depth (m)        | Reduced Level (mAOD) | Water Level (m) | Inst / Backfill | Samples and Testing |                |                | Tests / Results |
|                                                                                                                                                                 |              |                                      |                                       |                                                |                              |                                           |                                                                                     |                  |                      |                 |                 | Depth (m)           | Ref            |                |                 |
| Brown slightly gravelly slightly sandy CLAY with frequent rootlets (Topsoil) TOP                                                                                |              |                                      |                                       |                                                |                              |                                           |    | 0.30             | 6.58                 |                 |                 | 0.30                | ES1            |                |                 |
| Firm orangish brown slightly gravelly slightly sandy CLAY with frequent rootlets. Gravel is sub-angular fine flint and occasional calcareous nodules. (RTD) RTD |              |                                      |                                       |                                                |                              |                                           |    | 1.00             |                      |                 |                 | 1.00                | ES2            |                |                 |
| Firm orangish brown gravelly very sandy CLAY. Gravel is fine calcareous nodules. (RTD) RTD<br><i>Between 1.90m and 4.0m bgl lenses of orange sand</i>           |              |                                      |                                       |                                                |                              |                                           |   | 1.90             | 4.98                 |                 |                 |                     |                |                |                 |
| Highly weathered CHALK with flint                                                                                                                               |              |                                      |                                       |                                                |                              |                                           |  | 4.00             | 2.88                 |                 |                 |                     |                |                |                 |
| Structureless CHALK. Recovered as creamy white silty GRAVEL. Gravel is angular and sub-angular coarse chalk. (Upper Chalk - Class Dc)                           |              |                                      |                                       |                                                |                              |                                           |  | 5.30             | 1.58                 |                 |                 |                     |                |                |                 |
| EOH at 6.00m - Target depth achieved                                                                                                                            |              |                                      |                                       |                                                |                              |                                           |                                                                                     | 6.00             | 0.88                 |                 |                 |                     |                |                |                 |
| Observations / Remarks                                                                                                                                          |              |                                      |                                       |                                                |                              |                                           | Sampling Runs                                                                       |                  |                      |                 |                 | Hammer Information  |                |                |                 |
| 1. Groundwater encountered at 5.20m bgl<br>2. Upon completion exploratory hole backfilled with arisings                                                         |              |                                      |                                       |                                                |                              |                                           | From (m)                                                                            | To (m)           | Diam (mm)            | Recovery %      | Remarks         | Serial No.          | Energy Ratio % |                |                 |
|                                                                                                                                                                 |              |                                      |                                       |                                                |                              |                                           | 1.20                                                                                | 2.00             | 87                   | 100             |                 |                     |                |                |                 |
|                                                                                                                                                                 |              |                                      |                                       |                                                |                              |                                           | 2.00                                                                                | 3.00             | 87                   | 100             |                 |                     |                |                |                 |
|                                                                                                                                                                 |              |                                      |                                       |                                                |                              |                                           | 3.00                                                                                | 4.00             | 77                   | 85              |                 |                     |                |                |                 |
|                                                                                                                                                                 |              |                                      |                                       |                                                |                              |                                           | 4.00                                                                                | 5.00             | 77                   | 80              |                 |                     |                |                |                 |
|                                                                                                                                                                 |              |                                      |                                       |                                                |                              |                                           | 5.00                                                                                | 6.00             | 67                   | 80              |                 |                     |                | Project Number |                 |
|                                                                                                                                                                 |              |                                      |                                       |                                                |                              |                                           |                                                                                     |                  |                      |                 |                 | <b>A112666</b>      |                |                |                 |

DISTRICT COUNCIL Y/71/20/RES

|                                                                                                                                                                                        |                                      |                                                                                                                            |                                       |                                                |                              |                       |                                                                                     |           |                      |                 |                 |                                                                                     |                |                                   |                         |  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|----------------------------------------------------------------------------------------------------------------------------|---------------------------------------|------------------------------------------------|------------------------------|-----------------------|-------------------------------------------------------------------------------------|-----------|----------------------|-----------------|-----------------|-------------------------------------------------------------------------------------|----------------|-----------------------------------|-------------------------|--|
|                                                                                                         | Project: <b>Land at Stakers Farm</b> | Location Details                                                                                                           |                                       |                                                |                              |                       | Status                                                                              |           | Borehole Number      |                 |                 |                                                                                     |                |                                   |                         |  |
|                                                                                                                                                                                        | Location: <b>Yapton</b>              | Easting: 497831.19    Northing: 103786.71<br>Level: 6.95mAOD    Depth: 6.00m<br>Logger: DN    Type: WS<br>Inclination: 90° |                                       |                                                |                              |                       | PRELIM                                                                              |           | <b>WS04</b>          |                 |                 |                                                                                     |                |                                   |                         |  |
|                                                                                                                                                                                        | Client: <b>Dandara</b>               |                                                                                                                            |                                       |                                                |                              |                       |                                                                                     |           | Sheet 1 of 1         |                 |                 |                                                                                     |                |                                   |                         |  |
| Method, Plant and Crew                                                                                                                                                                 |                                      |                                                                                                                            |                                       |                                                | Diameter                     |                       | Casing                                                                              |           | Groundwater          |                 |                 |                                                                                     | Scale: 1:50    |                                   |                         |  |
| From (m)                                                                                                                                                                               | To (m)                               | Type                                                                                                                       | Plant Used                            | Crew                                           | Depth (m)                    | Diam (mm)             | Depth(m)                                                                            | Diam (mm) | Strike (m)           | Casing (m)      | Sealed (m)      | Rose To (m)                                                                         | Time (mins)    | Remarks                           | Checked By:             |  |
| 0.00<br>1.20                                                                                                                                                                           | 1.20<br>6.00                         | Inspection Pit<br>Window Sampler                                                                                           | Hand Excavated<br>Tracked Terrier Rig | D Horridge & S Walton<br>D Horridge & S Walton | 1.20<br>2.00<br>4.00<br>6.00 | 200<br>87<br>77<br>67 |                                                                                     |           |                      |                 |                 |                                                                                     |                |                                   | Approved By:            |  |
|                                                                                                                                                                                        |                                      |                                                                                                                            |                                       |                                                |                              |                       |                                                                                     |           |                      |                 |                 |                                                                                     |                |                                   | Start Date: 08/03/2019  |  |
|                                                                                                                                                                                        |                                      |                                                                                                                            |                                       |                                                |                              |                       |                                                                                     |           |                      |                 |                 |                                                                                     |                |                                   | Finish Date: 08/03/2019 |  |
| Strata Description                                                                                                                                                                     |                                      |                                                                                                                            |                                       |                                                |                              |                       | Legend                                                                              | Depth (m) | Reduced Level (mAOD) | Water Level (m) | Inst / Backfill | Samples and Testing                                                                 |                |                                   |                         |  |
|                                                                                                                                                                                        |                                      |                                                                                                                            |                                       |                                                |                              |                       |                                                                                     |           |                      |                 |                 | Depth (m)                                                                           | Ref            | Tests / Results                   |                         |  |
| TOPSOIL TOP                                                                                                                                                                            |                                      |                                                                                                                            |                                       |                                                |                              |                       |    | 0.30      | 6.65                 |                 |                 |  | 0.30           | ES1                               |                         |  |
| Firm orangish brown slightly gravelly slightly sandy CLAY with frequent rootlets. Sand is fine to coarse. Gravel is sub-angular fine flint. (RTD)<br>RTD                               |                                      |                                                                                                                            |                                       |                                                |                              |                       |    |           |                      |                 |                 | 1.00                                                                                | ES2            |                                   |                         |  |
|                                                                                                                                                                                        |                                      |                                                                                                                            |                                       |                                                |                              |                       |    |           |                      |                 |                 | 1.20                                                                                | B1             | SPT(C) 1.20m, N=10 (2,2/3,2,2,3)  |                         |  |
|                                                                                                                                                                                        |                                      |                                                                                                                            |                                       |                                                |                              |                       |    |           |                      |                 |                 | 1.50                                                                                | ES3            |                                   |                         |  |
| Angular flint cobbles between 2.2-2.3m bgl                                                                                                                                             |                                      |                                                                                                                            |                                       |                                                |                              |                       |    |           |                      |                 |                 |                                                                                     |                |                                   |                         |  |
| Firm light brown gravelly slightly sandy CLAY with low cobble content. Gravel is sub angular fine to medium chalk. Cobbles are angular flint. (RTD)<br>RTD                             |                                      |                                                                                                                            |                                       |                                                |                              |                       |    | 2.80      | 4.15                 |                 |                 |                                                                                     |                | SPT(C) 3.00m, N=17 (3,3/4,4,4,5)  |                         |  |
| Angular flint cobbles at 2.8m bgl                                                                                                                                                      |                                      |                                                                                                                            |                                       |                                                |                              |                       |    |           |                      |                 |                 |                                                                                     |                |                                   |                         |  |
| Highly weathered CHALK                                                                                                                                                                 |                                      |                                                                                                                            |                                       |                                                |                              |                       |    | 3.60      | 3.35                 |                 |                 |                                                                                     |                | SPT(C) 4.00m, N=27 (6,6/10,7,6,4) |                         |  |
|                                                                                                                                                                                        |                                      |                                                                                                                            |                                       |                                                |                              |                       |    |           |                      |                 |                 |                                                                                     |                |                                   |                         |  |
| Structureless CHALK. Recovered as white silty GRAVEL. Gravel is angular and sub-angular medium to coarse chalk. (Upper Chalk - Class Dc)<br>Layer of angular flint cobbles at 4.6m bgl |                                      |                                                                                                                            |                                       |                                                |                              |                       |    | 4.50      | 2.45                 |                 |                 |                                                                                     |                | SPT(C) 5.00m, N=33 (5,6/8,9,8,8)  |                         |  |
|                                                                                                                                                                                        |                                      |                                                                                                                            |                                       |                                                |                              |                       |    |           |                      |                 |                 |                                                                                     |                |                                   |                         |  |
| EOH at 6.00m - Target depth achieved                                                                                                                                                   |                                      |                                                                                                                            |                                       |                                                |                              |                       |    | 6.00      | 0.95                 |                 |                 |                                                                                     |                | SPT(C) 6.00m, N=19 (5,4/6,4,4,5)  |                         |  |
|                                                                                                                                                                                        |                                      |                                                                                                                            |                                       |                                                |                              |                       |    |           |                      |                 |                 |                                                                                     |                |                                   |                         |  |
|                                                                                                                                                                                        |                                      |                                                                                                                            |                                       |                                                |                              |                       |   |           |                      |                 |                 |                                                                                     |                |                                   |                         |  |
|                                                                                                                                                                                        |                                      |                                                                                                                            |                                       |                                                |                              |                       |  |           |                      |                 |                 |                                                                                     |                |                                   |                         |  |
|                                                                                                                                                                                        |                                      |                                                                                                                            |                                       |                                                |                              |                       |  |           |                      |                 |                 |                                                                                     |                |                                   |                         |  |
|                                                                                                                                                                                        |                                      |                                                                                                                            |                                       |                                                |                              |                       |  |           |                      |                 |                 |                                                                                     |                |                                   |                         |  |
|                                                                                                                                                                                        |                                      |                                                                                                                            |                                       |                                                |                              |                       |  |           |                      |                 |                 |                                                                                     |                |                                   |                         |  |
|                                                                                                                                                                                        |                                      |                                                                                                                            |                                       |                                                |                              |                       |  |           |                      |                 |                 |                                                                                     |                |                                   |                         |  |
|                                                                                                                                                                                        |                                      |                                                                                                                            |                                       |                                                |                              |                       |  |           |                      |                 |                 |                                                                                     |                |                                   |                         |  |
|                                                                                                                                                                                        |                                      |                                                                                                                            |                                       |                                                |                              |                       |  |           |                      |                 |                 |                                                                                     |                |                                   |                         |  |
|                                                                                                                                                                                        |                                      |                                                                                                                            |                                       |                                                |                              |                       |  |           |                      |                 |                 |                                                                                     |                |                                   |                         |  |
|                                                                                                                                                                                        |                                      |                                                                                                                            |                                       |                                                |                              |                       |  |           |                      |                 |                 |                                                                                     |                |                                   |                         |  |
|                                                                                                                                                                                        |                                      |                                                                                                                            |                                       |                                                |                              |                       |  |           |                      |                 |                 |                                                                                     |                |                                   |                         |  |
|                                                                                                                                                                                        |                                      |                                                                                                                            |                                       |                                                |                              |                       |  |           |                      |                 |                 |                                                                                     |                |                                   |                         |  |
|                                                                                                                                                                                        |                                      |                                                                                                                            |                                       |                                                |                              |                       |  |           |                      |                 |                 |                                                                                     |                |                                   |                         |  |
|                                                                                                                                                                                        |                                      |                                                                                                                            |                                       |                                                |                              |                       |  |           |                      |                 |                 |                                                                                     |                |                                   |                         |  |
|                                                                                                                                                                                        |                                      |                                                                                                                            |                                       |                                                |                              |                       |  |           |                      |                 |                 |                                                                                     |                |                                   |                         |  |
|                                                                                                                                                                                        |                                      |                                                                                                                            |                                       |                                                |                              |                       |  |           |                      |                 |                 |                                                                                     |                |                                   |                         |  |
|                                                                                                                                                                                        |                                      |                                                                                                                            |                                       |                                                |                              |                       |  |           |                      |                 |                 |                                                                                     |                |                                   |                         |  |
|                                                                                                                                                                                        |                                      |                                                                                                                            |                                       |                                                |                              |                       |  |           |                      |                 |                 |                                                                                     |                |                                   |                         |  |
|                                                                                                                                                                                        |                                      |                                                                                                                            |                                       |                                                |                              |                       |  |           |                      |                 |                 |                                                                                     |                |                                   |                         |  |
|                                                                                                                                                                                        |                                      |                                                                                                                            |                                       |                                                |                              |                       |  |           |                      |                 |                 |                                                                                     |                |                                   |                         |  |
|                                                                                                                                                                                        |                                      |                                                                                                                            |                                       |                                                |                              |                       |  |           |                      |                 |                 |                                                                                     |                |                                   |                         |  |
|                                                                                                                                                                                        |                                      |                                                                                                                            |                                       |                                                |                              |                       |  |           |                      |                 |                 |                                                                                     |                |                                   |                         |  |
|                                                                                                                                                                                        |                                      |                                                                                                                            |                                       |                                                |                              |                       |  |           |                      |                 |                 |                                                                                     |                |                                   |                         |  |
|                                                                                                                                                                                        |                                      |                                                                                                                            |                                       |                                                |                              |                       |  |           |                      |                 |                 |                                                                                     |                |                                   |                         |  |
|                                                                                                                                                                                        |                                      |                                                                                                                            |                                       |                                                |                              |                       |  |           |                      |                 |                 |                                                                                     |                |                                   |                         |  |
|                                                                                                                                                                                        |                                      |                                                                                                                            |                                       |                                                |                              |                       |  |           |                      |                 |                 |                                                                                     |                |                                   |                         |  |
|                                                                                                                                                                                        |                                      |                                                                                                                            |                                       |                                                |                              |                       |  |           |                      |                 |                 |                                                                                     |                |                                   |                         |  |
|                                                                                                                                                                                        |                                      |                                                                                                                            |                                       |                                                |                              |                       |  |           |                      |                 |                 |                                                                                     |                |                                   |                         |  |
|                                                                                                                                                                                        |                                      |                                                                                                                            |                                       |                                                |                              |                       |  |           |                      |                 |                 |                                                                                     |                |                                   |                         |  |
| Observations / Remarks                                                                                                                                                                 |                                      |                                                                                                                            |                                       |                                                |                              |                       | Sampling Runs                                                                       |           |                      |                 |                 | Hammer Information                                                                  |                |                                   |                         |  |
| 1. Groundwater not encountered<br>2. Upon completion exploratory hole installed with 50mm diameter standpipe to 5.00m bgl                                                              |                                      |                                                                                                                            |                                       |                                                |                              |                       | From (m)                                                                            | To (m)    | Diam (mm)            | Recovery %      | Remarks         | Serial No.                                                                          | Energy Ratio % |                                   |                         |  |
|                                                                                                                                                                                        |                                      |                                                                                                                            |                                       |                                                |                              |                       | 1.20                                                                                | 2.00      | 87                   | 100             |                 | DART - EQU2195                                                                      | 71             |                                   |                         |  |
|                                                                                                                                                                                        |                                      |                                                                                                                            |                                       |                                                |                              |                       | 2.00                                                                                | 3.00      | 77                   | 90              |                 |                                                                                     |                |                                   |                         |  |
|                                                                                                                                                                                        |                                      |                                                                                                                            |                                       |                                                |                              |                       | 3.00                                                                                | 4.00      | 77                   | 90              |                 |                                                                                     |                |                                   |                         |  |
|                                                                                                                                                                                        |                                      |                                                                                                                            |                                       |                                                |                              |                       | 4.00                                                                                | 5.00      | 67                   | 75              |                 |                                                                                     |                |                                   |                         |  |
|                                                                                                                                                                                        |                                      |                                                                                                                            |                                       |                                                |                              |                       | 5.00                                                                                | 6.00      | 67                   | 80              |                 |                                                                                     |                |                                   |                         |  |
|                                                                                                                                                                                        |                                      |                                                                                                                            |                                       |                                                |                              |                       |                                                                                     |           |                      |                 |                 | Project Number                                                                      |                |                                   |                         |  |
|                                                                                                                                                                                        |                                      |                                                                                                                            |                                       |                                                |                              |                       |                                                                                     |           |                      |                 |                 | <b>A112666</b>                                                                      |                |                                   |                         |  |
| DISTRICT COUNCIL Y/71/20/RES                                                                                                                                                           |                                      |                                                                                                                            |                                       |                                                |                              |                       |                                                                                     |           |                      |                 |                 |                                                                                     |                |                                   |                         |  |



|                                                                                                                                                             |              |                                      |                                       |                                                |                              |                                           |                                                                                    |           |                      |                 |                 |                     |             |                                   |                         |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|--------------------------------------|---------------------------------------|------------------------------------------------|------------------------------|-------------------------------------------|------------------------------------------------------------------------------------|-----------|----------------------|-----------------|-----------------|---------------------|-------------|-----------------------------------|-------------------------|
|                                                                              |              | Project: <b>Land at Stakers Farm</b> |                                       |                                                |                              | Location Details                          |                                                                                    |           |                      | Status          |                 | Borehole Number     |             |                                   |                         |
|                                                                                                                                                             |              | Location: <b>Yapton</b>              |                                       |                                                |                              | Easting: 497675.30    Northing: 103774.88 |                                                                                    |           |                      | PRELIM          |                 | <b>WS05</b>         |             |                                   |                         |
|                                                                                                                                                             |              | Client: <b>Dandara</b>               |                                       |                                                |                              | Level: 6.35mAOD    Depth: 6.00m           |                                                                                    |           |                      |                 |                 |                     |             |                                   |                         |
|                                                                                                                                                             |              |                                      |                                       |                                                |                              | Logger: DN    Type: WS                    |                                                                                    |           |                      |                 |                 |                     |             |                                   |                         |
|                                                                                                                                                             |              |                                      |                                       |                                                |                              | Inclination: 90°                          |                                                                                    |           |                      |                 |                 |                     |             |                                   |                         |
| Method, Plant and Crew                                                                                                                                      |              |                                      |                                       |                                                |                              | Diameter                                  |                                                                                    | Casing    |                      | Groundwater     |                 |                     |             |                                   |                         |
| From (m)                                                                                                                                                    | To (m)       | Type                                 | Plant Used                            | Crew                                           | Depth (m)                    | Diam (mm)                                 | Depth(m)                                                                           | Diam (mm) | Strike (m)           | Casing (m)      | Sealed (m)      | Rose To (m)         | Time (mins) | Remarks                           |                         |
| 0.00<br>1.20                                                                                                                                                | 1.20<br>6.00 | Inspection Pit<br>Window Sampler     | Hand Excavated<br>Tracked Terrier Rig | D Horridge & S Walton<br>D Horridge & S Walton | 1.20<br>3.00<br>4.00<br>6.00 | 200<br>87<br>77<br>67                     |                                                                                    |           | 5.00                 | 0               | -               | 5.00                | 20          |                                   |                         |
|                                                                                                                                                             |              |                                      |                                       |                                                |                              |                                           |                                                                                    |           |                      |                 |                 |                     |             |                                   | Scale: 1:50             |
|                                                                                                                                                             |              |                                      |                                       |                                                |                              |                                           |                                                                                    |           |                      |                 |                 |                     |             |                                   | Checked By:             |
|                                                                                                                                                             |              |                                      |                                       |                                                |                              |                                           |                                                                                    |           |                      |                 |                 |                     |             |                                   | Approved By:            |
|                                                                                                                                                             |              |                                      |                                       |                                                |                              |                                           |                                                                                    |           |                      |                 |                 |                     |             |                                   | Start Date: 08/03/2019  |
|                                                                                                                                                             |              |                                      |                                       |                                                |                              |                                           |                                                                                    |           |                      |                 |                 |                     |             |                                   | Finish Date: 08/03/2019 |
| Strata Description                                                                                                                                          |              |                                      |                                       |                                                |                              |                                           | Legend                                                                             | Depth (m) | Reduced Level (mAOD) | Water Level (m) | Inst / Backfill | Samples and Testing |             |                                   |                         |
|                                                                                                                                                             |              |                                      |                                       |                                                |                              |                                           |                                                                                    |           |                      |                 |                 | Depth (m)           | Ref         | Tests / Results                   |                         |
| TOPSOIL TOP                                                                                                                                                 |              |                                      |                                       |                                                |                              |                                           |   | 0.30      | 6.05                 |                 |                 | 0.20                | ES1         |                                   |                         |
| Firm brown orange slightly gravelly slightly sandy CLAY with rootlets. Gravel is sub angular fine to medium flint and fine calcareous nodules. (RTD)<br>RTD |              |                                      |                                       |                                                |                              |                                           |   |           |                      |                 |                 | 1.00                | ES2         |                                   |                         |
|                                                                                                                                                             |              |                                      |                                       |                                                |                              |                                           |                                                                                    |           |                      |                 |                 | 1.20                | B1          | SPT(C) 1.20m, N=8 (1,1/2,2,2,2)   |                         |
|                                                                                                                                                             |              |                                      |                                       |                                                |                              |                                           |                                                                                    |           |                      |                 |                 | 2.00                | B2          | SPT(C) 2.00m, N=4 (1,1/1,1,1,1)   |                         |
| Orange brown soft very gravelly sandy CLAY. Sand is fine to coarse. Gravel is fine to medium sub angular chalk.<br>RTD                                      |              |                                      |                                       |                                                |                              |                                           |   | 2.30      | 4.05                 |                 |                 |                     |             |                                   |                         |
| Highly weathered CHALK with frequent flint cobbles (Upper Chalk)                                                                                            |              |                                      |                                       |                                                |                              |                                           |                                                                                    | 2.90      | 3.45                 |                 |                 | 3.00                | B3          | SPT(C) 3.00m, N=17 (2,4/3,5,5,4)  |                         |
| Structureless CHALK. Recovered as creamy white silty GRAVEL. Gravel is angular and sub-angular fine to coarse chalk                                         |              |                                      |                                       |                                                |                              |                                           |   | 3.70      | 2.65                 |                 |                 | 4.00                | B4          | SPT(C) 4.00m, N=11 (4,4/3,3,3,2)  |                         |
|                                                                                                                                                             |              |                                      |                                       |                                                |                              |                                           |                                                                                    | 4.70      | 1.65                 |                 |                 | 5.00                | B5          | SPT(C) 5.00m, N=11 (3,3/3,2,3,3)  |                         |
| White CHALK. Recovered as sub angular to sub rounded coarse gravel and sub angular cobbles.                                                                 |              |                                      |                                       |                                                |                              |                                           |  | 6.00      | 0.35                 |                 |                 | 6.00                | B6          | SPT(C) 6.00m, N=22 (2,44/7,4,4,7) |                         |
| EOH at 6.00m - Target depth achieved                                                                                                                        |              |                                      |                                       |                                                |                              |                                           |                                                                                    |           |                      |                 |                 |                     |             |                                   |                         |
|                                                                                                                                                             |              |                                      |                                       |                                                |                              |                                           |                                                                                    |           |                      |                 |                 |                     |             |                                   |                         |
|                                                                                                                                                             |              |                                      |                                       |                                                |                              |                                           |                                                                                    |           |                      |                 |                 |                     |             |                                   |                         |
|                                                                                                                                                             |              |                                      |                                       |                                                |                              |                                           |                                                                                    |           |                      |                 |                 |                     |             |                                   |                         |
|                                                                                                                                                             |              |                                      |                                       |                                                |                              |                                           |                                                                                    |           |                      |                 |                 |                     |             |                                   |                         |
|                                                                                                                                                             |              |                                      |                                       |                                                |                              |                                           |                                                                                    |           |                      |                 |                 |                     |             |                                   |                         |
|                                                                                                                                                             |              |                                      |                                       |                                                |                              |                                           |                                                                                    |           |                      |                 |                 |                     |             |                                   |                         |
|                                                                                                                                                             |              |                                      |                                       |                                                |                              |                                           |                                                                                    |           |                      |                 |                 |                     |             |                                   |                         |
|                                                                                                                                                             |              |                                      |                                       |                                                |                              |                                           |                                                                                    |           |                      |                 |                 |                     |             |                                   |                         |
|                                                                                                                                                             |              |                                      |                                       |                                                |                              |                                           |                                                                                    |           |                      |                 |                 |                     |             |                                   |                         |
|                                                                                                                                                             |              |                                      |                                       |                                                |                              |                                           |                                                                                    |           |                      |                 |                 |                     |             |                                   |                         |
|                                                                                                                                                             |              |                                      |                                       |                                                |                              |                                           |                                                                                    |           |                      |                 |                 |                     |             |                                   |                         |
|                                                                                                                                                             |              |                                      |                                       |                                                |                              |                                           |                                                                                    |           |                      |                 |                 |                     |             |                                   |                         |
|                                                                                                                                                             |              |                                      |                                       |                                                |                              |                                           |                                                                                    |           |                      |                 |                 |                     |             |                                   |                         |
|                                                                                                                                                             |              |                                      |                                       |                                                |                              |                                           |                                                                                    |           |                      |                 |                 |                     |             |                                   |                         |
|                                                                                                                                                             |              |                                      |                                       |                                                |                              |                                           |                                                                                    |           |                      |                 |                 |                     |             |                                   |                         |
|                                                                                                                                                             |              |                                      |                                       |                                                |                              |                                           |                                                                                    |           |                      |                 |                 |                     |             |                                   |                         |
|                                                                                                                                                             |              |                                      |                                       |                                                |                              |                                           |                                                                                    |           |                      |                 |                 |                     |             |                                   |                         |
|                                                                                                                                                             |              |                                      |                                       |                                                |                              |                                           |                                                                                    |           |                      |                 |                 |                     |             |                                   |                         |
|                                                                                                                                                             |              |                                      |                                       |                                                |                              |                                           |                                                                                    |           |                      |                 |                 |                     |             |                                   |                         |
|                                                                                                                                                             |              |                                      |                                       |                                                |                              |                                           |                                                                                    |           |                      |                 |                 |                     |             |                                   |                         |
|                                                                                                                                                             |              |                                      |                                       |                                                |                              |                                           |                                                                                    |           |                      |                 |                 |                     |             |                                   |                         |
|                                                                                                                                                             |              |                                      |                                       |                                                |                              |                                           |                                                                                    |           |                      |                 |                 |                     |             |                                   |                         |
|                                                                                                                                                             |              |                                      |                                       |                                                |                              |                                           |                                                                                    |           |                      |                 |                 |                     |             |                                   |                         |
|                                                                                                                                                             |              |                                      |                                       |                                                |                              |                                           |                                                                                    |           |                      |                 |                 |                     |             |                                   |                         |
|                                                                                                                                                             |              |                                      |                                       |                                                |                              |                                           |                                                                                    |           |                      |                 |                 |                     |             |                                   |                         |
|                                                                                                                                                             |              |                                      |                                       |                                                |                              |                                           |                                                                                    |           |                      |                 |                 |                     |             |                                   |                         |
|                                                                                                                                                             |              |                                      |                                       |                                                |                              |                                           |                                                                                    |           |                      |                 |                 |                     |             |                                   |                         |
|                                                                                                                                                             |              |                                      |                                       |                                                |                              |                                           |                                                                                    |           |                      |                 |                 |                     |             |                                   |                         |
|                                                                                                                                                             |              |                                      |                                       |                                                |                              |                                           |                                                                                    |           |                      |                 |                 |                     |             |                                   |                         |
|                                                                                                                                                             |              |                                      |                                       |                                                |                              |                                           |                                                                                    |           |                      |                 |                 |                     |             |                                   |                         |
|                                                                                                                                                             |              |                                      |                                       |                                                |                              |                                           |                                                                                    |           |                      |                 |                 |                     |             |                                   |                         |
|                                                                                                                                                             |              |                                      |                                       |                                                |                              |                                           |                                                                                    |           |                      |                 |                 |                     |             |                                   |                         |
|                                                                                                                                                             |              |                                      |                                       |                                                |                              |                                           |                                                                                    |           |                      |                 |                 |                     |             |                                   |                         |
|                                                                                                                                                             |              |                                      |                                       |                                                |                              |                                           |                                                                                    |           |                      |                 |                 |                     |             |                                   |                         |
|                                                                                                                                                             |              |                                      |                                       |                                                |                              |                                           |                                                                                    |           |                      |                 |                 |                     |             |                                   |                         |
|                                                                                                                                                             |              |                                      |                                       |                                                |                              |                                           |                                                                                    |           |                      |                 |                 |                     |             |                                   |                         |
|                                                                                                                                                             |              |                                      |                                       |                                                |                              |                                           |                                                                                    |           |                      |                 |                 |                     |             |                                   |                         |
|                                                                                                                                                             |              |                                      |                                       |                                                |                              |                                           |                                                                                    |           |                      |                 |                 |                     |             |                                   |                         |
|                                                                                                                                                             |              |                                      |                                       |                                                |                              |                                           |                                                                                    |           |                      |                 |                 |                     |             |                                   |                         |
|                                                                                                                                                             |              |                                      |                                       |                                                |                              |                                           |                                                                                    |           |                      |                 |                 |                     |             |                                   |                         |
|                                                                                                                                                             |              |                                      |                                       |                                                |                              |                                           |                                                                                    |           |                      |                 |                 |                     |             |                                   |                         |
|                                                                                                                                                             |              |                                      |                                       |                                                |                              |                                           |                                                                                    |           |                      |                 |                 |                     |             |                                   |                         |
|                                                                                                                                                             |              |                                      |                                       |                                                |                              |                                           |                                                                                    |           |                      |                 |                 |                     |             |                                   |                         |
|                                                                                                                                                             |              |                                      |                                       |                                                |                              |                                           |                                                                                    |           |                      |                 |                 |                     |             |                                   |                         |
|                                                                                                                                                             |              |                                      |                                       |                                                |                              |                                           |                                                                                    |           |                      |                 |                 |                     |             |                                   |                         |
|                                                                                                                                                             |              |                                      |                                       |                                                |                              |                                           |                                                                                    |           |                      |                 |                 |                     |             |                                   |                         |
|                                                                                                                                                             |              |                                      |                                       |                                                |                              |                                           |                                                                                    |           |                      |                 |                 |                     |             |                                   |                         |
|                                                                                                                                                             |              |                                      |                                       |                                                |                              |                                           |                                                                                    |           |                      |                 |                 |                     |             |                                   |                         |
|                                                                                                                                                             |              |                                      |                                       |                                                |                              |                                           |                                                                                    |           |                      |                 |                 |                     |             |                                   |                         |
|                                                                                                                                                             |              |                                      |                                       |                                                |                              |                                           |                                                                                    |           |                      |                 |                 |                     |             |                                   |                         |
|                                                                                                                                                             |              |                                      |                                       |                                                |                              |                                           |                                                                                    |           |                      |                 |                 |                     |             |                                   |                         |
|                                                                                                                                                             |              |                                      |                                       |                                                |                              |                                           |                                                                                    |           |                      |                 |                 |                     |             |                                   |                         |
|                                                                                                                                                             |              |                                      |                                       |                                                |                              |                                           |                                                                                    |           |                      |                 |                 |                     |             |                                   |                         |
|                                                                                                                                                             |              |                                      |                                       |                                                |                              |                                           |                                                                                    |           |                      |                 |                 |                     |             |                                   |                         |
|                                                                                                                                                             |              |                                      |                                       |                                                |                              |                                           |                                                                                    |           |                      |                 |                 |                     |             |                                   |                         |
|                                                                                                                                                             |              |                                      |                                       |                                                |                              |                                           |                                                                                    |           |                      |                 |                 |                     |             |                                   |                         |
|                                                                                                                                                             |              |                                      |                                       |                                                |                              |                                           |                                                                                    |           |                      |                 |                 |                     |             |                                   |                         |
|                                                                                                                                                             |              |                                      |                                       |                                                |                              |                                           |                                                                                    |           |                      |                 |                 |                     |             |                                   |                         |
|                                                                                                                                                             |              |                                      |                                       |                                                |                              |                                           |                                                                                    |           |                      |                 |                 |                     |             |                                   |                         |
|                                                                                                                                                             |              |                                      |                                       |                                                |                              |                                           |                                                                                    |           |                      |                 |                 |                     |             |                                   |                         |
|                                                                                                                                                             |              |                                      |                                       |                                                |                              |                                           |                                                                                    |           |                      |                 |                 |                     |             |                                   |                         |
|                                                                                                                                                             |              |                                      |                                       |                                                |                              |                                           |                                                                                    |           |                      |                 |                 |                     |             |                                   |                         |
|                                                                                                                                                             |              |                                      |                                       |                                                |                              |                                           |                                                                                    |           |                      |                 |                 |                     |             |                                   |                         |
|                                                                                                                                                             |              |                                      |                                       |                                                |                              |                                           |                                                                                    |           |                      |                 |                 |                     |             |                                   |                         |
|                                                                                                                                                             |              |                                      |                                       |                                                |                              |                                           |                                                                                    |           |                      |                 |                 |                     |             |                                   |                         |
|                                                                                                                                                             |              |                                      |                                       |                                                |                              |                                           |                                                                                    |           |                      |                 |                 |                     |             |                                   |                         |
|                                                                                                                                                             |              |                                      |                                       |                                                |                              |                                           |                                                                                    |           |                      |                 |                 |                     |             |                                   |                         |
|                                                                                                                                                             |              |                                      |                                       |                                                |                              |                                           |                                                                                    |           |                      |                 |                 |                     |             |                                   |                         |
|                                                                                                                                                             |              |                                      |                                       |                                                |                              |                                           |                                                                                    |           |                      |                 |                 |                     |             |                                   |                         |
|                                                                                                                                                             |              |                                      |                                       |                                                |                              |                                           |                                                                                    |           |                      |                 |                 |                     |             |                                   |                         |
|                                                                                                                                                             |              |                                      |                                       |                                                |                              |                                           |                                                                                    |           |                      |                 |                 |                     |             |                                   |                         |
|                                                                                                                                                             |              |                                      |                                       |                                                |                              |                                           |                                                                                    |           |                      |                 |                 |                     |             |                                   |                         |
|                                                                                                                                                             |              |                                      |                                       |                                                |                              |                                           |                                                                                    |           |                      |                 |                 |                     | </          |                                   |                         |

|                                                                                                                                                                                                                                           |        |                                      |                                    |                                                |                              |                                           |                                                                                     |           |                      |                                                                                    |                 |                     |             |                                        |                         |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|--------------------------------------|------------------------------------|------------------------------------------------|------------------------------|-------------------------------------------|-------------------------------------------------------------------------------------|-----------|----------------------|------------------------------------------------------------------------------------|-----------------|---------------------|-------------|----------------------------------------|-------------------------|
|                                                                                                                                                            |        | Project: <b>Land at Stakers Farm</b> |                                    |                                                |                              | Location Details                          |                                                                                     |           |                      | Status                                                                             |                 | Borehole Number     |             |                                        |                         |
|                                                                                                                                                                                                                                           |        | Location: <b>Yapton</b>              |                                    |                                                |                              | Easting: 497617.01    Northing: 103688.19 |                                                                                     |           |                      | PRELIM                                                                             |                 | <b>WS06</b>         |             |                                        |                         |
|                                                                                                                                                                                                                                           |        | Client: <b>Dandara</b>               |                                    |                                                |                              | Level: 5.20mAOD    Depth: 5.00m           |                                                                                     |           |                      |                                                                                    |                 |                     |             |                                        |                         |
|                                                                                                                                                                                                                                           |        |                                      |                                    |                                                |                              | Logger: DN    Type: WS                    |                                                                                     |           |                      |                                                                                    |                 |                     |             |                                        |                         |
|                                                                                                                                                                                                                                           |        |                                      |                                    |                                                |                              | Inclination: 90°                          |                                                                                     |           |                      |                                                                                    |                 | Sheet 1 of 1        |             |                                        |                         |
| Method, Plant and Crew                                                                                                                                                                                                                    |        |                                      |                                    |                                                | Diameter                     |                                           | Casing                                                                              |           | Groundwater          |                                                                                    |                 |                     |             | Scale: 1:50                            |                         |
| From (m)                                                                                                                                                                                                                                  | To (m) | Type                                 | Plant Used                         | Crew                                           | Depth (m)                    | Diam (mm)                                 | Depth(m)                                                                            | Diam (mm) | Strike (m)           | Casing (m)                                                                         | Sealed (m)      | Rose To (m)         | Time (mins) | Remarks                                | Checked By:             |
| 0.00                                                                                                                                                                                                                                      | 1.20   | Inspection Pit Window Sampler        | Hand Excavated Tracked Terrier Rig | D Horridge & S Walton<br>D Horridge & S Walton | 1.20<br>3.00<br>4.00<br>5.00 | 200<br>87<br>77<br>67                     |                                                                                     |           | 3.80                 | 0                                                                                  | -               | 3.80                | 20          |                                        | Approved By:            |
|                                                                                                                                                                                                                                           |        |                                      |                                    |                                                |                              |                                           |                                                                                     |           |                      |                                                                                    |                 |                     |             |                                        | Start Date: 07/03/2019  |
|                                                                                                                                                                                                                                           |        |                                      |                                    |                                                |                              |                                           |                                                                                     |           |                      |                                                                                    |                 |                     |             |                                        | Finish Date: 07/03/2019 |
| Strata Description                                                                                                                                                                                                                        |        |                                      |                                    |                                                |                              |                                           | Legend                                                                              | Depth (m) | Reduced Level (mAOD) | Water Level (m)                                                                    | Inst / Backfill | Samples and Testing |             |                                        |                         |
|                                                                                                                                                                                                                                           |        |                                      |                                    |                                                |                              |                                           |                                                                                     |           |                      |                                                                                    |                 | Depth (m)           | Ref         | Tests / Results                        |                         |
| Brown slightly gravelly slightly sandy CLAY with frequent roots. Gravel is sub rounded coarse flint. (Topsoil) TOP                                                                                                                        |        |                                      |                                    |                                                |                              |                                           |    | 0.45      | 4.76                 |                                                                                    |                 | 0.40                | ES1         |                                        |                         |
| Firm orangish brown mottled light brown gravelly slightly sandy CLAY with frequent rootlets, low cobble content and lenses of coarse yellow sand. Gravel is sub angular to sub rounded fine to medium flint. Cobbles are flint. (RTD) RTD |        |                                      |                                    |                                                |                              |                                           |    | 1.30      | 3.90                 |                                                                                    |                 | 1.00<br>1.00        | B<br>ES     | SPT(C) 1.20m, N=12 (1,2/3,3,3,3)       |                         |
| Orangish brown clayey medium SAND. (RTD) RTD                                                                                                                                                                                              |        |                                      |                                    |                                                |                              |                                           |    | 1.70      | 3.50                 |                                                                                    |                 |                     |             |                                        |                         |
| Firm light orangish brown gravelly slightly sandy CLAY. Sand is fine to coarse. Gravel is sub angular fine to medium flint and fine calcareous fragments. (RTD) RTD                                                                       |        |                                      |                                    |                                                |                              |                                           |    |           |                      |                                                                                    |                 | 2.00                | B           | SPT(C) 2.00m, N=10 (1,2/2,2,3,3)       |                         |
|                                                                                                                                                                                                                                           |        |                                      |                                    |                                                |                              |                                           |    |           |                      |                                                                                    |                 |                     |             |                                        |                         |
|                                                                                                                                                                                                                                           |        |                                      |                                    |                                                |                              |                                           |    |           |                      |                                                                                    |                 | 3.00                | B           | SPT(C) 3.00m, N=28 (3,4/5,7,7,9)       |                         |
|                                                                                                                                                                                                                                           |        |                                      |                                    |                                                |                              |                                           |    |           |                      |                                                                                    |                 |                     |             |                                        |                         |
| Highly weathered CHALK. Recovered as light brown slightly sandy medium gravel. Sand is fine to coarse.                                                                                                                                    |        |                                      |                                    |                                                |                              |                                           |    | 3.80      | 1.40                 |  |                 | 4.00                | B           | SPT(C) 4.00m, N=22 (4,5/4,5,5,8)       |                         |
| CHALK. Recovered as white medium to coarse gravel.                                                                                                                                                                                        |        |                                      |                                    |                                                |                              |                                           |   | 4.40      | 0.80                 |                                                                                    |                 |                     |             |                                        |                         |
| EOH at 5.00m - Target depth achieved                                                                                                                                                                                                      |        |                                      |                                    |                                                |                              |                                           |  | 5.00      | 0.20                 |                                                                                    |                 | 5.00                | B           | SPT(C) 5.00m, N=51 (11,10/11,15,13,12) |                         |
|                                                                                                                                                                                                                                           |        |                                      |                                    |                                                |                              |                                           |  |           |                      |                                                                                    |                 |                     |             |                                        |                         |
|                                                                                                                                                                                                                                           |        |                                      |                                    |                                                |                              |                                           |  |           |                      |                                                                                    |                 |                     |             |                                        |                         |
|                                                                                                                                                                                                                                           |        |                                      |                                    |                                                |                              |                                           |  |           |                      |                                                                                    |                 |                     |             |                                        |                         |
|                                                                                                                                                                                                                                           |        |                                      |                                    |                                                |                              |                                           |  |           |                      |                                                                                    |                 |                     |             |                                        |                         |
|                                                                                                                                                                                                                                           |        |                                      |                                    |                                                |                              |                                           |  |           |                      |                                                                                    |                 |                     |             |                                        |                         |
|                                                                                                                                                                                                                                           |        |                                      |                                    |                                                |                              |                                           |  |           |                      |                                                                                    |                 |                     |             |                                        |                         |
|                                                                                                                                                                                                                                           |        |                                      |                                    |                                                |                              |                                           |  |           |                      |                                                                                    |                 |                     |             |                                        |                         |
|                                                                                                                                                                                                                                           |        |                                      |                                    |                                                |                              |                                           |  |           |                      |                                                                                    |                 |                     |             |                                        |                         |
|                                                                                                                                                                                                                                           |        |                                      |                                    |                                                |                              |                                           |  |           |                      |                                                                                    |                 |                     |             |                                        |                         |
|                                                                                                                                                                                                                                           |        |                                      |                                    |                                                |                              |                                           |  |           |                      |                                                                                    |                 |                     |             |                                        |                         |
|                                                                                                                                                                                                                                           |        |                                      |                                    |                                                |                              |                                           |  |           |                      |                                                                                    |                 |                     |             |                                        |                         |
|                                                                                                                                                                                                                                           |        |                                      |                                    |                                                |                              |                                           |  |           |                      |                                                                                    |                 |                     |             |                                        |                         |
|                                                                                                                                                                                                                                           |        |                                      |                                    |                                                |                              |                                           |  |           |                      |                                                                                    |                 |                     |             |                                        |                         |
|                                                                                                                                                                                                                                           |        |                                      |                                    |                                                |                              |                                           |  |           |                      |                                                                                    |                 |                     |             |                                        |                         |
|                                                                                                                                                                                                                                           |        |                                      |                                    |                                                |                              |                                           |  |           |                      |                                                                                    |                 |                     |             |                                        |                         |
|                                                                                                                                                                                                                                           |        |                                      |                                    |                                                |                              |                                           |  |           |                      |                                                                                    |                 |                     |             |                                        |                         |
| Observations / Remarks                                                                                                                                                                                                                    |        |                                      |                                    |                                                |                              |                                           |                                                                                     |           | Sampling Runs        |                                                                                    |                 |                     |             | Hammer Information                     |                         |
| 1. Groundwater encountered at 3.80m bgl<br>2. Upon completion exploratory hole installed with 50mm diameter standpipe to 3.00m bgl                                                                                                        |        |                                      |                                    |                                                |                              |                                           |                                                                                     |           | From (m)             | To (m)                                                                             | Diam (mm)       | Recovery %          | Remarks     | Serial No.                             | Energy Ratio %          |
|                                                                                                                                                                                                                                           |        |                                      |                                    |                                                |                              |                                           |                                                                                     |           | 1.20                 | 2.00                                                                               | 87              | 90                  |             | DART - EQU2195                         | 71                      |
|                                                                                                                                                                                                                                           |        |                                      |                                    |                                                |                              |                                           |                                                                                     |           | 2.00                 | 3.00                                                                               | 87              | 90                  |             |                                        |                         |
|                                                                                                                                                                                                                                           |        |                                      |                                    |                                                |                              |                                           |                                                                                     |           | 3.00                 | 4.00                                                                               | 77              | 90                  |             |                                        |                         |
|                                                                                                                                                                                                                                           |        |                                      |                                    |                                                |                              |                                           |                                                                                     |           | 4.00                 | 5.00                                                                               | 67              | 100                 |             |                                        |                         |
|                                                                                                                                                                                                                                           |        |                                      |                                    |                                                |                              |                                           |                                                                                     |           |                      |                                                                                    |                 |                     |             | Project Number                         |                         |
|                                                                                                                                                                                                                                           |        |                                      |                                    |                                                |                              |                                           |                                                                                     |           |                      |                                                                                    |                 |                     |             | <b>A112666</b>                         |                         |
| DISTRICT COUNCIL Y/71/20/RES                                                                                                                                                                                                              |        |                                      |                                    |                                                |                              |                                           |                                                                                     |           |                      |                                                                                    |                 |                     |             |                                        |                         |



|           |           |              |           |
|-----------|-----------|--------------|-----------|
| Eastings: | 497578.28 | Northing:    | 103653.34 |
| Level:    | 5.60mAOD  | Depth:       | 5.00m     |
| Logger:   | DN        | Type:        | WS        |
|           |           | Inclination: | °         |

PRELIM

WS07

Sheet 1 of 1

Diameter

Groundwater

Scale: 1:50

| From (m) | To (m) | Type           | Plant Used          | Crew                  | Depth (m) | Diam (mm) | Depth(m) | Diam (mm) | Strike (m) | Casing (m) | Sealed (m) | Rose To (m) | Time (mins) | Remarks |
|----------|--------|----------------|---------------------|-----------------------|-----------|-----------|----------|-----------|------------|------------|------------|-------------|-------------|---------|
| 0.00     | 1.20   | Inspection Pit | Hand excavated      | D Horridge & S Walton | 1.20      | 200       |          |           |            |            |            |             |             |         |
| 1.20     | 6.00   | Window Sampler | Tracked Terrier Rig | D Horridge & S Walton | 3.00      | 87        |          |           |            |            |            |             |             |         |
|          |        |                |                     |                       | 4.00      | 77        |          |           |            |            |            |             |             |         |
|          |        |                |                     |                       | 5.00      | 67        |          |           |            |            |            |             |             |         |

|              |          |
|--------------|----------|
| Checked By:  |          |
| Approved By: |          |
| Start Date:  | 08/03/20 |
| Finish Date: | 08/03/20 |

Legend

Depth (m)

Reduced  
LevelWater  
Level (m)

|          |  |
|----------|--|
| Inst /   |  |
| Backfill |  |

## Samples and Testing

| Depth (m) | Ref | Tests / Results |
|-----------|-----|-----------------|
|-----------|-----|-----------------|

Brown slightly gravelly slightly sandy CLAY with roots. Sand is fine to coarse. Gravel is sub rounded coarse flint. (Topsoil)

Firm orange brown slightly gravelly slightly sandy CLAY with rootlets. Sand is fine to coarse. Gravel is fine and medium sub-angular flint and fine calcareous nodules. (RTD)

Orange brown clayey fine to medium SAND (RTD)

Firm orange brown mottled light grey slightly gravelly slightly sandy CLAY. Gravel is sub-angular fine to medium flint and fine calcareous nodules. (RTD)

Orange brown gravelly clayey SAND. Gravel is sub-angular fine flint. (RTD)  
From 3.20m bgl damp

Firm light brown slightly gravelly sandy CLAY. Sand is fine to medium. Gravel is sub rounded fine calcareous nodules. (RTD)

Firm light brown very gravelly slightly sandy CLAY. Gravel is angular medium and coarse flint and calcareous nodules. (RTD)

Structureless CHALK. Recovered as light brown silty GRAVEL. Gravel is sub angular coarse chalk. (Upper Chalk - Grade Dc)

EOH at 5.00m - Target depth achieved

|                        |
|------------------------|
| Observations / Remarks |
|------------------------|

1. Groundwater not encountered
2. Upon completion exploratory hole backfilled with arisings

Sampling Runs

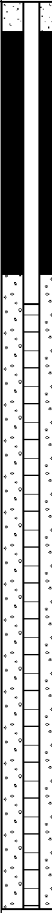
Hammer Information

| From (m) | To (m) | Diam (mm) | Recovery % | Remarks | Serial No.        | Energy Ratio |
|----------|--------|-----------|------------|---------|-------------------|--------------|
| 1.20     | 2.00   | 87        | 90         |         | DART -<br>EQU2195 | 71           |
| 2.00     | 3.00   | 87        | 100        |         |                   |              |
| 3.00     | 4.00   | 77        | 100        |         |                   |              |
| 4.00     | 5.00   | 67        | 80         |         |                   |              |

Project Number

**A112666**

|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |                                                                                        |                     |                                 |                                  |              |    |  |  |      |  |  |  |  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|--------------------------------------|---------------------------------------|-------------------------------------------------------------------------------|------------------------------|-----------------------|-----------------------------------------------------------------------------------|---------------|----------------------|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|---------------------|---------------------------------|----------------------------------|--------------|----|--|--|------|--|--|--|--|
|                                                                                 |              | Project: <b>Land at Stakers Farm</b> |                                       | Location Details                                                              |                              |                       |                                                                                   | Status        |                      | Borehole Number                                                                     |                                                                                        |                     |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              | Location: <b>Yapton</b>              |                                       | Easting: 497639.32    Northing: 103632.26                                     |                              |                       |                                                                                   | <b>PRELIM</b> |                      | <b>WS08</b>                                                                         |                                                                                        |                     |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              | Client: <b>Dandara</b>               |                                       | Level: 6.62mAOD    Depth: 6.00m<br>Logger: DN    Type: WS<br>Inclination: 90° |                              |                       |                                                                                   |               |                      |                                                                                     |                                                                                        |                     |                                 |                                  |              |    |  |  |      |  |  |  |  |
| Method, Plant and Crew                                                                                                                                         |              |                                      |                                       |                                                                               |                              | Diameter              |                                                                                   | Casing        |                      | Groundwater                                                                         |                                                                                        |                     |                                 | Scale: 1:50                      |              |    |  |  |      |  |  |  |  |
| From (m)                                                                                                                                                       | To (m)       | Type                                 | Plant Used                            | Crew                                                                          | Depth (m)                    | Diam (mm)             | Depth(m)                                                                          | Diam (mm)     | Strike (m)           | Casing (m)                                                                          | Sealed (m)                                                                             | Rose To (m)         | Time (mins)                     | Remarks                          | Checked By:  |    |  |  |      |  |  |  |  |
| 0.00<br>1.20                                                                                                                                                   | 1.20<br>6.00 | Inspection Pit<br>Window Sampler     | Hand Excavated<br>Tracked Terrier Rig | D Horridge & S Walton<br>D Horridge & S Walton                                | 1.20<br>3.00<br>4.00<br>6.00 | 200<br>87<br>77<br>67 |                                                                                   |               | 4.00                 | 0                                                                                   | -                                                                                      | 4.00                | 20                              |                                  | Approved By: |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |                                                                                        |                     |                                 | Start Date: 07/03/2019           |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |                                                                                        |                     |                                 | Finish Date: 07/03/2019          |              |    |  |  |      |  |  |  |  |
| Strata Description                                                                                                                                             |              |                                      |                                       |                                                                               |                              |                       | Legend                                                                            | Depth (m)     | Reduced Level (mAOD) | Water Level (m)                                                                     | Inst / Backfill                                                                        | Samples and Testing |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |                                                                                        | Depth (m)           | Ref                             | Tests / Results                  |              |    |  |  |      |  |  |  |  |
| TOPSOIL.                                                                                                                                                       |              |                                      |                                       |                                                                               |                              |                       |  | 0.50          | 6.12                 |                                                                                     |     | 0.30                | ES1                             | SPT(C) 1.20m, N=8 (1,1/2,2,2,2)  |              | 1  |  |  |      |  |  |  |  |
| Firm orangish brown slightly gravelly slightly sandy CLAY with roots. Sand is fine to coarse. Gravel is sub angular coarse flint and calcareous nodules. (RTD) |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |                                                                                        |                     |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |                                                                                        | 1.00                | ES                              |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |                                                                                        | 1.20                | B                               |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |                                                                                        | 1.50                | ES                              |                                  |              |    |  |  |      |  |  |  |  |
| Soft brown very sandy gravelly CLAY locally grading to clayey SAND. Sand is fine to coarse. Gravel is sub rounded coarse chalk                                 |              |                                      |                                       |                                                                               |                              |                       | 2.30                                                                              | 4.32          |                      |  | 2.00                                                                                   | B                   | SPT(C) 2.00m, N=9 (1,1/2,3,2,2) |                                  | 2            |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     | 2.60                                                                                   |                     |                                 |                                  |              |    |  |  |      |  |  |  |  |
| Highly weathered CHALK. Recovered as weak light brown fine to medium gravel in a comminuted matrix. (Grade Dm)                                                 |              |                                      |                                       |                                                                               |                              |                       |  | 2.80          | 3.82                 |                                                                                     |     | 3.00                | B                               | SPT(C) 3.00m, N=12 (1,2/2,2,4,4) |              | 3  |  |  |      |  |  |  |  |
| White CHALK. Recovered as weak structureless gravel infilled comminuted matrix and occasional flint. (Grade Dc)                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |                                                                                        |                     |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |                                                                                        | 4.00                | B                               |                                  |              |    |  |  |      |  |  |  |  |
| EOH at 6.00m - Target depth achieved                                                                                                                           |              |                                      |                                       |                                                                               |                              |                       |                                                                                   | 6.00          | 0.62                 |                                                                                     |   | 5.00                | B                               | SPT(C) 5.00m, N=27 (5,5/6,7,7,7) |              | 5  |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |                                                                                        | 6.00                | B                               |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |                                                                                        |                     |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |                                                                                        |                     |                                 |                                  |              |    |  |  | 7.00 |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |                                                                                        |                     |                                 |                                  |              |    |  |  | 8.00 |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |   | 6.00                | B                               | SPT(C) 6.00m, N=18 (5,4/4,4,5,5) |              | 6  |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |                                                                                        | 7.00                |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |   | 7.00                |                                 |                                  |              | 7  |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |                                                                                        | 8.00                |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |   | 8.00                |                                 |                                  |              | 8  |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |                                                                                        | 9.00                |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |   | 9.00                |                                 |                                  |              | 9  |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |                                                                                        | 10.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
| Observations / Remarks                                                                                                                                         |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |   | 10.00               |                                 |                                  |              | 10 |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |                                                                                        | 11.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
| 1. Groundwater encountered at 4.00m bgl<br>2. Upon completion exploratory hole backfilled with arisings                                                        |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |   | 11.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |                                                                                        | 12.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |   | 12.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |                                                                                        | 13.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |   | 13.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |                                                                                        | 14.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |   | 14.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |                                                                                        | 15.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |   | 15.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |                                                                                        | 16.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |   | 16.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |                                                                                        | 17.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |   | 17.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |                                                                                        | 18.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |   | 18.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |                                                                                        | 19.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |   | 19.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |                                                                                        | 20.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |   | 20.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |                                                                                        | 21.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |   | 21.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |                                                                                        | 22.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |   | 22.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |                                                                                        | 23.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |   | 23.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |                                                                                        | 24.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |   | 24.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |                                                                                        | 25.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |   | 25.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |                                                                                        | 26.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |   | 26.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |                                                                                        | 27.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |   | 27.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |                                                                                        | 28.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |   | 28.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |                                                                                        | 29.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |   | 29.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |                                                                                        | 30.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |   | 30.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |                                                                                        | 31.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |   | 31.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |                                                                                        | 32.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |   | 32.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |                                                                                        | 33.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |   | 33.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |                                                                                        | 34.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |   | 34.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |                                                                                        | 35.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |   | 35.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |                                                                                        | 36.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |   | 36.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |                                                                                        | 37.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |   | 37.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |                                                                                        | 38.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |   | 38.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |                                                                                        | 39.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |   | 39.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |                                                                                        | 40.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |   | 40.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |                                                                                        | 41.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |   | 41.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |                                                                                        | 42.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |   | 42.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |                                                                                        | 43.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |   | 43.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |                                                                                        | 44.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |   | 44.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |                                                                                        | 45.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |   | 45.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |                                                                                        | 46.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |   | 46.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |                                                                                        | 47.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |   | 47.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |                                                                                        | 48.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |   | 48.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |                                                                                        | 49.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |   | 49.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |                                                                                        | 50.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |   | 50.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |                                                                                        | 51.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |   | 51.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |                                                                                        | 52.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |   | 52.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |                                                                                        | 53.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |   | 53.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |                                                                                        | 54.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |   | 54.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |                                                                                        | 55.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |  | 55.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |                                                                                        | 56.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |  | 56.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |                                                                                        | 57.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |  | 57.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |                                                                                        | 58.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |  | 58.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |                                                                                        | 59.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |  | 59.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |                                                                                        | 60.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |  | 60.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |                                                                                        | 61.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |  | 61.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |                                                                                        | 62.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |  | 62.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |                                                                                        | 63.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |  | 63.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |                                                                                        | 64.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |  | 64.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |                                                                                        | 65.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |  | 65.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |                                                                                        | 66.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |  | 66.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |                                                                                        | 67.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |  | 67.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |                                                                                        | 68.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |  | 68.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |                                                                                        | 69.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |  | 69.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |                                                                                        | 70.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |  | 70.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |                                                                                        | 71.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |  | 71.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |                                                                                        | 72.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |  | 72.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |                                                                                        | 73.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |  | 73.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |                                                                                        | 74.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |  | 74.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |                                                                                        | 75.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |  | 75.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |                                                                                        | 76.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |  | 76.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |                                                                                        | 77.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |  | 77.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |                                                                                        | 78.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |  | 78.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |                                                                                        | 79.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |  | 79.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |                                                                                        | 80.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |  | 80.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |                                                                                        | 81.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |  | 81.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |                                                                                        | 82.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |  | 82.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |                                                                                        | 83.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |  | 83.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |                                                                                        | 84.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |  | 84.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |                                                                                        | 85.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |  | 85.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |                                                                                        | 86.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |
|                                                                                                                                                                |              |                                      |                                       |                                                                               |                              |                       |                                                                                   |               |                      |                                                                                     |  | 86.00               |                                 |                                  |              |    |  |  |      |  |  |  |  |

|                                                                                                                                                                                       |                                      |                                  |                                       |                                                |                                           |                       |                                                                                     |                  |                      |                 |                 |                                                                                      |             |                         |                                  |                                  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|----------------------------------|---------------------------------------|------------------------------------------------|-------------------------------------------|-----------------------|-------------------------------------------------------------------------------------|------------------|----------------------|-----------------|-----------------|--------------------------------------------------------------------------------------|-------------|-------------------------|----------------------------------|----------------------------------|
|                                                                                                        | Project: <b>Land at Stakers Farm</b> |                                  |                                       |                                                | Location Details                          |                       |                                                                                     |                  | Status               |                 | Borehole Number |                                                                                      |             |                         |                                  |                                  |
|                                                                                                                                                                                       | Location: <b>Yapton</b>              |                                  |                                       |                                                | Easting: 497569.34    Northing: 103556.93 |                       |                                                                                     |                  | PRELIM               |                 | <b>WS09</b>     |                                                                                      |             |                         |                                  |                                  |
|                                                                                                                                                                                       | Client: <b>Dandara</b>               |                                  |                                       |                                                | Level: 6.54mAOD    Depth: 6.00m           |                       |                                                                                     |                  |                      |                 |                 |                                                                                      |             |                         |                                  |                                  |
|                                                                                                                                                                                       |                                      |                                  |                                       | Logger: DN    Type: WS                         |                                           |                       |                                                                                     | Inclination: 90° |                      |                 |                 | Sheet 1 of 1                                                                         |             |                         |                                  |                                  |
| Method, Plant and Crew                                                                                                                                                                |                                      |                                  |                                       |                                                | Diameter                                  |                       | Casing                                                                              |                  | Groundwater          |                 |                 |                                                                                      |             | Scale: 1:50             |                                  |                                  |
| From (m)                                                                                                                                                                              | To (m)                               | Type                             | Plant Used                            | Crew                                           | Depth (m)                                 | Diam (mm)             | Depth(m)                                                                            | Diam (mm)        | Strike (m)           | Casing (m)      | Sealed (m)      | Rose To (m)                                                                          | Time (mins) | Remarks                 | Checked By:                      |                                  |
| 0.00<br>1.20                                                                                                                                                                          | 1.20<br>6.00                         | Inspection Pit<br>Window Sampler | Hand Excavated<br>Tracked Terrier Rig | D Horridge & S Walton<br>D Horridge & S Walton | 1.20<br>2.00<br>5.00<br>6.00              | 200<br>87<br>77<br>67 |                                                                                     |                  | 4.20                 | 0               | -               | 4.20                                                                                 | 20          |                         | Approved By:                     |                                  |
|                                                                                                                                                                                       |                                      |                                  |                                       |                                                |                                           |                       |                                                                                     |                  |                      |                 |                 |                                                                                      |             | Start Date: 07/03/2019  |                                  |                                  |
|                                                                                                                                                                                       |                                      |                                  |                                       |                                                |                                           |                       |                                                                                     |                  |                      |                 |                 |                                                                                      |             | Finish Date: 07/03/2019 |                                  |                                  |
| Strata Description                                                                                                                                                                    |                                      |                                  |                                       |                                                |                                           |                       | Legend                                                                              | Depth (m)        | Reduced Level (mAOD) | Water Level (m) | Inst / Backfill | Samples and Testing                                                                  |             |                         |                                  |                                  |
|                                                                                                                                                                                       |                                      |                                  |                                       |                                                |                                           |                       |                                                                                     |                  |                      |                 |                 | Depth (m)                                                                            | Ref         | Tests / Results         |                                  |                                  |
| TOPSOIL.                                                                                                                                                                              |                                      |                                  |                                       |                                                |                                           |                       |    | 0.40             | 6.14                 |                 |                 |  | 0.30        | ES1                     | SPT(C) 1.20m, N=9 (2,2/2,2,3)    |                                  |
| Firm orangish brown mottled grey gravelly slightly sandy CLAY with rootlets. Sand is fine to coarse. Gravel is sub angular fine flint and occasional coarse calcareous nodules. (RTD) |                                      |                                  |                                       |                                                |                                           |                       |                                                                                     |                  |                      |                 |                 |                                                                                      |             |                         |                                  |                                  |
| From 0.80m bgl no rootlets                                                                                                                                                            |                                      |                                  |                                       |                                                |                                           |                       |                                                                                     |                  |                      |                 |                 |                                                                                      |             |                         |                                  |                                  |
| From 2.0m bgl becoming sandy                                                                                                                                                          |                                      |                                  |                                       |                                                |                                           |                       |                                                                                     |                  |                      |                 |                 |                                                                                      |             |                         |                                  |                                  |
| Soft light orangish brown slightly gravelly very sandy CLAY locally grading to slightly gravelly clayey SAND. Sand is fine to coarse. Gravel is flint and calcareous fragments. (RTD) |                                      |                                  |                                       |                                                |                                           |                       |                                                                                     |                  |                      |                 |                 |                                                                                      |             |                         |                                  |                                  |
| Damp from 2.30m bgl                                                                                                                                                                   |                                      |                                  |                                       |                                                |                                           |                       |    | 2.60             | 3.94                 |                 |                 |                                                                                      |             |                         |                                  |                                  |
| Highly weathered CHALK. Recovered as light brown sandy fine gravel with light brown sandy clay matrix.                                                                                |                                      |                                  |                                       |                                                |                                           |                       |    | 3.20             | 3.34                 |                 |                 |                                                                                      | 3.00        | B                       | SPT(C) 3.00m, N=20 (3,4/5,4,5,6) |                                  |
| Structureless white CHALK. Firm gravel size depth weak. Some yellow staining in fissures and occasional flint cobble.                                                                 |                                      |                                  |                                       |                                                |                                           |                       |                                                                                     |                  |                      |                 |                 |                                                                                      |             |                         |                                  |                                  |
|                                                                                                                                                                                       |                                      |                                  |                                       |                                                |                                           |                       |                                                                                     |                  |                      |                 |                 |                                                                                      |             |                         |                                  |                                  |
|                                                                                                                                                                                       |                                      |                                  |                                       |                                                |                                           |                       |   | 6.00             | 0.54                 |                 |                 |                                                                                      | 4.00        | B                       | SPT(C) 4.00m, N=10 (3,3/1,2,3,4) |                                  |
|                                                                                                                                                                                       |                                      |                                  |                                       |                                                |                                           |                       |                                                                                     |                  |                      |                 |                 |                                                                                      |             |                         |                                  |                                  |
|                                                                                                                                                                                       |                                      |                                  |                                       |                                                |                                           |                       |                                                                                     |                  |                      |                 |                 |                                                                                      |             |                         |                                  |                                  |
| EOH at 6.00m - Target depth achieved                                                                                                                                                  |                                      |                                  |                                       |                                                |                                           |                       |  |                  |                      |                 |                 |                                                                                      |             |                         | SPT(C) 5.00m, N=27 (5,9/7,6,7,7) |                                  |
|                                                                                                                                                                                       |                                      |                                  |                                       |                                                |                                           |                       |                                                                                     |                  |                      |                 |                 |                                                                                      |             |                         |                                  | SPT(C) 6.00m, N=24 (7,6/5,6,6,7) |
|                                                                                                                                                                                       |                                      |                                  |                                       |                                                |                                           |                       |                                                                                     |                  |                      |                 |                 |                                                                                      |             |                         |                                  |                                  |
|                                                                                                                                                                                       |                                      |                                  |                                       |                                                |                                           |                       |                                                                                     |                  |                      |                 |                 |                                                                                      |             |                         |                                  |                                  |
|                                                                                                                                                                                       |                                      |                                  |                                       |                                                |                                           |                       |                                                                                     |                  |                      |                 |                 |                                                                                      |             |                         |                                  |                                  |
|                                                                                                                                                                                       |                                      |                                  |                                       |                                                |                                           |                       |                                                                                     |                  |                      |                 |                 |                                                                                      |             |                         |                                  |                                  |
|                                                                                                                                                                                       |                                      |                                  |                                       |                                                |                                           |                       |                                                                                     |                  |                      |                 |                 |                                                                                      |             |                         |                                  |                                  |
|                                                                                                                                                                                       |                                      |                                  |                                       |                                                |                                           |                       |                                                                                     |                  |                      |                 |                 |                                                                                      |             |                         |                                  |                                  |
|                                                                                                                                                                                       |                                      |                                  |                                       |                                                |                                           |                       |                                                                                     |                  |                      |                 |                 |                                                                                      |             |                         |                                  |                                  |
|                                                                                                                                                                                       |                                      |                                  |                                       |                                                |                                           |                       |                                                                                     |                  |                      |                 |                 |                                                                                      |             |                         |                                  |                                  |
|                                                                                                                                                                                       |                                      |                                  |                                       |                                                |                                           |                       |                                                                                     |                  |                      |                 |                 |                                                                                      |             |                         |                                  |                                  |
|                                                                                                                                                                                       |                                      |                                  |                                       |                                                |                                           |                       |                                                                                     |                  |                      |                 |                 |                                                                                      |             |                         |                                  |                                  |
|                                                                                                                                                                                       |                                      |                                  |                                       |                                                |                                           |                       |                                                                                     |                  |                      |                 |                 |                                                                                      |             |                         |                                  |                                  |
|                                                                                                                                                                                       |                                      |                                  |                                       |                                                |                                           |                       |                                                                                     |                  |                      |                 |                 |                                                                                      |             |                         |                                  |                                  |
|                                                                                                                                                                                       |                                      |                                  |                                       |                                                |                                           |                       |                                                                                     |                  |                      |                 |                 |                                                                                      |             |                         |                                  |                                  |
|                                                                                                                                                                                       |                                      |                                  |                                       |                                                |                                           |                       |                                                                                     |                  |                      |                 |                 |                                                                                      |             |                         |                                  |                                  |
|                                                                                                                                                                                       |                                      |                                  |                                       |                                                |                                           |                       |                                                                                     |                  |                      |                 |                 |                                                                                      |             |                         |                                  |                                  |
|                                                                                                                                                                                       |                                      |                                  |                                       |                                                |                                           |                       |                                                                                     |                  |                      |                 |                 |                                                                                      |             |                         |                                  |                                  |
|                                                                                                                                                                                       |                                      |                                  |                                       |                                                |                                           |                       |                                                                                     |                  |                      |                 |                 |                                                                                      |             |                         |                                  |                                  |
|                                                                                                                                                                                       |                                      |                                  |                                       |                                                |                                           |                       |                                                                                     |                  |                      |                 |                 |                                                                                      |             |                         |                                  |                                  |
|                                                                                                                                                                                       |                                      |                                  |                                       |                                                |                                           |                       |                                                                                     |                  |                      |                 |                 |                                                                                      |             |                         |                                  |                                  |
|                                                                                                                                                                                       |                                      |                                  |                                       |                                                |                                           |                       |                                                                                     |                  |                      |                 |                 |                                                                                      |             |                         |                                  |                                  |
|                                                                                                                                                                                       |                                      |                                  |                                       |                                                |                                           |                       |                                                                                     |                  |                      |                 |                 |                                                                                      |             |                         |                                  |                                  |
|                                                                                                                                                                                       |                                      |                                  |                                       |                                                |                                           |                       |                                                                                     |                  |                      |                 |                 |                                                                                      |             |                         |                                  |                                  |
|                                                                                                                                                                                       |                                      |                                  |                                       |                                                |                                           |                       |                                                                                     |                  |                      |                 |                 |                                                                                      |             |                         |                                  |                                  |
|                                                                                                                                                                                       |                                      |                                  |                                       |                                                |                                           |                       |                                                                                     |                  |                      |                 |                 |                                                                                      |             |                         |                                  |                                  |
|                                                                                                                                                                                       |                                      |                                  |                                       |                                                |                                           |                       |                                                                                     |                  |                      |                 |                 |                                                                                      |             |                         |                                  |                                  |
|                                                                                                                                                                                       |                                      |                                  |                                       |                                                |                                           |                       |                                                                                     |                  |                      |                 |                 |                                                                                      |             |                         |                                  |                                  |
|                                                                                                                                                                                       |                                      |                                  |                                       |                                                |                                           |                       |                                                                                     |                  |                      |                 |                 |                                                                                      |             |                         |                                  |                                  |
|                                                                                                                                                                                       |                                      |                                  |                                       |                                                |                                           |                       |                                                                                     |                  |                      |                 |                 |                                                                                      |             |                         |                                  |                                  |
|                                                                                                                                                                                       |                                      |                                  |                                       |                                                |                                           |                       |                                                                                     |                  |                      |                 |                 |                                                                                      |             |                         |                                  |                                  |
|                                                                                                                                                                                       |                                      |                                  |                                       |                                                |                                           |                       |                                                                                     |                  |                      |                 |                 |                                                                                      |             |                         |                                  |                                  |
|                                                                                                                                                                                       |                                      |                                  |                                       |                                                |                                           |                       |                                                                                     |                  |                      |                 |                 |                                                                                      |             |                         |                                  |                                  |
|                                                                                                                                                                                       |                                      |                                  |                                       |                                                |                                           |                       |                                                                                     |                  |                      |                 |                 |                                                                                      |             |                         |                                  |                                  |
|                                                                                                                                                                                       |                                      |                                  |                                       |                                                |                                           |                       |                                                                                     |                  |                      |                 |                 |                                                                                      |             |                         |                                  |                                  |
|                                                                                                                                                                                       |                                      |                                  |                                       |                                                |                                           |                       |                                                                                     |                  |                      |                 |                 |                                                                                      |             |                         |                                  |                                  |
|                                                                                                                                                                                       |                                      |                                  |                                       |                                                |                                           |                       |                                                                                     |                  |                      |                 |                 |                                                                                      |             |                         |                                  |                                  |
|                                                                                                                                                                                       |                                      |                                  |                                       |                                                |                                           |                       |                                                                                     |                  |                      |                 |                 |                                                                                      |             |                         |                                  |                                  |
|                                                                                                                                                                                       |                                      |                                  |                                       |                                                |                                           |                       |                                                                                     |                  |                      |                 |                 |                                                                                      |             |                         |                                  |                                  |
|                                                                                                                                                                                       |                                      |                                  |                                       |                                                |                                           |                       |                                                                                     |                  |                      |                 |                 |                                                                                      |             |                         |                                  |                                  |
|                                                                                                                                                                                       |                                      |                                  |                                       |                                                |                                           |                       |                                                                                     |                  |                      |                 |                 |                                                                                      |             |                         |                                  |                                  |
|                                                                                                                                                                                       |                                      |                                  |                                       |                                                |                                           |                       |                                                                                     |                  |                      |                 |                 |                                                                                      |             |                         |                                  |                                  |
|                                                                                                                                                                                       |                                      |                                  |                                       |                                                |                                           |                       |                                                                                     |                  |                      |                 |                 |                                                                                      |             |                         |                                  |                                  |
|                                                                                                                                                                                       |                                      |                                  |                                       |                                                |                                           |                       |                                                                                     |                  |                      |                 |                 |                                                                                      |             |                         |                                  |                                  |
|                                                                                                                                                                                       |                                      |                                  |                                       |                                                |                                           |                       |                                                                                     |                  |                      |                 |                 |                                                                                      |             |                         |                                  |                                  |
|                                                                                                                                                                                       |                                      |                                  |                                       |                                                |                                           |                       |                                                                                     |                  |                      |                 |                 |                                                                                      |             |                         |                                  |                                  |
|                                                                                                                                                                                       |                                      |                                  |                                       |                                                |                                           |                       |                                                                                     |                  |                      |                 |                 |                                                                                      |             |                         |                                  |                                  |
|                                                                                                                                                                                       |                                      |                                  |                                       |                                                |                                           |                       |                                                                                     |                  |                      |                 |                 |                                                                                      |             |                         |                                  |                                  |
|                                                                                                                                                                                       |                                      |                                  |                                       |                                                |                                           |                       |                                                                                     |                  |                      |                 |                 |                                                                                      |             |                         |                                  |                                  |
|                                                                                                                                                                                       |                                      |                                  |                                       |                                                |                                           |                       |                                                                                     |                  |                      |                 |                 |                                                                                      |             |                         |                                  |                                  |
|                                                                                                                                                                                       |                                      |                                  |                                       |                                                |                                           |                       |                                                                                     |                  |                      |                 |                 |                                                                                      |             |                         |                                  |                                  |
|                                                                                                                                                                                       |                                      |                                  |                                       |                                                |                                           |                       |                                                                                     |                  |                      |                 |                 |                                                                                      |             |                         |                                  |                                  |
|                                                                                                                                                                                       |                                      |                                  |                                       |                                                |                                           |                       |                                                                                     |                  |                      |                 |                 |                                                                                      |             |                         |                                  |                                  |
|                                                                                                                                                                                       |                                      |                                  |                                       |                                                |                                           |                       |                                                                                     |                  |                      |                 |                 |                                                                                      |             |                         |                                  |                                  |
|                                                                                                                                                                                       |                                      |                                  |                                       |                                                |                                           |                       |                                                                                     |                  |                      |                 |                 |                                                                                      |             |                         |                                  |                                  |
|                                                                                                                                                                                       |                                      |                                  |                                       |                                                |                                           |                       |                                                                                     |                  |                      |                 |                 |                                                                                      |             |                         |                                  |                                  |
|                                                                                                                                                                                       |                                      |                                  |                                       |                                                |                                           |                       |                                                                                     |                  |                      |                 |                 |                                                                                      |             |                         |                                  |                                  |
|                                                                                                                                                                                       |                                      |                                  |                                       |                                                |                                           |                       |                                                                                     |                  |                      |                 |                 |                                                                                      |             |                         |                                  |                                  |
|                                                                                                                                                                                       |                                      |                                  |                                       |                                                |                                           |                       |                                                                                     |                  |                      |                 |                 |                                                                                      |             |                         |                                  |                                  |
|                                                                                                                                                                                       |                                      |                                  |                                       |                                                |                                           |                       |                                                                                     |                  |                      |                 |                 |                                                                                      |             |                         |                                  |                                  |
|                                                                                                                                                                                       |                                      |                                  |                                       |                                                |                                           |                       |                                                                                     |                  |                      |                 |                 |                                                                                      |             |                         |                                  |                                  |
|                                                                                                                                                                                       |                                      |                                  |                                       |                                                |                                           |                       |                                                                                     |                  |                      |                 |                 |                                                                                      |             |                         |                                  |                                  |
|                                                                                                                                                                                       |                                      |                                  |                                       |                                                |                                           |                       |                                                                                     |                  |                      |                 |                 |                                                                                      |             |                         |                                  |                                  |
|                                                                                                                                                                                       |                                      |                                  |                                       |                                                |                                           |                       |                                                                                     |                  |                      |                 |                 |                                                                                      |             |                         |                                  |                                  |
|                                                                                                                                                                                       |                                      |                                  |                                       |                                                |                                           |                       |                                                                                     |                  |                      |                 |                 |                                                                                      |             |                         |                                  |                                  |
|                                                                                                                                                                                       |                                      |                                  |                                       |                                                |                                           |                       |                                                                                     |                  |                      |                 |                 |                                                                                      |             |                         |                                  |                                  |
|                                                                                                                                                                                       |                                      |                                  |                                       |                                                |                                           |                       |                                                                                     |                  |                      |                 |                 |                                                                                      |             |                         |                                  |                                  |
|                                                                                                                                                                                       |                                      |                                  |                                       |                                                |                                           |                       |                                                                                     |                  |                      |                 |                 |                                                                                      |             |                         |                                  |                                  |

| Method, Plant and Crew                                                                                                                                                                      |              |                                  |                                       |                                              | Diameter                     |                       | Casing   |           | Groundwater          |                 |                 |                     |             | Scale:          |                                       |            |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|----------------------------------|---------------------------------------|----------------------------------------------|------------------------------|-----------------------|----------|-----------|----------------------|-----------------|-----------------|---------------------|-------------|-----------------|---------------------------------------|------------|
| From (m)                                                                                                                                                                                    | To (m)       | Type                             | Plant Used                            | Crew                                         | Depth (m)                    | Diam (mm)             | Depth(m) | Diam (mm) | Strike (m)           | Casing (m)      | Sealed (m)      | Rose To (m)         | Time (mins) | Remarks         | Checked By:                           |            |
| 0.00<br>1.20                                                                                                                                                                                | 1.20<br>6.00 | Inspection Pit<br>Window Sampler | Hand Excavated<br>Tracked Terrier Rig | D Homidge & S Walton<br>D Homidge & S Walton | 1.20<br>3.00<br>5.00<br>6.00 | 200<br>87<br>77<br>67 |          |           | 4.20                 | 0               | -               | 4.20                | 20          |                 | Approved By:                          |            |
|                                                                                                                                                                                             |              |                                  |                                       |                                              |                              |                       |          |           |                      |                 |                 |                     |             |                 | Start Date:                           | 07/03/2019 |
|                                                                                                                                                                                             |              |                                  |                                       |                                              |                              |                       |          |           |                      |                 |                 |                     |             |                 | Finish Date:                          | 07/03/2019 |
| Strata Description                                                                                                                                                                          |              |                                  |                                       |                                              |                              |                       | Legend   | Depth (m) | Reduced Level (mAOD) | Water Level (m) | Inst / Backfill | Samples and Testing |             |                 |                                       |            |
|                                                                                                                                                                                             |              |                                  |                                       |                                              |                              |                       |          |           |                      |                 |                 | Depth (m)           | Ref         | Tests / Results |                                       |            |
| TOPSOIL.                                                                                                                                                                                    |              |                                  |                                       |                                              |                              |                       |          |           |                      |                 |                 |                     |             |                 |                                       |            |
| Firm orangish brown mottled grey slightly gravelly slightly sandy CLAY with rootlets. Sand is fine to coarse. Gravel is sub angular to sub rounded fine to medium calcareous nodules. (RTD) |              |                                  |                                       |                                              |                              |                       |          | 0.40      | 6.26                 |                 |                 |                     | 0.30        | ES1             |                                       |            |
| No rootlets from 1.10m bgl                                                                                                                                                                  |              |                                  |                                       |                                              |                              |                       |          |           |                      |                 |                 |                     | 0.80        | ES              |                                       |            |
|                                                                                                                                                                                             |              |                                  |                                       |                                              |                              |                       |          |           |                      |                 |                 |                     | 1.20        | B               | SPT(C) 1.20m, N=6 (1,1/1,2,1,2)       |            |
|                                                                                                                                                                                             |              |                                  |                                       |                                              |                              |                       |          |           |                      |                 |                 |                     | 2.00        | B               | SPT(C) 2.00m, N=5 (1,1/2,1,1,1)       |            |
|                                                                                                                                                                                             |              |                                  |                                       |                                              |                              |                       |          |           |                      |                 |                 |                     | 2.00        | ES              |                                       |            |
| Dark orangish brown slightly gravelly slightly clayey fine to coarse SAND with low cobble content. Gravel is medium calcareous nodules and occasional flint. Cobbles are flint (RTD)        |              |                                  |                                       |                                              |                              |                       |          | 2.30      | 4.36                 |                 |                 |                     |             |                 |                                       |            |
| Firm light orangish brown slightly sandy gravelly CLAY. Sand is fine to coarse. Gravel is sub angular fine to medium flint and chalk fragments. (RTD)                                       |              |                                  |                                       |                                              |                              |                       |          | 2.50      | 4.16                 |                 |                 |                     |             |                 |                                       |            |
|                                                                                                                                                                                             |              |                                  |                                       |                                              |                              |                       |          |           |                      |                 |                 |                     |             |                 |                                       |            |
| Highly weathered CHALK.                                                                                                                                                                     |              |                                  |                                       |                                              |                              |                       |          | 3.60      | 3.06                 |                 |                 |                     |             |                 |                                       |            |
|                                                                                                                                                                                             |              |                                  |                                       |                                              |                              |                       |          |           |                      |                 |                 |                     | 4.00        | B               | SPT(C) 4.00m, N=26 (6,6/8,6,6,6)      |            |
| White structureless CHALK medium to coarse gravel size clasts weak in comminuted material and occasional flint cobbles.                                                                     |              |                                  |                                       |                                              |                              |                       |          | 4.40      | 2.26                 |                 |                 |                     |             |                 |                                       |            |
|                                                                                                                                                                                             |              |                                  |                                       |                                              |                              |                       |          |           |                      |                 |                 |                     | 5.00        | B               | SPT(C) 5.00m, N=32 (6,6/6,7,9,10)     |            |
|                                                                                                                                                                                             |              |                                  |                                       |                                              |                              |                       |          |           |                      |                 |                 |                     |             |                 |                                       |            |
| EOH at 6.00m - Target depth achieved                                                                                                                                                        |              |                                  |                                       |                                              |                              |                       |          | 6.00      | 0.66                 |                 |                 |                     | 6.00        | B               | SPT(C) 6.00m, 50 (10,13/50 for 265mm) |            |
|                                                                                                                                                                                             |              |                                  |                                       |                                              |                              |                       |          |           |                      |                 |                 |                     |             |                 |                                       |            |
|                                                                                                                                                                                             |              |                                  |                                       |                                              |                              |                       |          |           |                      |                 |                 |                     |             |                 |                                       |            |
|                                                                                                                                                                                             |              |                                  |                                       |                                              |                              |                       |          |           |                      |                 |                 |                     |             |                 |                                       |            |
|                                                                                                                                                                                             |              |                                  |                                       |                                              |                              |                       |          |           |                      |                 |                 |                     |             |                 |                                       |            |
|                                                                                                                                                                                             |              |                                  |                                       |                                              |                              |                       |          |           |                      |                 |                 |                     |             |                 |                                       |            |
|                                                                                                                                                                                             |              |                                  |                                       |                                              |                              |                       |          |           |                      |                 |                 |                     |             |                 |                                       |            |
|                                                                                                                                                                                             |              |                                  |                                       |                                              |                              |                       |          |           |                      |                 |                 |                     |             |                 |                                       |            |
|                                                                                                                                                                                             |              |                                  |                                       |                                              |                              |                       |          |           |                      |                 |                 |                     |             |                 |                                       |            |
|                                                                                                                                                                                             |              |                                  |                                       |                                              |                              |                       |          |           |                      |                 |                 |                     |             |                 |                                       |            |
|                                                                                                                                                                                             |              |                                  |                                       |                                              |                              |                       |          |           |                      |                 |                 |                     |             |                 |                                       |            |
|                                                                                                                                                                                             |              |                                  |                                       |                                              |                              |                       |          |           |                      |                 |                 |                     |             |                 |                                       |            |
|                                                                                                                                                                                             |              |                                  |                                       |                                              |                              |                       |          |           |                      |                 |                 |                     |             |                 |                                       |            |
|                                                                                                                                                                                             |              |                                  |                                       |                                              |                              |                       |          |           |                      |                 |                 |                     |             |                 |                                       |            |
|                                                                                                                                                                                             |              |                                  |                                       |                                              |                              |                       |          |           |                      |                 |                 |                     |             |                 |                                       |            |
|                                                                                                                                                                                             |              |                                  |                                       |                                              |                              |                       |          |           |                      |                 |                 |                     |             |                 |                                       |            |
|                                                                                                                                                                                             |              |                                  |                                       |                                              |                              |                       |          |           |                      |                 |                 |                     |             |                 |                                       |            |
|                                                                                                                                                                                             |              |                                  |                                       |                                              |                              |                       |          |           |                      |                 |                 |                     |             |                 |                                       |            |
|                                                                                                                                                                                             |              |                                  |                                       |                                              |                              |                       |          |           |                      |                 |                 |                     |             |                 |                                       |            |
|                                                                                                                                                                                             |              |                                  |                                       |                                              |                              |                       |          |           |                      |                 |                 |                     |             |                 |                                       |            |
|                                                                                                                                                                                             |              |                                  |                                       |                                              |                              |                       |          |           |                      |                 |                 |                     |             |                 |                                       |            |
|                                                                                                                                                                                             |              |                                  |                                       |                                              |                              |                       |          |           |                      |                 |                 |                     |             |                 |                                       |            |
|                                                                                                                                                                                             |              |                                  |                                       |                                              |                              |                       |          |           |                      |                 |                 |                     |             |                 |                                       |            |
|                                                                                                                                                                                             |              |                                  |                                       |                                              |                              |                       |          |           |                      |                 |                 |                     |             |                 |                                       |            |
|                                                                                                                                                                                             |              |                                  |                                       |                                              |                              |                       |          |           |                      |                 |                 |                     |             |                 |                                       |            |
|                                                                                                                                                                                             |              |                                  |                                       |                                              |                              |                       |          |           |                      |                 |                 |                     |             |                 |                                       |            |
|                                                                                                                                                                                             |              |                                  |                                       |                                              |                              |                       |          |           |                      |                 |                 |                     |             |                 |                                       |            |
|                                                                                                                                                                                             |              |                                  |                                       |                                              |                              |                       |          |           |                      |                 |                 |                     |             |                 |                                       |            |
|                                                                                                                                                                                             |              |                                  |                                       |                                              |                              |                       |          |           |                      |                 |                 |                     |             |                 |                                       |            |
|                                                                                                                                                                                             |              |                                  |                                       |                                              |                              |                       |          |           |                      |                 |                 |                     |             |                 |                                       |            |
|                                                                                                                                                                                             |              |                                  |                                       |                                              |                              |                       |          |           |                      |                 |                 |                     |             |                 |                                       |            |
|                                                                                                                                                                                             |              |                                  |                                       |                                              |                              |                       |          |           |                      |                 |                 |                     |             |                 |                                       |            |
|                                                                                                                                                                                             |              |                                  |                                       |                                              |                              |                       |          |           |                      |                 |                 |                     |             |                 |                                       |            |
|                                                                                                                                                                                             |              |                                  |                                       |                                              |                              |                       |          |           |                      |                 |                 |                     |             |                 |                                       |            |
|                                                                                                                                                                                             |              |                                  |                                       |                                              |                              |                       |          |           |                      |                 |                 |                     |             |                 |                                       |            |
|                                                                                                                                                                                             |              |                                  |                                       |                                              |                              |                       |          |           |                      |                 |                 |                     |             |                 |                                       |            |
|                                                                                                                                                                                             |              |                                  |                                       |                                              |                              |                       |          |           |                      |                 |                 |                     |             |                 |                                       |            |
|                                                                                                                                                                                             |              |                                  |                                       |                                              |                              |                       |          |           |                      |                 |                 |                     |             |                 |                                       |            |
|                                                                                                                                                                                             |              |                                  |                                       |                                              |                              |                       |          |           |                      |                 |                 |                     |             |                 |                                       |            |
|                                                                                                                                                                                             |              |                                  |                                       |                                              |                              |                       |          |           |                      |                 |                 |                     |             |                 |                                       |            |
|                                                                                                                                                                                             |              |                                  |                                       |                                              |                              |                       |          |           |                      |                 |                 |                     |             |                 |                                       |            |
|                                                                                                                                                                                             |              |                                  |                                       |                                              |                              |                       |          |           |                      |                 |                 |                     |             |                 |                                       |            |
|                                                                                                                                                                                             |              |                                  |                                       |                                              |                              |                       |          |           |                      |                 |                 |                     |             |                 |                                       |            |
|                                                                                                                                                                                             |              |                                  |                                       |                                              |                              |                       |          |           |                      |                 |                 |                     |             |                 |                                       |            |
|                                                                                                                                                                                             |              |                                  |                                       |                                              |                              |                       |          |           |                      |                 |                 |                     |             |                 |                                       |            |
|                                                                                                                                                                                             |              |                                  |                                       |                                              |                              |                       |          |           |                      |                 |                 |                     |             |                 |                                       |            |
|                                                                                                                                                                                             |              |                                  |                                       |                                              |                              |                       |          |           |                      |                 |                 |                     |             |                 |                                       |            |
|                                                                                                                                                                                             |              |                                  |                                       |                                              |                              |                       |          |           |                      |                 |                 |                     |             |                 |                                       |            |
|                                                                                                                                                                                             |              |                                  |                                       |                                              |                              |                       |          |           |                      |                 |                 |                     |             |                 |                                       |            |
|                                                                                                                                                                                             |              |                                  |                                       |                                              |                              |                       |          |           |                      |                 |                 |                     |             |                 |                                       |            |
|                                                                                                                                                                                             |              |                                  |                                       |                                              |                              |                       |          |           |                      |                 |                 |                     |             |                 |                                       |            |
|                                                                                                                                                                                             |              |                                  |                                       |                                              |                              |                       |          |           |                      |                 |                 |                     |             |                 |                                       |            |



**Plate 1**      **WS01 hand pit arisings**



**Plate 2**      **WS01**

WYG Environment  
5th Floor, Longcross Court  
47 Newport Road  
Cardiff  
CF24 0AD



**Project :**  
**Land at Stakers Farm, Yapton**

**Client: Dandara**

**Project No.: A112666**

**Date : March 2019**

**Environmental Consultancy  
Ground Technologies & Investigation**



**Plate 3**

**WS02**

**WYG Environment**  
**5th Floor, Longcross Court**  
**47 Newport Road**  
**Cardiff**  
**CF24 0AD**



**Environmental Consultancy**  
**Ground Technologies & Investigation**

**Project :**  
**Land at Stakers Farm, Yapton**

**Client: Dandara**

**Project No.: A112666**

**Date : March 2019**





**Plate 4**      WS04 hand pit arisings



**Plate 5**      WS04

WYG Environment  
5th Floor, Longcross Court  
47 Newport Road  
Cardiff  
CF24 0AD



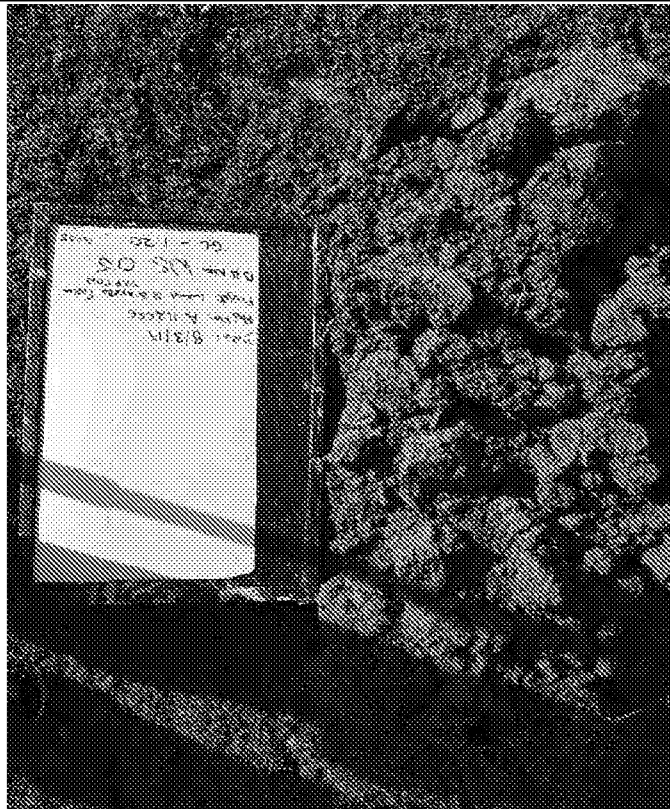
**Project :**  
**Land at Stakers Farm, Yapton**

**Client: Dandara**

**Project No.: A112666**

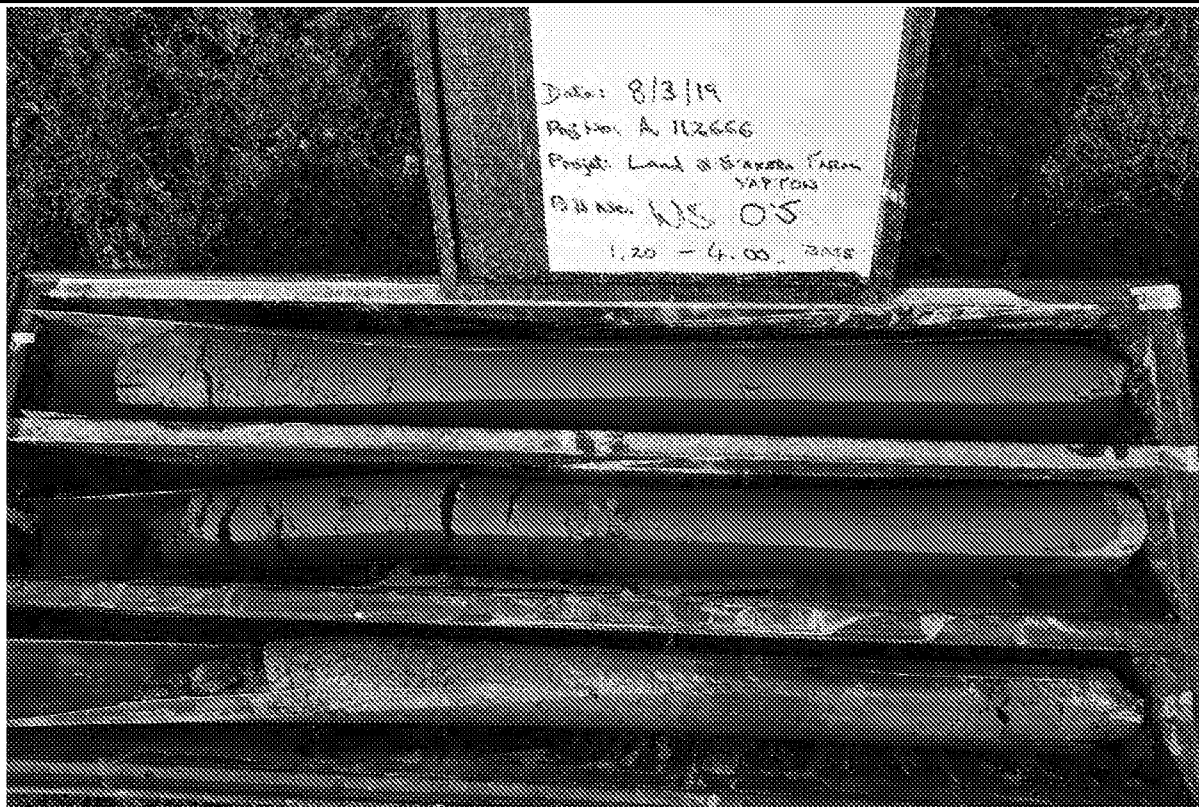
**Date : March 2019**

Environmental Consultancy  
Ground Technologies & Investigation



**Plate 6**

WS05 hand pit arisings



**Plate 7**

WS05

WYG Environment  
5th Floor, Longcross Court  
47 Newport Road  
Cardiff  
CF24 0AD



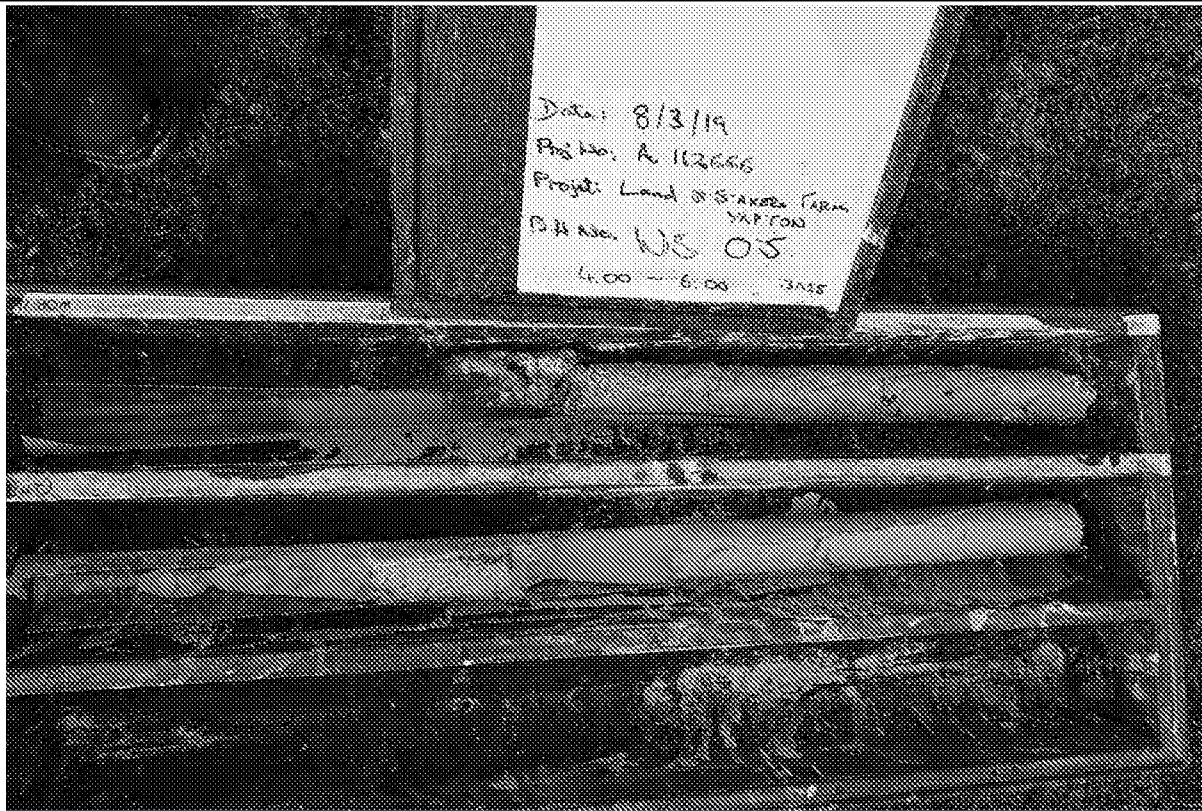
**Project :**  
Land at Stakers Farm, Yapton

**Client:** Dandara

**Project No.:** A112666

**Date :** March 2019

Environmental Consultancy  
Ground Technologies & Investigation



**Plate 8**

**WS05**

**WYG Environment**  
 5th Floor, Longcross Court  
 47 Newport Road  
 Cardiff  
 CF24 0AD



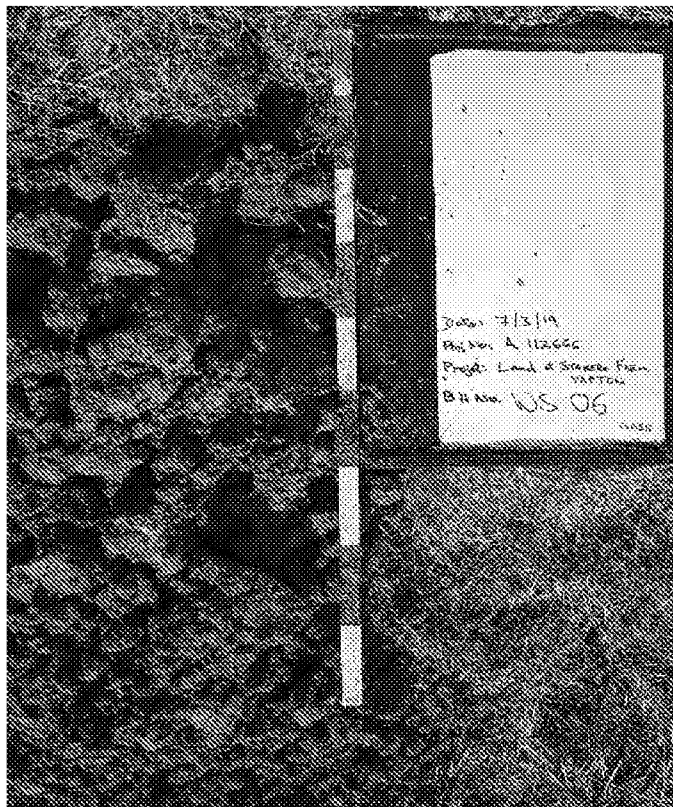
**Environmental Consultancy**  
**Ground Technologies & Investigation**

**Project :**  
**Land at Stakers Farm, Yapton**

**Client: Dandara**

**Project No.: A112666**

**Date : March 2019**



**Plate 9**

WS06 hand pit arisings



**Plate 10**

WS06

WYG Environment  
5th Floor, Longcross Court  
47 Newport Road  
Cardiff  
CF24 0AD



**Project :**  
Land at Stakers Farm, Yapton

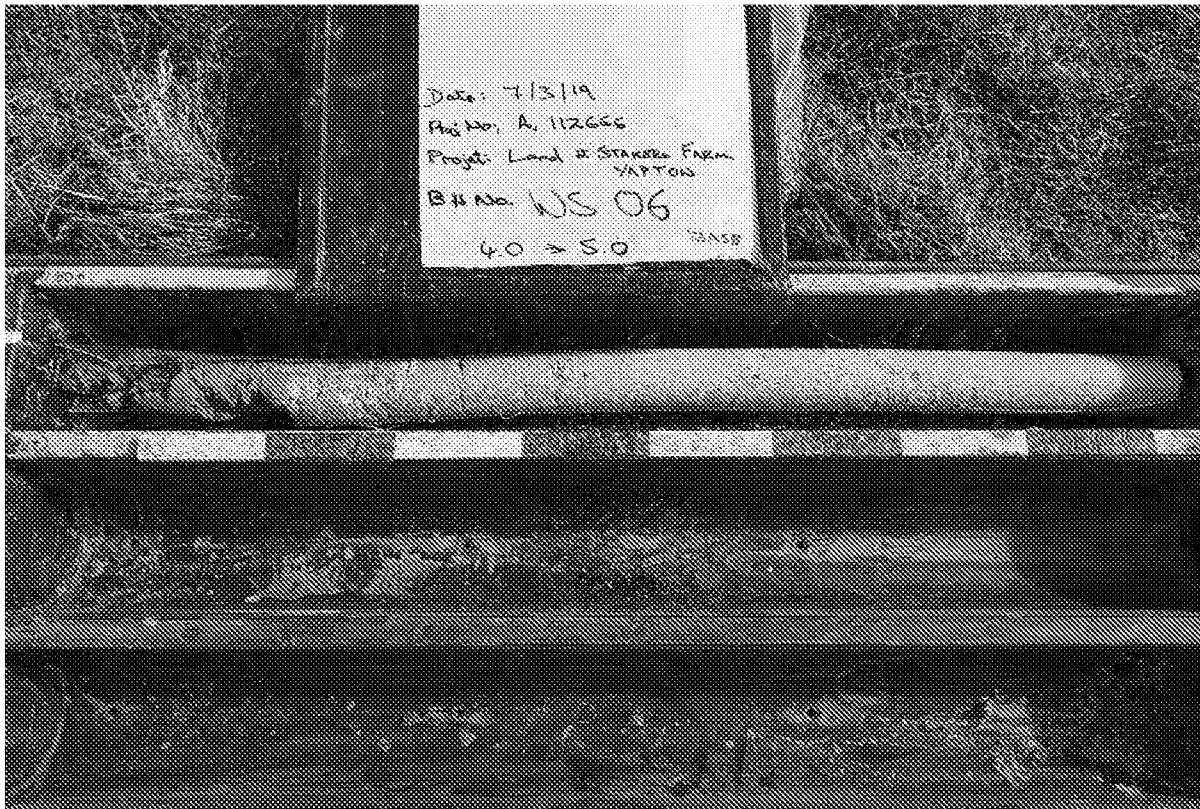
**Client:** Dandara

**Project No.:** A112666

**Date :** March 2019

Environmental Consultancy  
Ground Technologies & Investigation





**Plate 11**

**WS06**

WYG Environment  
5th Floor, Longcross Court  
47 Newport Road  
Cardiff  
CF24 0AD



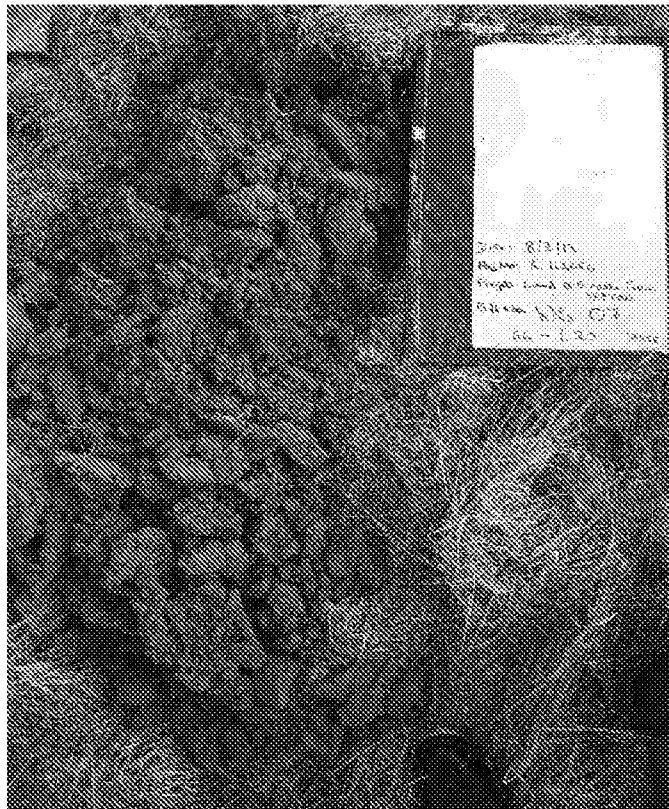
**Project :**  
**Land at Stakers Farm, Yapton**

**Client: Dandara**

**Project No.: A112666**

**Date : March 2019**

**Environmental Consultancy  
Ground Technologies & Investigation**



**Plate 12**

WS07 hand pit arisings



**Plate 13**

WS07

WYG Environment  
5th Floor, Longcross Court  
47 Newport Road  
Cardiff  
CF24 0AD



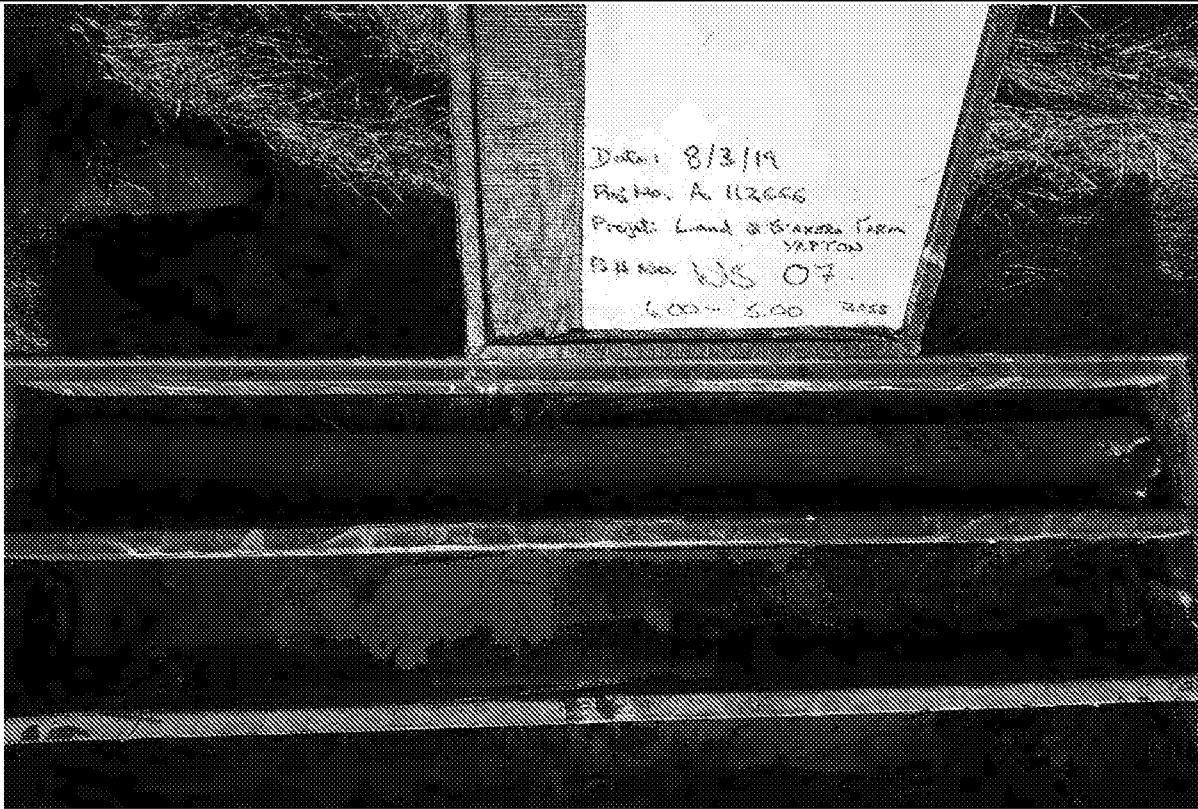
**Project :**  
Land at Stakers Farm, Yapton

**Client:** Dandara

**Project No.:** A112666

**Date :** March 2019

Environmental Consultancy  
Ground Technologies & Investigation



**Plate 14**

WS07

WYG Environment  
5th Floor, Longcross Court  
47 Newport Road  
Cardiff  
CF24 0AD



**Project :**  
**Land at Stakers Farm, Yapton**

**Client: Dandara**

**Project No.: A112666**

**Date : March 2019**

**E-mail: [enviro.dandara@wyg.com](mailto:enviro.dandara@wyg.com)**  
**Environmental Consultancy**  
**Ground Technologies & Investigation**



**Plate 15**

**WS08 hand pit arisings**



**Plate 16**

**WS08**

WYG Environment  
5th Floor, Longcross Court  
47 Newport Road  
Cardiff  
CF24 0AD



**Project :**  
**Land at Stakers Farm, Yapton**

**Client: Dandara**

**Project No.: A112666**

**Date : March 2019**

Environmental Consultancy  
Ground Technologies & Investigation





Plate 17 WS08

WYG Environment  
5th Floor, Longcross Court  
47 Newport Road  
Cardiff  
CF24 0AD



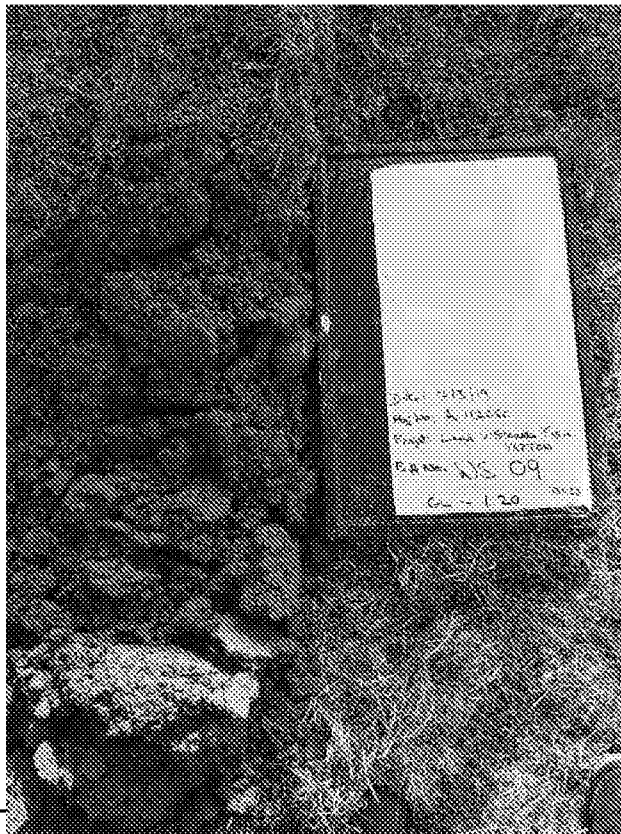
Environmental Consultancy  
Ground Technologies & Investigation

Project :  
Land at Stakers Farm, Yapton

Client: Dandara

Project No.: A112666

Date : March 2019



**Plate 18**

WS09 hand pit arisings



**Plate 19**

WS09

WYG Environment  
5th Floor, Longcross Court  
47 Newport Road  
Cardiff  
CF24 0AD



**Project :**  
Land at Stakers Farm, Yapton

**Client:** Dandara

**Project No.:** A112666

**Date :** March 2019



Ground Technologies & Investigation



**Plate 20**

**WS09**

**WYG Environment**  
 5th Floor, Longcross Court  
 47 Newport Road  
 Cardiff  
 CF24 0AD



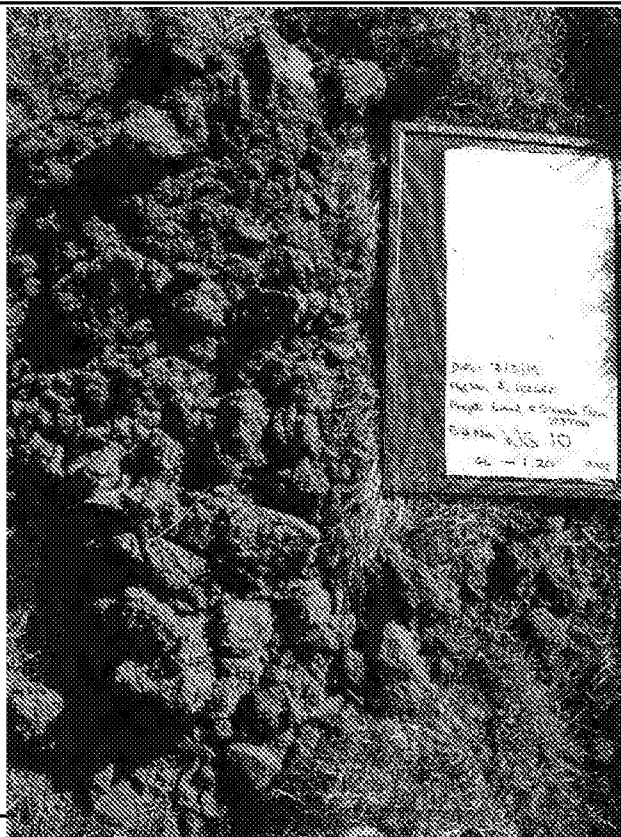
**Project :**  
**Land at Stakers Farm, Yapton**

**Client: Dandara**

**Project No.: A112666**

**Date : March 2019**

**Environmental Consultancy**  
**Ground Technologies & Investigation**



**Plate 21**      WS10 hand pit arisings



**Plate 22**      WS10

WYG Environment  
5th Floor, Longcross Court  
47 Newport Road  
Cardiff  
CF24 0AD



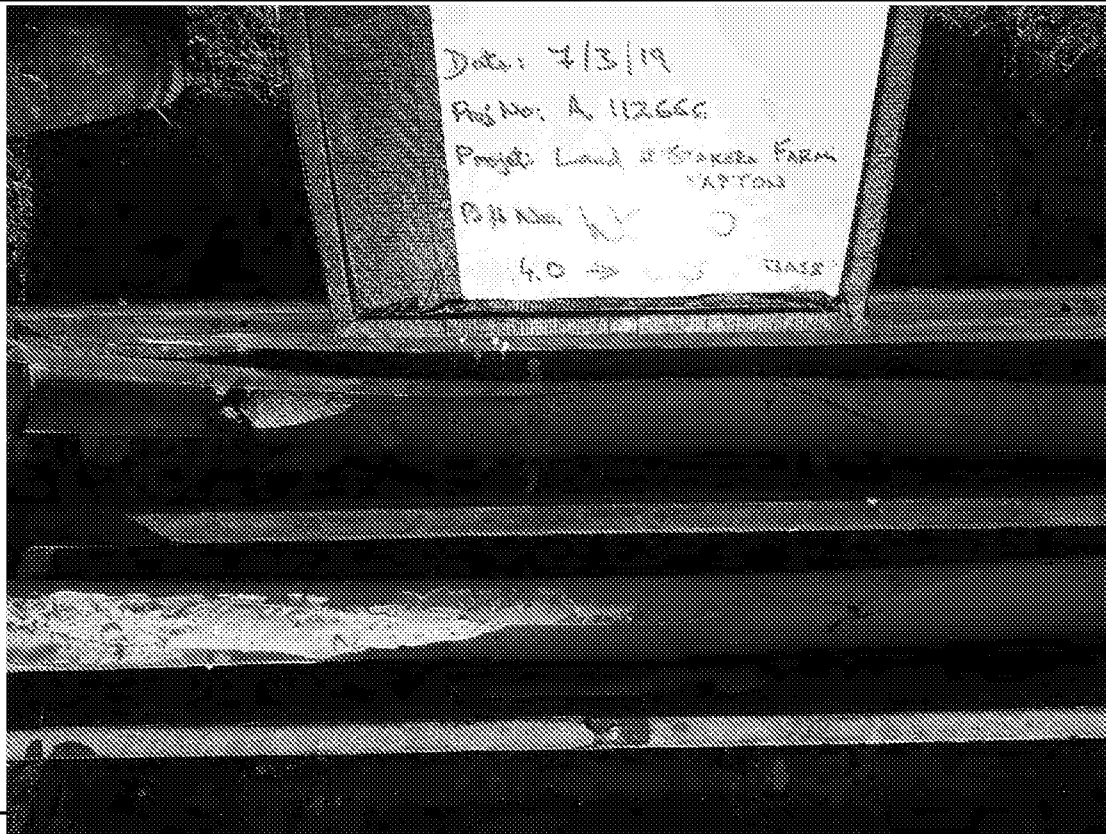
**Project :**  
**Land at Stakers Farm, Yapton**

**Client: Dandara**

**Project No.: A112666**

**Date : March 2019**

**Environmental Consultancy  
Ground Technologies & Investigation**



**Plate 23**      WS10 hand pit arisings

WYG Environment  
5th Floor, Longcross Court  
47 Newport Road  
Cardiff  
CF24 0AD



**Project :**  
Land at Stakers Farm, Yapton

**Client:** Dandara

**Project No.:** A112666

**Date :** March 2019

Environmental Consultancy  
Ground Technologies & Investigation





**Plate 24** TP01



**Plate 25** TP01 arisings

WYG Environment  
5th Floor, Longcross Court  
47 Newport Road  
Cardiff  
CF24 0AD



**Project :**  
Land at Stakers Farm, Yapton

**Client:** Dandara

**Project No.:** A112666

**Date :** March 2019

Environmental Consultancy  
Ground Technologies & Investigation



**Plate 26** TP02



**Plate 27** TP02 arisings

WYG Environment  
5th Floor, Longcross Court  
47 Newport Road  
Cardiff  
CF24 0AD



**Project :**  
Land at Stakers Farm, Yapton

**Client:** Dandara

**Project No.:** A112666

**Date :** March 2019

**Ground Technologies & Investigation**





**Plate 28** TP04



**Plate 29** TP04 arisings

WYG Environment  
5th Floor, Longcross Court  
47 Newport Road  
Cardiff  
CF24 0AD



**Project :**  
**Land at Stakers Farm, Yapton**

**Client: Dandara**

**Project No.: A112666**

**Date : March 2019**

Environmental Consultancy  
Ground Technologies & Investigation





**Plate 30** TP06



**Plate 31** TP06 arisings

WYG Environment  
5th Floor, Longcross Court  
47 Newport Road  
Cardiff  
CF24 0AD



**Project :**  
Land at Stakers Farm, Yapton

**Client:** Dandara

**Project No.:** A112666

**Date :** March 2019

Environmental Consultancy  
Ground Technologies & Investigation



**Plate 32** TP07



**Plate 33** TP07 arisings

WYG Environment  
5th Floor, Longcross Court  
47 Newport Road  
Cardiff  
CF24 0AD



**Project :**  
Land at Stakers Farm, Yapton

**Client:** Dandara

**Project No.:** A112666

**Date :** March 2019

Environmental Consultancy  
Ground Technologies & Investigation





**Plate 34**      WS07 hand pit arisings



**Plate 35**      WS07

WYG Environment  
5th Floor, Longcross Court  
47 Newport Road  
Cardiff  
CF24 0AD



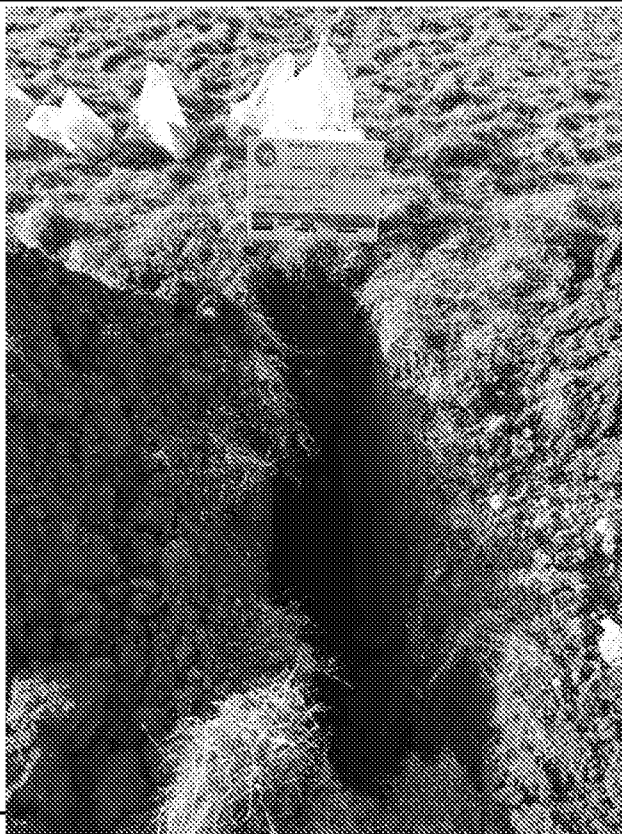
**Project :**  
Land at Stakers Farm, Yapton

**Client:** Dandara

**Project No.:** A112666

**Date :** March 2019

Environmental Consultancy  
Ground Technologies & Investigation



**Plate 36**

TP09



**Plate 37**

TP09 arisings

WYG Environment  
5th Floor, Longcross Court  
47 Newport Road  
Cardiff  
CF24 0AD



**Project :**  
Land at Stakers Farm, Yapton

**Client:** Dandara

**Project No.:** A112666

**Date :** March 2019

Environmental Consultancy  
Ground Technologies & Investigation



**Plate 38** TP10



**Plate 16** TP10 arisings

WYG Environment  
5th Floor, Longcross Court  
47 Newport Road  
Cardiff  
CF24 0AD



**Project :**  
Land at Stakers Farm, Yapton

**Client:** Dandara

**Project No.:** A112666

**Date :** March 2019

Environmental Consultancy  
Ground Technologies & Investigation

**Land at Stakers Farm, Yapton**  
**Ground Investigation – Interpretative Report**



**Appendix C – Soakaway Test Results**





|                      |                              |
|----------------------|------------------------------|
| <b>DATE:</b>         | 08/03/2019                   |
| <b>PROJECT No:</b>   | A112666                      |
| <b>PROJECT NAME:</b> | Land at Stakers Farm, Yapton |
| <b>CLIENT:</b>       | Dandara                      |
| <b>TRIAL PIT ID:</b> | TP08                         |
| <b>TEST NUMBER:</b>  | 1                            |



|                      |                              |
|----------------------|------------------------------|
| <b>DATE:</b>         | 08/03/2019                   |
| <b>PROJECT No:</b>   | A112666                      |
| <b>PROJECT NAME:</b> | Land at Stakers Farm, Yapton |
| <b>CLIENT:</b>       | Dandara                      |
| <b>TRIAL PIT ID:</b> | TP09                         |
| <b>TEST NUMBER:</b>  | 1                            |

Figure 10 is a line graph showing the depth of water below ground level (m) versus time from filling to maximum effective depth (seconds). The y-axis ranges from 3.10 to 3.55 m, and the x-axis ranges from 0 to 6000 seconds. The data points, marked with diamonds, show a slight decrease in depth from approximately 3.16 m at 0 seconds to 3.18 m at 5400 seconds. A horizontal dashed line is drawn at approximately 3.27 m.

| Time from filling to maximum effective depth (seconds) | Depth of water below ground level (m) |
|--------------------------------------------------------|---------------------------------------|
| 0                                                      | 3.16                                  |
| 100                                                    | 3.16                                  |
| 200                                                    | 3.16                                  |
| 300                                                    | 3.16                                  |
| 400                                                    | 3.16                                  |
| 500                                                    | 3.16                                  |
| 600                                                    | 3.16                                  |
| 700                                                    | 3.16                                  |
| 800                                                    | 3.16                                  |
| 900                                                    | 3.16                                  |
| 1000                                                   | 3.16                                  |
| 1200                                                   | 3.16                                  |
| 1800                                                   | 3.16                                  |
| 2700                                                   | 3.17                                  |
| 3600                                                   | 3.18                                  |
| 5400                                                   | 3.18                                  |

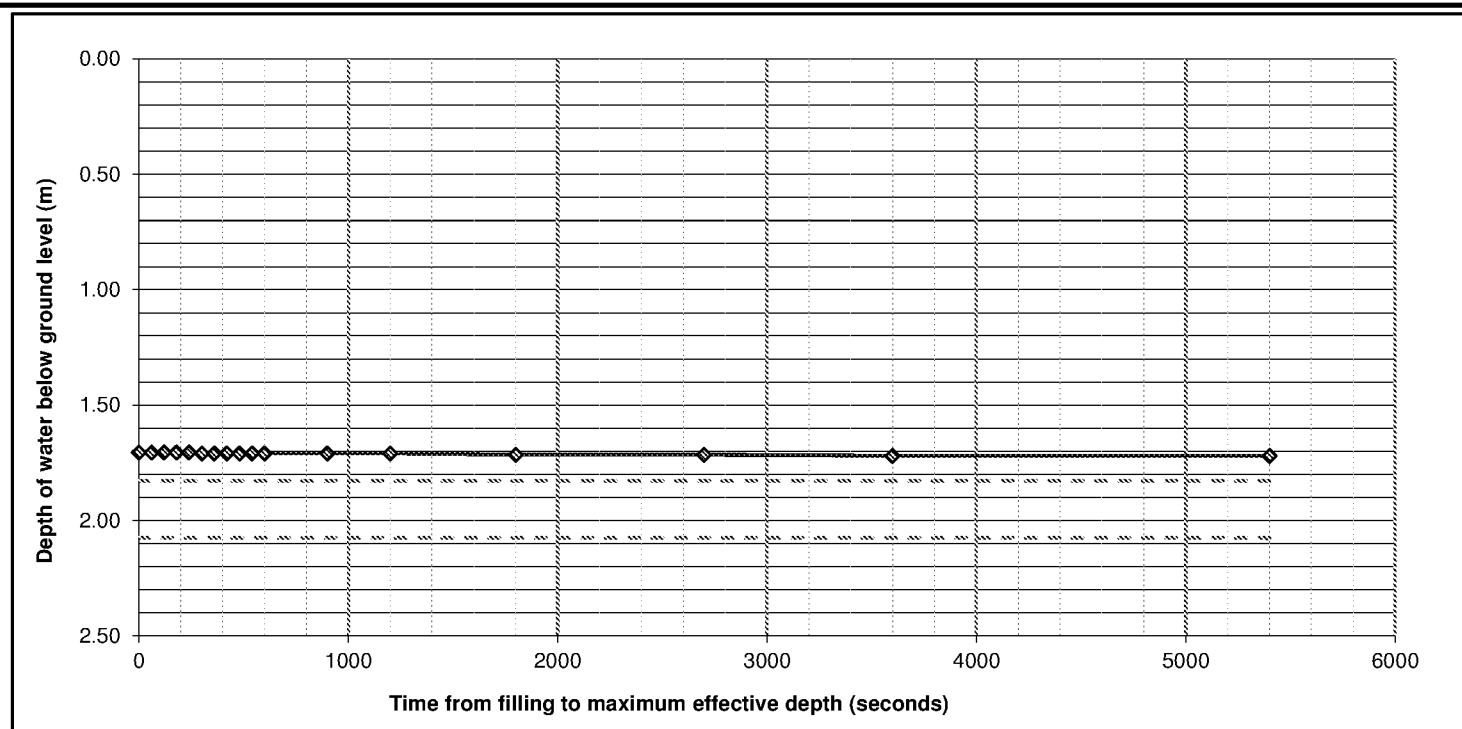
[illegible]





|                      |                              |
|----------------------|------------------------------|
| <b>DATE:</b>         | 08/03/2019                   |
| <b>PROJECT No:</b>   | A112666                      |
| <b>PROJECT NAME:</b> | Land at Stakers Farm, Yapton |
| <b>CLIENT:</b>       | Dandara                      |
| <b>TRIAL PIT ID:</b> | TP03                         |
| <b>TEST NUMBER:</b>  | 1                            |

## SOAKAWAY TEST - SOIL INFILTRATION RATE/ PERMEABILITY CALCULATION

[illegible]

**Land at Stakers Farm, Yapton**  
**Ground Investigation – Interpretative Report**



**Appendix D – CBR Test Results**

# WYG Environment

5<sup>th</sup> Floor, Longcross Court, 47 Newport Road, Cardiff  
Tel: 02920 829200  
Fax: 02920 455321  
Environmental Consultancy  
Ground Engineering Services



PROJECT No.: A112666

PROJECT NAME: Land at Stakers Farm, Yapton

CLIENT: Dandara

FIGURE No.: TRL 01

## DCP-CBR Corellation

$$\text{Log}_{10}(\text{CBR}) = 2.48 - 1.057 \times \text{Log}_{10}(\text{mm/blow})$$

## DCP -Modulus E Corellation

$$E = 17.6 (\text{CBR})^{0.64} \text{ MPa}$$

## In situ CBR by TRL Probe

Reference: TRL 01

Position: Test 1

Date:

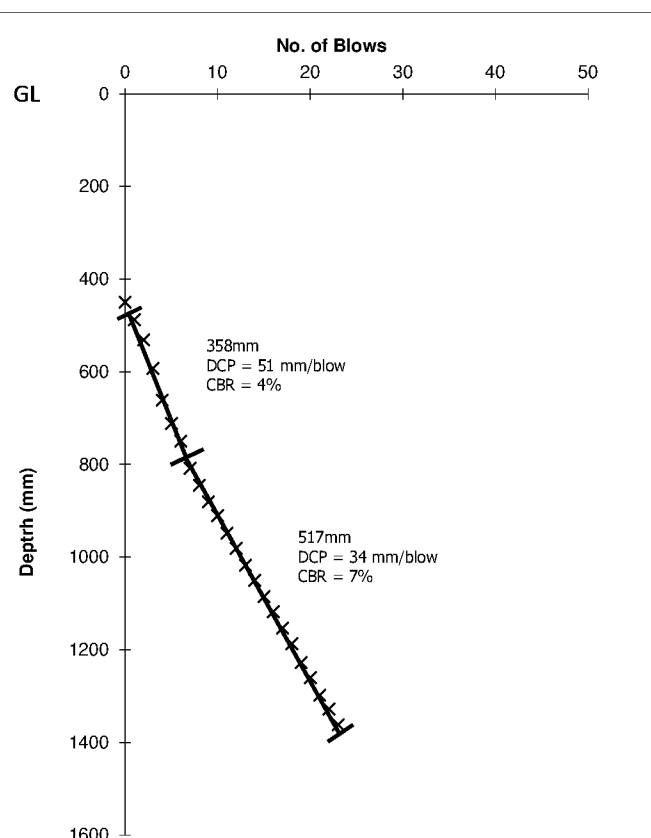
08 March 2019

| mm per blow | Σ Blows | Reading on Scale (mm) | Depth from Ground Level (mm) | mm per blow | Σ Blows | Reading on Scale (mm) | Depth from Ground Level (mm) |
|-------------|---------|-----------------------|------------------------------|-------------|---------|-----------------------|------------------------------|
| 38          | 1       | 22                    | 450                          |             |         |                       |                              |
| 43          | 2       | 60                    | 488                          |             |         |                       |                              |
| 62          | 3       | 103                   | 531                          |             |         |                       |                              |
| 68          | 4       | 165                   | 593                          |             |         |                       |                              |
| 50          | 5       | 233                   | 661                          |             |         |                       |                              |
| 39          | 6       | 283                   | 711                          |             |         |                       |                              |
| 58          | 7       | 322                   | 750                          |             |         |                       |                              |
| 37          | 8       | 380                   | 808                          |             |         |                       |                              |
| 35          | 9       | 417                   | 845                          |             |         |                       |                              |
| 31          | 10      | 452                   | 880                          |             |         |                       |                              |
| 37          | 11      | 483                   | 911                          |             |         |                       |                              |
| 33          | 12      | 520                   | 948                          |             |         |                       |                              |
| 36          | 13      | 553                   | 981                          |             |         |                       |                              |
| 33          | 14      | 589                   | 1017                         |             |         |                       |                              |
| 35          | 15      | 622                   | 1050                         |             |         |                       |                              |
| 33          | 16      | 657                   | 1085                         |             |         |                       |                              |
| 35          | 17      | 690                   | 1118                         |             |         |                       |                              |
| 34          | 18      | 725                   | 1153                         |             |         |                       |                              |
| 40          | 19      | 759                   | 1187                         |             |         |                       |                              |
| 33          | 20      | 799                   | 1227                         |             |         |                       |                              |
| 38          | 21      | 832                   | 1260                         |             |         |                       |                              |
| 30          | 22      | 870                   | 1298                         |             |         |                       |                              |
| 34          | 23      | 900                   | 1328                         |             |         |                       |                              |
|             | 24      | 934                   | 1362                         |             |         |                       |                              |

Test started at: 0.5 m below ground level

Zero Reading: 22 mm

Zero reading = start depth below ground surface



After Design manual for Roads and Bridges, Volume 7 Pavement Design and maintenance, Section 3 Pavement Maintenance Assessment, Part 2 HD29/08

Data compiled by: CA  
Data checked by: CA

# WYG Environment

5<sup>th</sup> Floor, Longcross Court, 47 Newport Road, Cardiff  
Tel: 02920 829200  
Fax: 02920 455321  
Environmental Consultancy  
Ground Engineering Services



PROJECT No.: A112666

PROJECT NAME: Land at Stakers Farm, Yapton

CLIENT: Dandara

FIGURE No.: TRL 02

## DCP-CBR Corellation

$$\text{Log}_{10}(\text{CBR}) = 2.48 - 1.057 \times \text{Log}_{10}(\text{mm/blow})$$

## DCP -Modulus E Corellation

$$E = 17.6 (\text{CBR})^{0.64} \text{ MPa}$$

## In situ CBR by TRL Probe

Reference: TRL 02

Position: Test 1

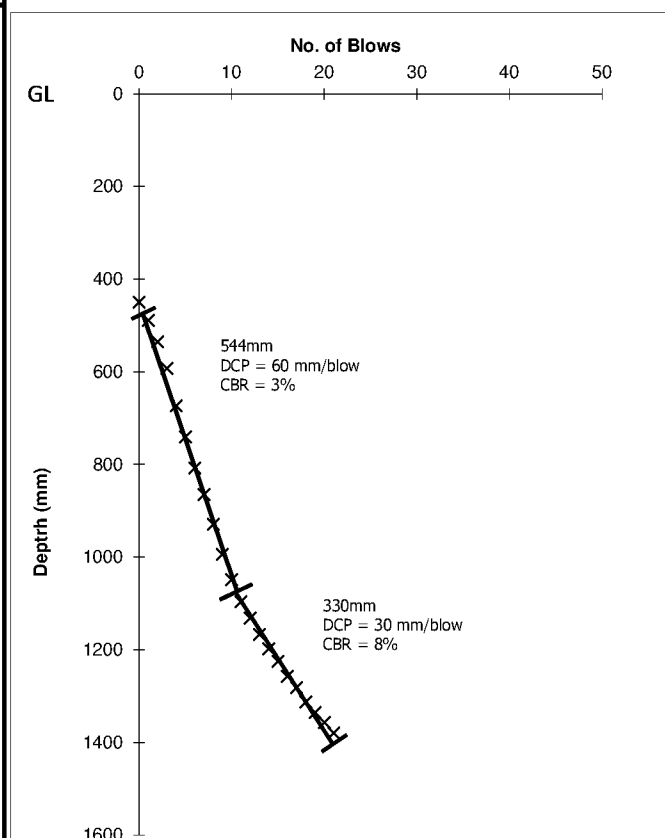
Date: 08 March 2019

| mm per blow | Σ Blows | Reading on Scale (mm) | Depth from Ground Level (mm) | mm per blow | Σ Blows | Reading on Scale (mm) | Depth from Ground Level (mm) |
|-------------|---------|-----------------------|------------------------------|-------------|---------|-----------------------|------------------------------|
| 39          | 1       | 11                    | 450                          |             |         |                       |                              |
| 46          | 2       | 50                    | 489                          |             |         |                       |                              |
| 58          | 3       | 96                    | 535                          |             |         |                       |                              |
| 80          | 4       | 154                   | 593                          |             |         |                       |                              |
| 68          | 5       | 234                   | 673                          |             |         |                       |                              |
| 67          | 6       | 302                   | 741                          |             |         |                       |                              |
| 57          | 7       | 369                   | 808                          |             |         |                       |                              |
| 64          | 8       | 426                   | 865                          |             |         |                       |                              |
| 65          | 9       | 490                   | 929                          |             |         |                       |                              |
| 55          | 10      | 555                   | 994                          |             |         |                       |                              |
| 47          | 11      | 610                   | 1049                         |             |         |                       |                              |
| 36          | 12      | 657                   | 1096                         |             |         |                       |                              |
| 35          | 13      | 693                   | 1132                         |             |         |                       |                              |
| 31          | 14      | 728                   | 1167                         |             |         |                       |                              |
| 27          | 15      | 759                   | 1198                         |             |         |                       |                              |
| 32          | 16      | 786                   | 1225                         |             |         |                       |                              |
| 25          | 17      | 818                   | 1257                         |             |         |                       |                              |
| 30          | 18      | 843                   | 1282                         |             |         |                       |                              |
| 23          | 19      | 873                   | 1312                         |             |         |                       |                              |
| 22          | 20      | 896                   | 1335                         |             |         |                       |                              |
| 22          | 21      | 918                   | 1357                         |             |         |                       |                              |
| 22          | 22      | 940                   | 1379                         |             |         |                       |                              |

Test started at: 0.5 m below ground level

Zero Reading: 11 mm

Zero reading = start depth below ground surface

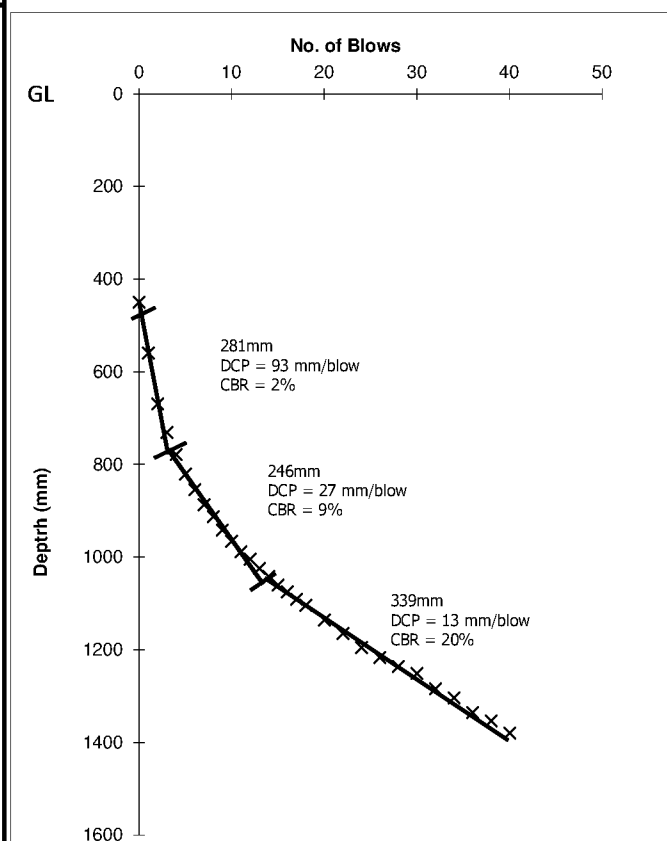


After Design manual for Roads and Bridges, Volume 7 Pavement Design and maintenance, Section 3 Pavement Maintenance Assessment, Part 2 HD29/08

Data compiled by: CA  
Data checked by: CA

$$E = 17.6 (\text{CBR})^{0.64} \text{ MPa}$$

Test started at: 0.5 m below ground level  
Zero Reading: 13 mm  
Zero reading = start depth below ground surface



Data compiled by: CA  
Data checked by: CA

# WYG Environment

5<sup>th</sup> Floor, Longcross Court, 47 Newport Road, Cardiff  
Tel: 02920 829200  
Fax: 02920 455321  
Environmental Consultancy  
Ground Engineering Services



PROJECT No.: A112666

PROJECT NAME: Land at Stakers Farm, Yapton

CLIENT: Dandara

FIGURE No.: TRL 04

## DCP-CBR Corellation

$$\text{Log}_{10}(\text{CBR}) = 2.48 - 1.057 \times \text{Log}_{10} (\text{mm/blow})$$

## DCP -Modulus E Corellation

$$E = 17.6 (\text{CBR})^{0.64} \text{ MPa}$$

## In situ CBR by TRL Probe

Reference: TRL 04

Position: Test 1

Date:

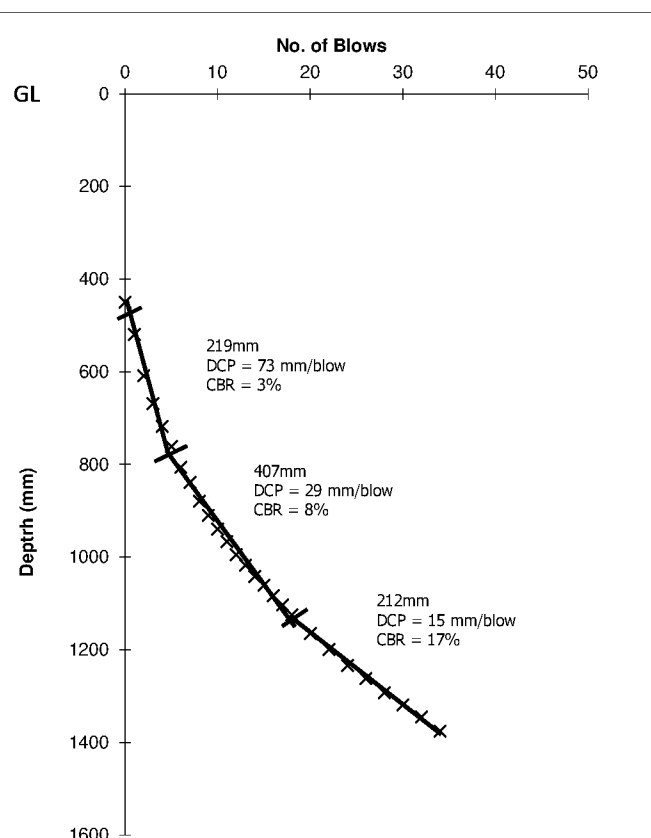
08 March 2019

| mm per blow | Σ Blows | Reading on Scale (mm) | Depth from Ground Level (mm) | mm per blow | Σ Blows | Reading on Scale (mm) | Depth from Ground Level (mm) |
|-------------|---------|-----------------------|------------------------------|-------------|---------|-----------------------|------------------------------|
| 69          | 1       | 15                    | 450                          |             |         |                       |                              |
| 89          | 2       | 84                    | 519                          |             |         |                       |                              |
| 61          | 3       | 173                   | 608                          |             |         |                       |                              |
| 49          | 4       | 234                   | 669                          |             |         |                       |                              |
| 43          | 5       | 283                   | 718                          |             |         |                       |                              |
| 45          | 6       | 326                   | 761                          |             |         |                       |                              |
| 32          | 7       | 371                   | 806                          |             |         |                       |                              |
| 41          | 8       | 403                   | 838                          |             |         |                       |                              |
| 31          | 9       | 444                   | 879                          |             |         |                       |                              |
| 29          | 10      | 475                   | 910                          |             |         |                       |                              |
| 28          | 11      | 504                   | 939                          |             |         |                       |                              |
| 28          | 12      | 532                   | 967                          |             |         |                       |                              |
| 22          | 13      | 560                   | 995                          |             |         |                       |                              |
| 24          | 14      | 582                   | 1017                         |             |         |                       |                              |
| 20          | 15      | 606                   | 1041                         |             |         |                       |                              |
| 22          | 16      | 626                   | 1061                         |             |         |                       |                              |
| 20          | 17      | 648                   | 1083                         |             |         |                       |                              |
| 22          | 18      | 668                   | 1103                         |             |         |                       |                              |
| 39          | 19      | 690                   | 1125                         |             |         |                       |                              |
| 35          | 20      | 729                   | 1164                         |             |         |                       |                              |
| 35          | 21      | 764                   | 1199                         |             |         |                       |                              |
| 28          | 22      | 799                   | 1234                         |             |         |                       |                              |
| 31          | 23      | 827                   | 1262                         |             |         |                       |                              |
|             | 24      | 858                   | 1293                         |             |         |                       |                              |

Test started at: 0.5 m below ground level

Zero Reading: 15 mm

Zero reading = start depth below ground surface



After Design manual for Roads and Bridges, Volume 7 Pavement Design and maintenance, Section 3 Pavement Maintenance Assessment, Part 2 HD29/08

Data compiled by:

CA

Data checked by:

CA

# WYG Environment

5<sup>th</sup> Floor, Longcross Court, 47 Newport Road, Cardiff  
Tel: 02920 829200  
Fax: 02920 455321  
Environmental Consultancy  
Ground Engineering Services



PROJECT No.: A112666

PROJECT NAME: Land at Stakers Farm, Yapton

CLIENT: Dandara

FIGURE No.: TRL 05

## DCP-CBR Corellation

$$\text{Log}_{10}(\text{CBR}) = 2.48 - 1.057 \times \text{Log}_{10}(\text{mm/blow})$$

## DCP -Modulus E Corellation

$$E = 17.6 (\text{CBR})^{0.64} \text{ MPa}$$

## In situ CBR by TRL Probe

Reference: TRL 05

Position: Test 1

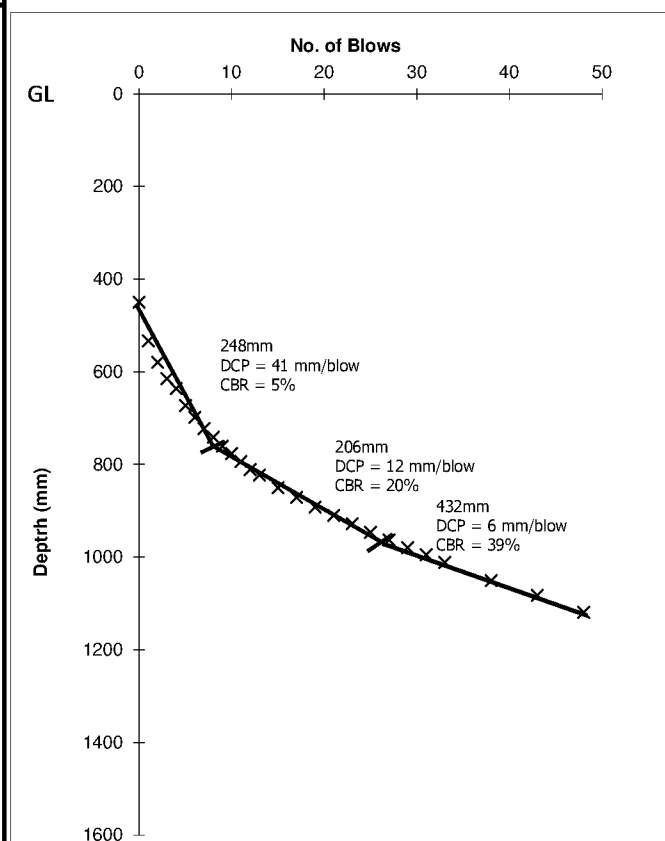
Date: 08 March 2019

| mm per blow | Σ Blows | Reading on Scale (mm) | Depth from Ground Level (mm) | mm per blow | Σ Blows | Reading on Scale (mm) | Depth from Ground Level (mm) |
|-------------|---------|-----------------------|------------------------------|-------------|---------|-----------------------|------------------------------|
| 83          | 1       | 19                    | 450                          |             |         |                       |                              |
| 46          | 2       | 102                   | 533                          |             |         |                       |                              |
| 35          | 3       | 148                   | 579                          |             |         |                       |                              |
| 22          | 4       | 183                   | 614                          |             |         |                       |                              |
| 37          | 5       | 205                   | 636                          |             |         |                       |                              |
| 25          | 6       | 242                   | 673                          |             |         |                       |                              |
| 24          | 7       | 267                   | 698                          |             |         |                       |                              |
| 19          | 8       | 291                   | 722                          |             |         |                       |                              |
| 19          | 9       | 310                   | 741                          |             |         |                       |                              |
| 17          | 10      | 329                   | 760                          |             |         |                       |                              |
| 16          | 11      | 346                   | 777                          |             |         |                       |                              |
| 18          | 12      | 362                   | 793                          |             |         |                       |                              |
| 12          | 13      | 380                   | 811                          |             |         |                       |                              |
| 27          | 14      | 392                   | 823                          |             |         |                       |                              |
| 21          | 15      | 419                   | 850                          |             |         |                       |                              |
| 21          | 16      | 440                   | 871                          |             |         |                       |                              |
| 18          | 17      | 461                   | 892                          |             |         |                       |                              |
| 18          | 18      | 479                   | 910                          |             |         |                       |                              |
| 18          | 19      | 497                   | 928                          |             |         |                       |                              |
| 18          | 20      | 515                   | 946                          |             |         |                       |                              |
| 17          | 21      | 532                   | 963                          |             |         |                       |                              |
| 15          | 22      | 549                   | 980                          |             |         |                       |                              |
| 16          | 23      | 564                   | 995                          |             |         |                       |                              |
|             | 24      | 580                   | 1011                         |             |         |                       |                              |

Test started at: 0.5 m below ground level

Zero Reading: 19 mm

Zero reading = start depth below ground surface



After Design manual for Roads and Bridges, Volume 7 Pavement Design and maintenance, Section 3 Pavement Maintenance Assessment, Part 2 HD29/08

Data compiled by: CA  
Data checked by: CA

**Land at Stakers Farm, Yapton**  
**Ground Investigation – Interpretative Report**



**Appendix E – Geotechnical Laboratory Testing Results**





# Laboratory Report



GEO Site & Testing Services Ltd

## Contract Number: 43335

Client Ref: **A112666**

Report Date: **30-03-2019**

Client PO: **C19/295**

Client **WYG Group**  
**Arndale Court**  
**Headingley**  
**Leeds**  
**LS6 2UJ**

Contract Title: **Land at Stakers Farm, Yapton**  
For the attention of: **Paul Vincent**

Date Received: **12-03-2019**  
Date Commenced: **12-03-2019**  
Date Completed: **30-03-2019**

| Test Description                                                                                                                                    | Qty |
|-----------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| <b>Moisture Content</b><br>BS 1377:1990 - Part 2 : 3.2 - * UKAS                                                                                     | 2   |
| <b>4 Point Liquid &amp; Plastic Limit</b><br>BS 1377:1990 - Part 2 : 4.3 & 5.3 - * UKAS                                                             | 2   |
| <b>Saturated Moisture Content of chalk (SMC)</b><br>BS 1377:1990 - Part 2 : 3.3 - * UKAS                                                            | 8   |
| <b>Particle Size Distribution (Dry Sieve method)</b><br><b>This test is for non-cohesive material only.</b><br>BS 1377:1990 - Part 2 : 9.3 - * UKAS | 2   |
| <b>Water Soluble Sulphate 2:1 extract</b><br>BS 1377:1990 - Part 3 : 5.3 - @ Non Accredited Test                                                    | 2   |
| <b>pH value of soil</b><br>BS 1377:1990 - Part 3 : 9.5 - @ Non Accredited Test                                                                      | 2   |
| <b>Disposal of samples for job</b>                                                                                                                  | 1   |

Notes: **Observations and Interpretations are outside the UKAS Accreditation**  
\* - denotes test included in laboratory scope of accreditation  
# - denotes test carried out by approved contractor  
@ - denotes non accredited tests

This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

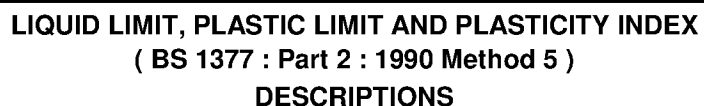
#### Approved Signatories:

Ben Sharp (Contracts Manager) - Emma Sharp (Office Manager) - Paul Evans (Quality/Technical Manager)

Richard John (Advanced Testing Manager) - Sean Penn (Administrative/Accounts Assistant) - Wayne Honey (Administrative/Quality Assistant)

GEO Site & Testing Services Ltd

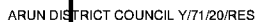
Unit 3-4, Heol Aur, Dafen Ind Estate, Dafen, Llanelli, Carmarthenshire SA14 8QN



43335

### Land at Stakers Farm, Yapton

|                |          |            |                                        |
|----------------|----------|------------|----------------------------------------|
| Operators      | Checked  | 30/03/2019 | Paul Evans (Quality/Technical Manager) |
| Ieuan Williams | Approved | 30/03/2019 | Emma Sharp (Office Manager)            |



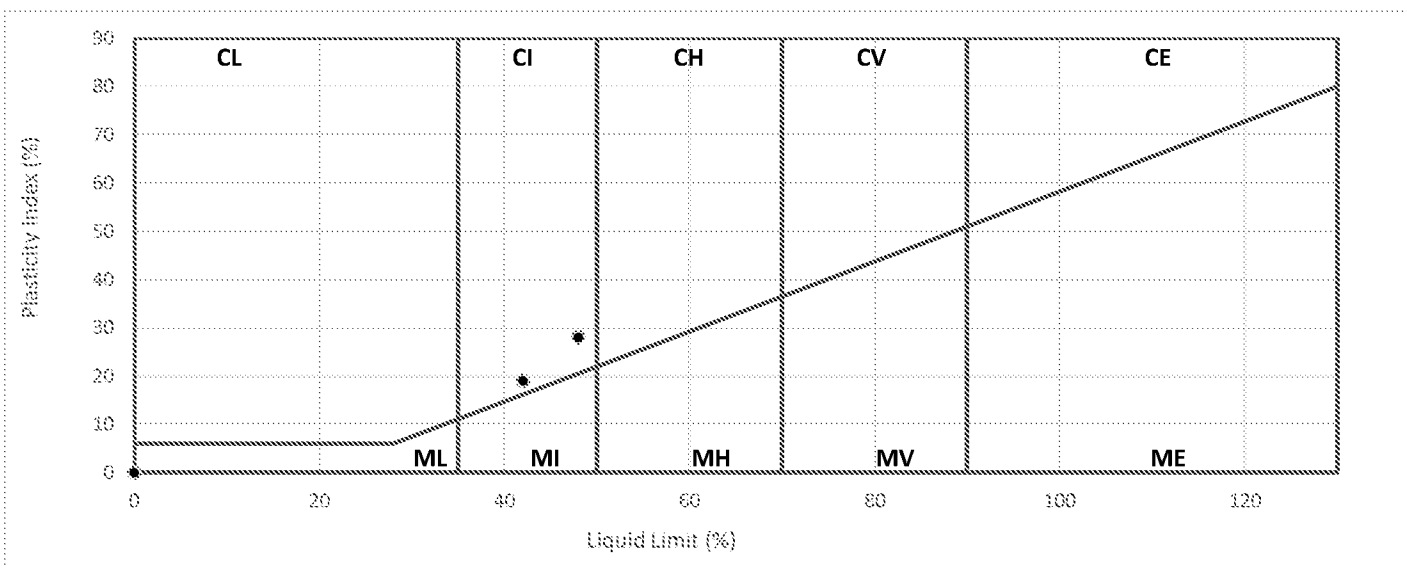


|                 |                              |  |
|-----------------|------------------------------|--|
| Contract Number | 43335                        |  |
| Site Name       | Land at Stakers Farm, Yapton |  |
|                 |                              |  |
|                 |                              |  |

[illegible]

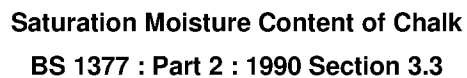
Symbols: NP : Non Plastic # : Liquid Limit and Plastic Limit Wet Sieved

## PLASTICITY CHART FOR CASAGRANDE CLASSIFICATION



|                |          |            |                                        |
|----------------|----------|------------|----------------------------------------|
| Operators      | Checked  | 30/03/2019 | Paul Evans (Quality/Technical Manager) |
| Ieuan Williams | Approved | 30/03/2019 | Emma Sharp (Office Manager)            |





Contract Number

43335

Site Name

### Land at Stakers Farm, Yapton

| Key | Reported As | Clause |
|-----|-------------|--------|
|-----|-------------|--------|

## Operators

Checked

29/03/2019

Ben Sharp

RO/MH

Approved

30/03/2019

Paul Evans





**PARTICLE SIZE DISTRIBUTION**  
**BS 1377 Part 2:1990**  
**Wet Sieve, Clause 9.2**

Contract Number **43335**

Borehole/Pit No. **TP8**

Site Name **Land at Stakers Farm, Yapton**

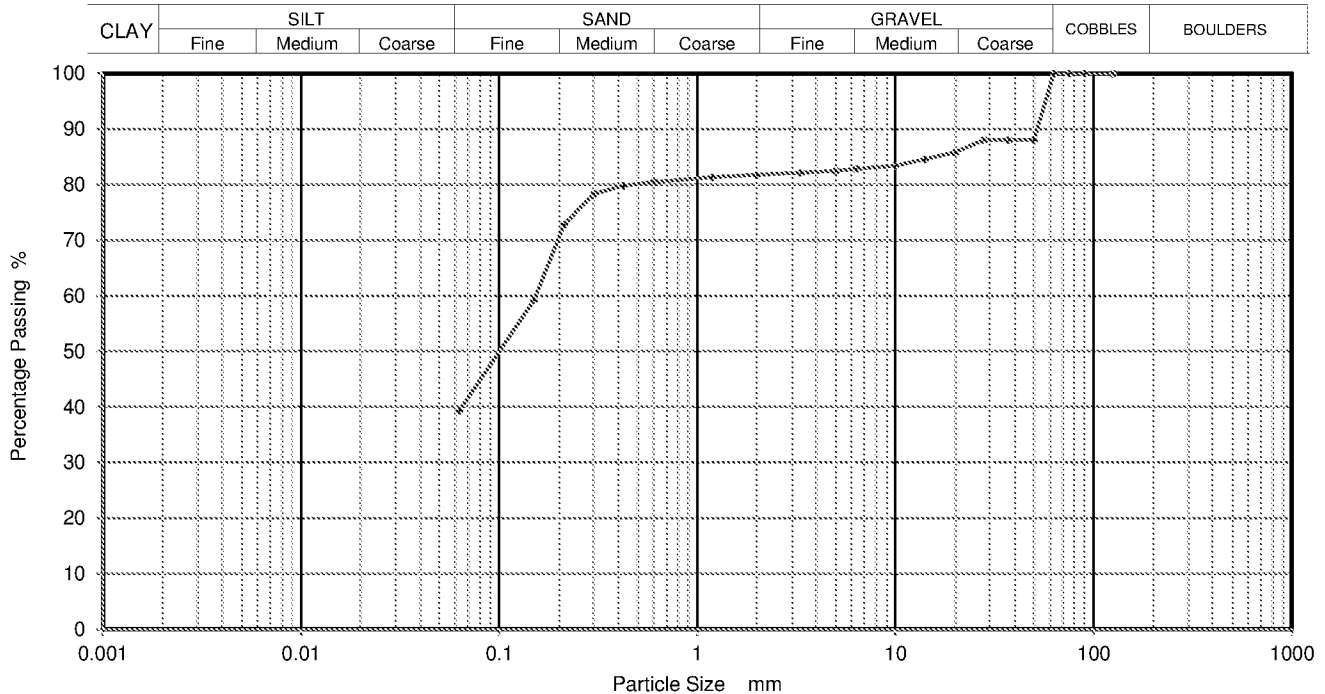
Sample No.

Soil Description  
 Brown fine to coarse gravelly silty/clayey fine to coarse SAND

Depth Top **2.00**

Depth Base

Sample Type **0**



| Sieving          |           | Sedimentation    |           |
|------------------|-----------|------------------|-----------|
| Particle Size mm | % Passing | Particle Size mm | % Passing |
| 125              | 100       |                  |           |
| 90               | 100       |                  |           |
| 75               | 100       |                  |           |
| 63               | 100       |                  |           |
| 50               | 88        |                  |           |
| 37.5             | 88        |                  |           |
| 28               | 88        |                  |           |
| 20               | 86        |                  |           |
| 14               | 85        |                  |           |
| 10               | 83        |                  |           |
| 6.3              | 83        |                  |           |
| 5                | 82        |                  |           |
| 3.35             | 82        |                  |           |
| 2                | 82        |                  |           |
| 1.18             | 81        |                  |           |
| 0.6              | 80        |                  |           |
| 0.425            | 80        |                  |           |
| 0.3              | 78        |                  |           |
| 0.212            | 73        |                  |           |
| 0.15             | 59        |                  |           |
| 0.063            | 39        |                  |           |

| Sample Proportions | % dry mass |
|--------------------|------------|
| Cobbles            | 0          |
| Gravel             | 18         |
| Sand               | 43         |
| Silt and Clay      | 39         |
|                    |            |
|                    |            |

Remarks  
 Preparation and testing in accordance with BS1377 unless noted below

|           |          |            |            |
|-----------|----------|------------|------------|
| Operators | Checked  | 29/03/2019 | Ben Sharp  |
| RO/MH     | Approved | 30/03/2019 | Paul Evans |





**PARTICLE SIZE DISTRIBUTION**  
**BS 1377 Part 2:1990**  
**Wet Sieve, Clause 9.2**

Contract Number

**43335**

Borehole/Pit No.

**TP9**

Site Name

**Land at Stakers Farm, Yapton**

Sample No.

Soil Description

Brown fine to coarse gravelly silty/clayey fine to coarse SAND

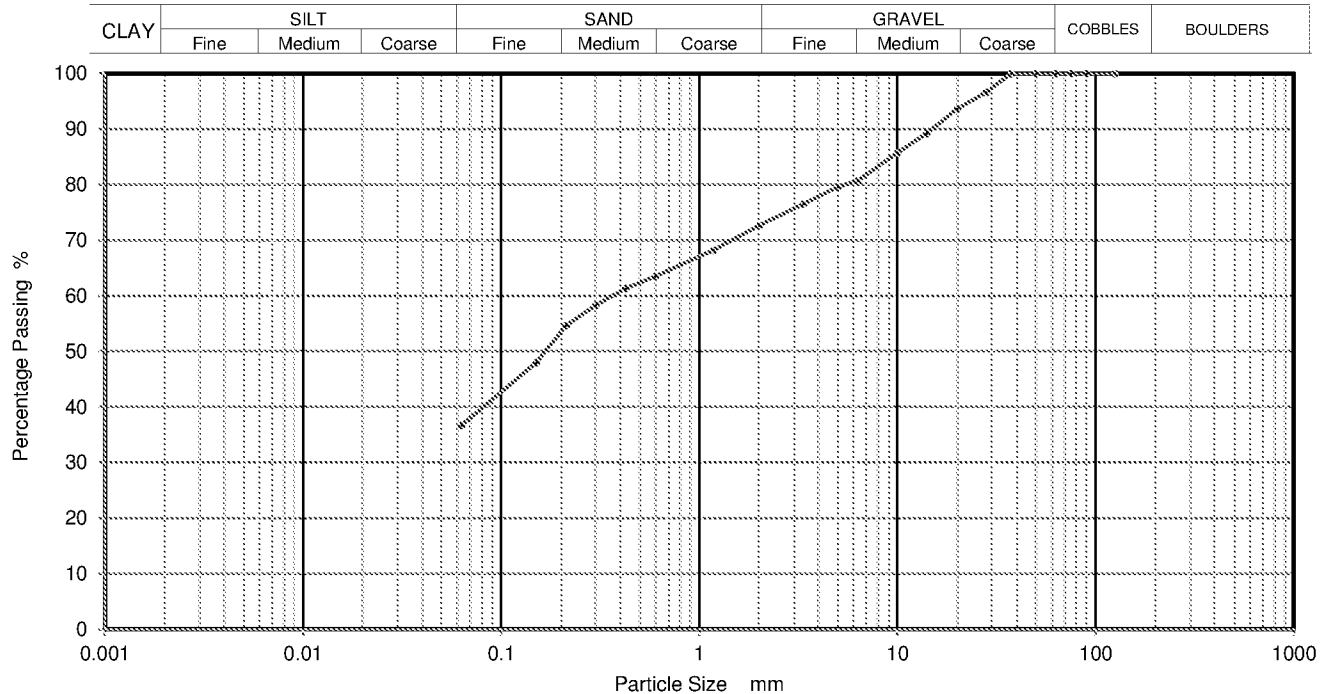
Depth Top

**3.00**

Depth Base

Sample Type

**0**



| Sieving          |           | Sedimentation    |           |
|------------------|-----------|------------------|-----------|
| Particle Size mm | % Passing | Particle Size mm | % Passing |
| 125              | 100       |                  |           |
| 90               | 100       |                  |           |
| 75               | 100       |                  |           |
| 63               | 100       |                  |           |
| 50               | 100       |                  |           |
| 37.5             | 100       |                  |           |
| 28               | 97        |                  |           |
| 20               | 94        |                  |           |
| 14               | 89        |                  |           |
| 10               | 86        |                  |           |
| 6.3              | 81        |                  |           |
| 5                | 80        |                  |           |
| 3.35             | 77        |                  |           |
| 2                | 73        |                  |           |
| 1.18             | 68        |                  |           |
| 0.6              | 64        |                  |           |
| 0.425            | 61        |                  |           |
| 0.3              | 58        |                  |           |
| 0.212            | 55        |                  |           |
| 0.15             | 48        |                  |           |
| 0.063            | 37        |                  |           |

| Sample Proportions | % dry mass |
|--------------------|------------|
| Cobbles            | 0          |
| Gravel             | 27         |
| Sand               | 36         |
| Silt and Clay      | 37         |
|                    |            |
|                    |            |

**Remarks**

Preparation and testing in accordance with BS1377 unless noted below

|           |          |            |            |
|-----------|----------|------------|------------|
| Operators | Checked  | 29/03/2019 | Ben Sharp  |
| RO/MH     | Approved | 30/03/2019 | Paul Evans |







# Laboratory Report



## Contract Number: 43720

Client Ref:

Report Date: **11-04-2019**

Client PO:

Client **WYG Group**  
**Arndale Court**  
**Headingley**  
**Leeds**  
**LS6 2UJ**

Contract Title: **Land at Stakers Farm, Yapton**  
For the attention of: **Caroline Anderson**

Date Received: **04-04-2019**  
Date Commenced: **04-04-2019**  
Date Completed: **11-04-2019**

| Test Description                                                                                 | Qty |
|--------------------------------------------------------------------------------------------------|-----|
| <b>Moisture Content</b><br>BS 1377:1990 - Part 2 : 3.2 - * UKAS                                  | 2   |
| <b>4 Point Liquid &amp; Plastic Limit</b><br>BS 1377:1990 - Part 2 : 4.3 & 5.3 - * UKAS          | 2   |
| <b>PSD Wet Sieve method</b><br>BS 1377:1990 - Part 2 : 9.2 - * UKAS                              | 1   |
| <b>Water Soluble Sulphate 2:1 extract</b><br>BS 1377:1990 - Part 3 : 5.3 - @ Non Accredited Test | 2   |
| <b>pH value of soil</b><br>BS 1377:1990 - Part 3 : 9.5 - @ Non Accredited Test                   | 2   |
| <b>Disposal of samples for job</b>                                                               | 1   |

Notes: Observations and Interpretations are outside the UKAS Accreditation  
\* - denotes test included in laboratory scope of accreditation  
# - denotes test carried out by approved contractor  
@ - denotes non accredited tests

This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

#### Approved Signatories:

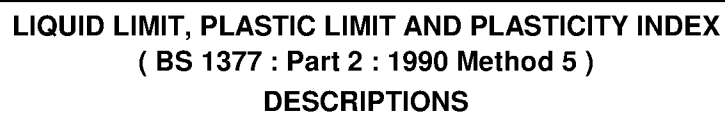
Ben Sharp (Contracts Manager) - Emma Sharp (Office Manager) - Paul Evans (Quality/Technical Manager)

Richard John (Advanced Testing Manager) - Sean Penn (Administrative/Accounts Assistant) - Wayne Honey (Administrative/Quality Assistant)

GEO Site & Testing Services Ltd

Unit 2, Huddersfield Road, Huddersfield, West Yorkshire, HD1 1BA





Contract Number

43720

Site Name

### Land at Stakers Farm, Yapton

[illegible]

|               |          |            |                                        |
|---------------|----------|------------|----------------------------------------|
| Operators     | Checked  | 11/04/2019 | Paul Evans (Quality/Technical Manager) |
| Darren Bourne | Approved | 11/04/2019 | Emma Sharp (Office Manager)            |







**PARTICLE SIZE DISTRIBUTION**  
**BS 1377 Part 2:1990**  
**Wet Sieve, Clause 9.2**

Contract Number

**43720**

Borehole/Pit No.

**TP1**

Site Name

**Land at Stakers Farm, Yapton**

Sample No.

Soil Description

Brown fine to coarse gravelly silty clayey fine to coarse SAND

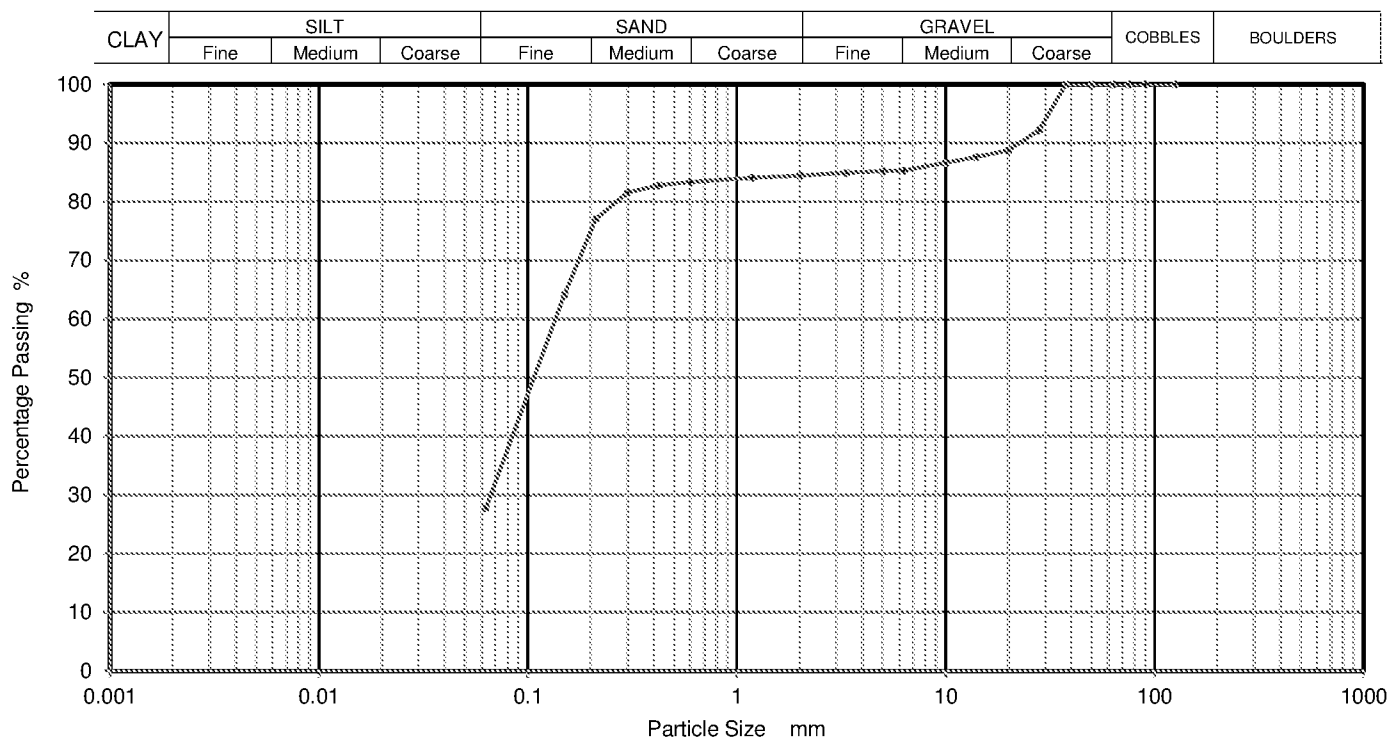
Depth Top

**3.10**

Depth Base

Sample Type

**0**



| Sieving          |           | Sedimentation    |           |
|------------------|-----------|------------------|-----------|
| Particle Size mm | % Passing | Particle Size mm | % Passing |
| 125              | 100       |                  |           |
| 90               | 100       |                  |           |
| 75               | 100       |                  |           |
| 63               | 100       |                  |           |
| 50               | 100       |                  |           |
| 37.5             | 100       |                  |           |
| 28               | 92        |                  |           |
| 20               | 89        |                  |           |
| 14               | 88        |                  |           |
| 10               | 87        |                  |           |
| 6.3              | 85        |                  |           |
| 5                | 85        |                  |           |
| 3.35             | 85        |                  |           |
| 2                | 84        |                  |           |
| 1.18             | 84        |                  |           |
| 0.6              | 83        |                  |           |
| 0.425            | 83        |                  |           |
| 0.3              | 82        |                  |           |
| 0.212            | 77        |                  |           |
| 0.15             | 64        |                  |           |
| 0.063            | 28        |                  |           |

| Sample Proportions | % dry mass |
|--------------------|------------|
| Cobbles            | 0          |
| Gravel             | 16         |
| Sand               | 56         |
| Silt and Clay      | 28         |
|                    |            |
|                    |            |

**Remarks**

Preparation and testing in accordance with BS1377 unless noted below

|           |          |            |            |
|-----------|----------|------------|------------|
| Operators | Checked  | 10/04/2019 | Ben Sharp  |
| RO/MH     | Approved | 11/04/2019 | Paul Evans |





**Land at Stakers Farm, Yapton**  
**Ground Investigation – Interpretative Report**



**Appendix F – Environmental Laboratory Testing Results**



WYG Geo-Environment  
5th Floor  
Longcross Court  
47 Newport Road  
Cardiff  
CF24 0AD

Attention: Katy Woodhouse

## CERTIFICATE OF ANALYSIS

|                              |                      |
|------------------------------|----------------------|
| Date of report Generation:   | 23 March 2019        |
| Customer:                    | H_WYG_CDF            |
| Sample Delivery Group (SDG): | 190313-14            |
| Your Reference:              | A112666              |
| Location:                    | Land at Stakers Farm |
| Report No:                   | 498064               |

This report has been revised and directly supersedes 497902 in its entirety.

We received 46 samples on Wednesday March 13, 2019 and 16 of these samples were scheduled for analysis which was completed on Saturday March 23, 2019. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden (Method codes TM) or ALS Life Sciences Ltd Aberdeen (Method codes S).

All sample data is provided by the customer. The reported results relate to the sample supplied, and on the basis that this data is correct.

Incorrect sampling dates and/or sample information will affect the validity of results.

The customer is not permitted to reproduce this report except in full without the approval of the laboratory.

Approved By:



**Sonia McWhan**

Operations Manager





# CERTIFICATE OF ANALYSIS

Validated

SDG: 190313-14  
Location: Land at Stakers Farm

Client Reference: A112666  
Order Number: C19/247

Report Number: 498064  
Superseded Report: 497902

## Received Sample Overview

| Lab Sample No(s) | Customer Sample Ref. | AGS Ref. | Depth (m)   | Sampled Date |
|------------------|----------------------|----------|-------------|--------------|
| 19532849         | TP01                 | ES1      | 0.50 - 0.50 | 08/03/2019   |
| 19532853         | TP01                 | ES2      | 1.00 - 1.00 | 08/03/2019   |
| 19532859         | TP01                 | ES2      | 2.00 - 2.00 | 08/03/2019   |
| 19532829         | TP02                 | ES1      | 0.40 - 0.40 | 08/03/2019   |
| 19532833         | TP02                 | ES2      | 1.50 - 1.50 | 08/03/2019   |
| 19532841         | TP03                 | ES1      | 0.40 - 0.40 | 08/03/2019   |
| 19532845         | TP03                 | ES2      | 1.20 - 1.20 | 08/03/2019   |
| 19532866         | TP04                 | ES1      | 0.50 - 0.50 | 08/03/2019   |
| 19532875         | TP04                 | ES2      | 1.50 - 1.50 | 08/03/2019   |
| 19532889         | TP06                 | ES1      | 0.50 - 0.50 | 07/03/2019   |
| 19532900         | TP06                 | ES2      | 1.20 - 1.20 | 07/03/2019   |
| 19532907         | TP06                 | ES3      | 2.80 - 2.80 | 07/03/2019   |
| 19532663         | TP07                 | ES1      | 0.50 - 0.50 | 07/03/2019   |
| 19532707         | TP07                 | ES2      | 1.00 - 1.00 | 07/03/2019   |
| 19532819         | TP08                 | ES1      | 0.50 - 0.50 | 08/03/2019   |
| 19532825         | TP08                 | ES2      | 1.50 - 1.50 | 08/03/2019   |
| 19532795         | TP09                 | ES1      | 0.50 - 0.50 | 08/03/2019   |
| 19532802         | TP09                 | ES2      | 1.00 - 1.00 | 08/03/2019   |
| 19532811         | TP09                 | ES3      | 1.70 - 1.70 | 08/03/2019   |
| 19532764         | TP10                 | ES1      | 0.50 - 0.50 | 07/03/2019   |
| 19532837         | TP10                 | ES2      | 1.00 - 1.00 | 07/03/2019   |
| 19532881         | TP10                 | ES3      | 1.60 - 1.60 | 07/03/2019   |
| 19532723         | WS01                 | ES1      | 0.30 - 0.30 | 08/03/2019   |
| 19532727         | WS01                 | ES2      | 1.00        | 08/03/2019   |
| 19532731         | WS01                 | ES3      | 1.50        | 08/03/2019   |
| 19532735         | WS02                 | ES1      | 0.30 - 0.30 | 08/03/2019   |
| 19532739         | WS02                 | ES2      | 1.00 - 1.00 | 08/03/2019   |
| 19532743         | WS04                 | ES1      | 0.30 - 0.30 | 08/03/2019   |
| 19532755         | WS04                 | ES2      | 1.00 - 1.00 | 08/03/2019   |
| 19532770         | WS04                 | ES3      | 1.50 - 1.50 | 08/03/2019   |
| 19532778         | WS05                 | ES1      | 0.20 - 0.20 | 08/03/2019   |
| 19532787         | WS05                 | ES2      | 1.00 - 1.00 | 08/03/2019   |
| 19532914         | WS06                 | ES1      | 0.40 - 0.40 | 07/03/2019   |
| 19532667         | WS06                 | ES2      | 1.00 - 1.00 | 07/03/2019   |
| 19532715         | WS07                 | ES2      | 0.00 - 0.00 | 08/03/2019   |
| 19532719         | WS07                 | ES3      | 0.00 - 0.00 | 08/03/2019   |
| 19532711         | WS07                 | ES1      | 0.30 - 0.30 | 08/03/2019   |
| 19532671         | WS08                 | ES1      | 0.30 - 0.30 | 07/03/2019   |
| 19532675         | WS08                 | ES2      | 1.00 - 1.00 | 07/03/2019   |
| 19532679         | WS08                 | ES3      | 1.50 - 1.50 | 07/03/2019   |
| 19532683         | WS09                 | ES1      | 0.30 - 0.30 | 07/03/2019   |
| 19532687         | WS09                 | ES2      | 1.00 - 1.00 | 07/03/2019   |
| 19532691         | WS09                 | ES3      | 1.50 - 1.50 | 07/03/2019   |
| 19532695         | WS10                 | ES1      | 0.30 - 0.30 | 07/03/2019   |
| 19532699         | WS10                 | ES2      | 0.80 - 0.80 | 07/03/2019   |
| 19532703         | WS10                 | ES3      | 2.00 - 2.00 | 07/03/2019   |

### Maximum Sample/Coolbox Temperature (°C) :

ISO5667-3 Water quality - Sampling - Part3 -

During Transportation samples shall be stored in a cooling device capable of maintaining a temperature of (5±3)°C.

6.8

ALS have data which show that a cool box with 4 frozen icepacks is capable of maintaining pre-chilled samples at a temperature of (5±3)°C for a period of up to 24hrs.

Only received samples which have had analysis scheduled will be shown on the following pages.









# CERTIFICATE OF ANALYSIS

Validated

SDG: 190313-14  
Location: Land at Stakers Farm

Client Reference: A112666  
Order Number: C19/247

Report Number: 498064  
Superseded Report: 497902

## Results Legend

- ☒ Test  
☐ No Determination Possible

## Sample Types -

S - Soil/Solid  
UNS - Unspecified Solid  
GW - Ground Water  
SW - Surface Water  
LE - Land Leachate  
PL - Prepared Leachate  
PR - Process Water  
SA - Saline Water  
TE - Trade Effluent  
TS - Treated Sewage  
US - Untreated Sewage  
RE - Recreational Water  
DW - Drinking Water Non-regulatory  
UNL - Unspecified Liquid  
SL - Sludge  
G - Gas  
OTH - Other

| Lab Sample No(s) | Customer Sample Reference | AGS Reference | Depth (m)   | Container               | Sample Type |
|------------------|---------------------------|---------------|-------------|-------------------------|-------------|
| 19532764         | TP10                      | ES1           | 0.50 - 0.50 | 1kg TUB                 | S           |
| 19532795         | TP09                      | ES1           | 0.50 - 0.50 | 60g VOC (ALE215)        | S           |
| 19532819         | TP08                      | ES1           | 0.50 - 0.50 | 250g Amber Jar (ALE210) | S           |
| 19532863         | TP07                      | ES1           | 0.50 - 0.50 | 1kg TUB                 | S           |
| 19532900         | TP06                      | ES2           | 1.20 - 1.20 | 60g VOC (ALE215)        | S           |
| 19532933         | TP02                      | ES2           | 1.50 - 1.50 | 250g Amber Jar (ALE210) | S           |
| 19532966         | TP04                      | ES1           | 0.50 - 0.50 | 60g VOC (ALE215)        | S           |
| 19532999         | TP03                      | ES1           | 0.50 - 0.50 | 250g Amber Jar (ALE210) | S           |
| 19533032         | TP01                      | ES1           | 0.50 - 0.50 | 1kg TUB                 | S           |
| 19533065         | TP05                      | ES1           | 0.50 - 0.50 | 60g VOC (ALE215)        | S           |
| 19533098         | TP06                      | ES2           | 1.20 - 1.20 | 250g Amber Jar (ALE210) | S           |
| 19533131         | TP07                      | ES1           | 0.50 - 0.50 | 1kg TUB                 | S           |
| 19533164         | TP08                      | ES1           | 0.50 - 0.50 | 60g VOC (ALE215)        | S           |
| 19533197         | TP09                      | ES1           | 0.50 - 0.50 | 250g Amber Jar (ALE210) | S           |
| 19533230         | TP10                      | ES1           | 0.50 - 0.50 | 1kg TUB                 | S           |
| 19533263         | TP11                      | ES1           | 0.50 - 0.50 | 60g VOC (ALE215)        | S           |
| 19533296         | TP12                      | ES1           | 0.50 - 0.50 | 250g Amber Jar (ALE210) | S           |
| 19533329         | TP13                      | ES1           | 0.50 - 0.50 | 1kg TUB                 | S           |
| 19533362         | TP14                      | ES1           | 0.50 - 0.50 | 60g VOC (ALE215)        | S           |
| 19533395         | TP15                      | ES1           | 0.50 - 0.50 | 250g Amber Jar (ALE210) | S           |
| 19533428         | TP16                      | ES1           | 0.50 - 0.50 | 1kg TUB                 | S           |
| 19533461         | TP17                      | ES1           | 0.50 - 0.50 | 60g VOC (ALE215)        | S           |
| 19533494         | TP18                      | ES1           | 0.50 - 0.50 | 250g Amber Jar (ALE210) | S           |
| 19533527         | TP19                      | ES1           | 0.50 - 0.50 | 1kg TUB                 | S           |
| 19533560         | TP20                      | ES1           | 0.50 - 0.50 | 60g VOC (ALE215)        | S           |
| 19533593         | TP21                      | ES1           | 0.50 - 0.50 | 250g Amber Jar (ALE210) | S           |
| 19533626         | TP22                      | ES1           | 0.50 - 0.50 | 1kg TUB                 | S           |
| 19533659         | TP23                      | ES1           | 0.50 - 0.50 | 60g VOC (ALE215)        | S           |
| 19533692         | TP24                      | ES1           | 0.50 - 0.50 | 250g Amber Jar (ALE210) | S           |
| 19533725         | TP25                      | ES1           | 0.50 - 0.50 | 1kg TUB                 | S           |
| 19533758         | TP26                      | ES1           | 0.50 - 0.50 | 60g VOC (ALE215)        | S           |
| 19533791         | TP27                      | ES1           | 0.50 - 0.50 | 250g Amber Jar (ALE210) | S           |
| 19533824         | TP28                      | ES1           | 0.50 - 0.50 | 1kg TUB                 | S           |
| 19533857         | TP29                      | ES1           | 0.50 - 0.50 | 60g VOC (ALE215)        | S           |
| 19533890         | TP30                      | ES1           | 0.50 - 0.50 | 250g Amber Jar (ALE210) | S           |
| 19533923         | TP31                      | ES1           | 0.50 - 0.50 | 1kg TUB                 | S           |
| 19533956         | TP32                      | ES1           | 0.50 - 0.50 | 60g VOC (ALE215)        | S           |
| 19533989         | TP33                      | ES1           | 0.50 - 0.50 | 250g Amber Jar (ALE210) | S           |
| 19534022         | TP34                      | ES1           | 0.50 - 0.50 | 1kg TUB                 | S           |
| 19534055         | TP35                      | ES1           | 0.50 - 0.50 | 60g VOC (ALE215)        | S           |
| 19534088         | TP36                      | ES1           | 0.50 - 0.50 | 250g Amber Jar (ALE210) | S           |
| 19534121         | TP37                      | ES1           | 0.50 - 0.50 | 1kg TUB                 | S           |
| 19534154         | TP38                      | ES1           | 0.50 - 0.50 | 60g VOC (ALE215)        | S           |
| 19534187         | TP39                      | ES1           | 0.50 - 0.50 | 250g Amber Jar (ALE210) | S           |
| 19534220         | TP40                      | ES1           | 0.50 - 0.50 | 1kg TUB                 | S           |
| 19534253         | TP41                      | ES1           | 0.50 - 0.50 | 60g VOC (ALE215)        | S           |
| 19534286         | TP42                      | ES1           | 0.50 - 0.50 | 250g Amber Jar (ALE210) | S           |
| 19534319         | TP43                      | ES1           | 0.50 - 0.50 | 1kg TUB                 | S           |
| 19534352         | TP44                      | ES1           | 0.50 - 0.50 | 60g VOC (ALE215)        | S           |
| 19534385         | TP45                      | ES1           | 0.50 - 0.50 | 250g Amber Jar (ALE210) | S           |
| 19534418         | TP46                      | ES1           | 0.50 - 0.50 | 1kg TUB                 | S           |
| 19534451         | TP47                      | ES1           | 0.50 - 0.50 | 60g VOC (ALE215)        | S           |
| 19534484         | TP48                      | ES1           | 0.50 - 0.50 | 250g Amber Jar (ALE210) | S           |
| 19534517         | TP49                      | ES1           | 0.50 - 0.50 | 1kg TUB                 | S           |
| 19534550         | TP50                      | ES1           | 0.50 - 0.50 | 60g VOC (ALE215)        | S           |
| 19534583         | TP51                      | ES1           | 0.50 - 0.50 | 250g Amber Jar (ALE210) | S           |
| 19534616         | TP52                      | ES1           | 0.50 - 0.50 | 1kg TUB                 | S           |
| 19534649         | TP53                      | ES1           | 0.50 - 0.50 | 60g VOC (ALE215)        | S           |
| 19534682         | TP54                      | ES1           | 0.50 - 0.50 | 250g Amber Jar (ALE210) | S           |
| 19534715         | TP55                      | ES1           | 0.50 - 0.50 | 1kg TUB                 | S           |
| 19534748         | TP56                      | ES1           | 0.50 - 0.50 | 60g VOC (ALE215)        | S           |
| 19534781         | TP57                      | ES1           | 0.50 - 0.50 | 250g Amber Jar (ALE210) | S           |
| 19534814         | TP58                      | ES1           | 0.50 - 0.50 | 1kg TUB                 | S           |
| 19534847         | TP59                      | ES1           | 0.50 - 0.50 | 60g VOC (ALE215)        | S           |
| 19534880         | TP60                      | ES1           | 0.50 - 0.50 | 250g Amber Jar (ALE210) | S           |
| 19534913         | TP61                      | ES1           | 0.50 - 0.50 | 1kg TUB                 | S           |
| 19534946         | TP62                      | ES1           | 0.50 - 0.50 | 60g VOC (ALE215)        | S           |
| 19534979         | TP63                      | ES1           | 0.50 - 0.50 | 250g Amber Jar (ALE210) | S           |
| 19535012         | TP64                      | ES1           | 0.50 - 0.50 | 1kg TUB                 | S           |
| 19535045         | TP65                      | ES1           | 0.50 - 0.50 | 60g VOC (ALE215)        | S           |
| 19535078         | TP66                      | ES1           | 0.50 - 0.50 | 250g Amber Jar (ALE210) | S           |
| 19535111         | TP67                      | ES1           | 0.50 - 0.50 | 1kg TUB                 | S           |
| 19535144         | TP68                      | ES1           | 0.50 - 0.50 | 60g VOC (ALE215)        | S           |
| 19535177         | TP69                      | ES1           | 0.50 - 0.50 | 250g Amber Jar (ALE210) | S           |
| 19535210         | TP70                      | ES1           | 0.50 - 0.50 | 1kg TUB                 | S           |
| 19535243         | TP71                      | ES1           | 0.50 - 0.50 | 60g VOC (ALE215)        | S           |
| 19535276         | TP72                      | ES1           | 0.50 - 0.50 | 250g Amber Jar (ALE210) | S           |
| 19535309         | TP73                      | ES1           | 0.50 - 0.50 | 1kg TUB                 | S           |
| 19535342         | TP74                      | ES1           | 0.50 - 0.50 | 60g VOC (ALE215)        | S           |
| 19535375         | TP75                      | ES1           | 0.50 - 0.50 | 250g Amber Jar (ALE210) | S           |
| 19535408         | TP76                      | ES1           | 0.50 - 0.50 | 1kg TUB                 | S           |
| 19535441         | TP77                      | ES1           | 0.50 - 0.50 | 60g VOC (ALE215)        | S           |
| 19535474         | TP78                      | ES1           | 0.50 - 0.50 | 250g Amber Jar (ALE210) | S           |
| 19535507         | TP79                      | ES1           | 0.50 - 0.50 | 1kg TUB                 | S           |
| 19535540         | TP80                      | ES1           | 0.50 - 0.50 | 60g VOC (ALE215)        | S           |
| 19535573         | TP81                      | ES1           | 0.50 - 0.50 | 250g Amber Jar (ALE210) | S           |
| 19535606         | TP82                      | ES1           | 0.50 - 0.50 | 1kg TUB                 | S           |
| 19535639         | TP83                      | ES1           | 0.50 - 0.50 | 60g VOC (ALE215)        | S           |
| 19535672         | TP84                      | ES1           | 0.50 - 0.50 | 250g Amber Jar (ALE210) | S           |
| 19535705         | TP85                      | ES1           | 0.50 - 0.50 | 1kg TUB                 | S           |
| 19535738         | TP86                      | ES1           | 0.50 - 0.50 | 60g VOC (ALE215)        | S           |
| 19535771         | TP87                      | ES1           | 0.50 - 0.50 | 250g Amber Jar (ALE210) | S           |
| 19535804         | TP88                      | ES1           | 0.50 - 0.50 | 1kg TUB                 | S           |
| 19535837         | TP89                      | ES1           | 0.50 - 0.50 | 60g VOC (ALE215)        | S           |
| 19535870         | TP90                      | ES1           | 0.50 - 0.50 | 250g Amber Jar (ALE210) | S           |
| 19535903         | TP91                      | ES1           | 0.50 - 0.50 | 1kg TUB                 | S           |
| 19535936         | TP92                      | ES1           | 0.50 - 0.50 | 60g VOC (ALE215)        | S           |
| 19535969         | TP93                      | ES1           | 0.50 - 0.50 | 250g Amber Jar (ALE210) | S           |
| 19536002         | TP94                      | ES1           | 0.50 - 0.50 | 1kg TUB                 | S           |
| 19536035         | TP95                      | ES1           | 0.50 - 0.50 | 60g VOC (ALE215)        | S           |
| 19536068         | TP96                      | ES1           | 0.50 - 0.50 | 250g Amber Jar (ALE210) | S           |
| 19536101         | TP97                      | ES1           | 0.50 - 0.50 | 1kg TUB                 | S           |
| 19536134         | TP98                      | ES1           | 0.50 - 0.50 | 60g VOC (ALE215)        | S           |
| 19536167         | TP99                      | ES1           | 0.50 - 0.50 | 250g Amber Jar (ALE210) | S           |
| 19536200         | TP100                     | ES1           | 0.50 - 0.50 | 1kg TUB                 | S           |
| 19536233         | TP101                     | ES1           | 0.50 - 0.50 | 60g VOC (ALE215)        | S           |
| 19536266         | TP102                     | ES1           | 0.50 - 0.50 | 250g Amber Jar (ALE210) | S           |
| 19536299         | TP103                     | ES1           | 0.50 - 0.50 | 1kg TUB                 | S           |
| 19536332         | TP104                     | ES1           | 0.50 - 0.50 | 60g VOC (ALE215)        | S           |
| 19536365         | TP105                     | ES1           | 0.50 - 0.50 | 250g Amber Jar (ALE210) | S           |
| 19536398         | TP106                     | ES1           | 0.50 - 0.50 | 1kg TUB                 | S           |
| 19536431         | TP107                     | ES1           | 0.50 - 0.50 | 60g VOC (ALE215)        | S           |
| 19536464         | TP108                     | ES1           | 0.50 - 0.50 | 250g Amber Jar (ALE210) | S           |
| 19536497         | TP109                     | ES1           | 0.50 - 0.50 | 1kg TUB                 | S           |
| 19536530         | TP110                     | ES1           | 0.50 - 0.50 | 60g VOC (ALE215)        | S           |
| 19536563         | TP111                     | ES1           | 0.50 - 0.50 | 250g Amber Jar (ALE210) | S           |
| 19536596         | TP112                     | ES1           | 0.50 - 0.50 | 1kg TUB                 | S           |
| 19536629         | TP113                     | ES1           | 0.50 - 0.50 | 60g VOC (ALE215)        | S           |
| 19536662         | TP114                     | ES1           | 0.50 - 0.50 | 250g Amber Jar (ALE210) | S           |
| 19536695         | TP115                     | ES1           | 0.50 - 0.50 | 1kg TUB                 | S           |
| 19536728         | TP116                     | ES1           | 0.50 - 0.50 | 60g VOC (ALE215)        | S           |
| 19536761         | TP117                     | ES1           | 0.50 - 0.50 | 250g Amber Jar (ALE210) | S           |
| 19536794         | TP118                     | ES1           | 0.50 - 0.50 | 1kg TUB                 | S           |
| 19536827         | TP119                     | ES1           | 0.50 - 0.50 | 60g VOC (ALE215)        | S           |
| 19536860         | TP120                     | ES1           | 0.50 - 0.50 | 250g Amber Jar (ALE210) | S           |
| 19536893         | TP121                     | ES1           | 0.50 - 0.50 | 1kg TUB                 | S           |
| 19536926         | TP122                     | ES1           | 0.50 - 0.50 | 60g VOC (ALE215)        | S           |
| 19536959         | TP123                     | ES1           | 0.50 - 0.50 | 250g Amber Jar (ALE210) | S           |
| 19536992         | TP124                     | ES1           | 0.50 - 0.50 | 1kg TUB                 | S           |
| 19537025         | TP125                     | ES1           | 0.50 - 0.50 | 60g VOC (ALE215)        | S           |
| 19537058         | TP126                     | ES1           | 0.50 - 0.50 | 250g Amber Jar (ALE210) | S           |
| 19537091         | TP127                     | ES1           | 0.50 - 0.50 | 1kg TUB                 | S           |
| 19537124         | TP128                     | ES1           | 0.50 - 0.50 | 60g VOC (ALE215)        | S           |
| 19537157         | TP129                     | ES1           | 0.50 - 0.50 | 250g Amber Jar (ALE210) | S           |
| 19537190         | TP130                     | ES1           | 0.50 - 0.50 | 1kg TUB                 | S           |
| 19537223         | TP131                     | ES1           | 0.50 - 0.50 | 60g VOC (ALE215)        | S           |
| 19537256         | TP132                     | ES1           | 0.50 - 0.50 | 250g Amber Jar (ALE210) | S           |
| 19537289         | TP133                     | ES1           | 0.50 - 0.50 | 1kg TUB                 | S           |
| 19537322         | TP134                     | ES1           | 0.50 - 0.50 | 60g VOC (ALE215)        | S           |
| 19537355         | TP135                     | ES1           | 0.50 - 0.50 | 250g Amber Jar (ALE210) | S           |
| 19537388         | TP136                     | ES1           | 0.50 - 0.50 | 1kg TUB                 | S           |
| 19537421         | TP137                     | ES1           | 0.50 - 0.50 | 60g VOC (ALE215)        | S           |
| 19537454         | TP138                     | ES1           | 0.50 - 0.50 | 250g Amber Jar (ALE210) | S           |
| 19537487         | TP139                     | ES1           | 0.50 - 0.50 | 1kg TUB                 | S           |
| 19537520         | TP140                     | ES1           | 0.50 - 0.50 | 60g VOC (ALE215)        | S           |
| 19537553         | TP141                     | ES1           | 0.50 - 0.50 | 250g Amber Jar (ALE210) | S           |
| 19537586         | TP142                     | ES1           | 0.50 - 0.50 | 1kg TUB                 | S           |
| 19537619         | TP143                     | ES1           | 0.50 - 0.50 | 60g VOC (ALE215)        | S           |
| 19537652         | TP144                     | ES1           | 0.50 - 0.50 | 250g Amber Jar (ALE210) | S           |
| 19537685         | TP145                     | ES1           | 0.50 - 0.50 | 1kg TUB                 | S           |
| 19537718         | TP146                     | ES1           | 0.50 - 0.50 | 60g VOC (ALE215)        | S           |
| 19537751         | TP147                     | ES1           | 0.50 - 0.50 | 250g Amber Jar (ALE210) | S           |
| 19537784         | TP148                     | ES1           | 0.50 - 0.50 | 1kg TUB                 | S           |
| 19537817         | TP149                     | ES1           | 0.50 - 0.50 | 60g VOC (ALE215)        | S           |
| 19537850         | TP150                     | ES1           | 0.50 - 0.50 | 250g Amber Jar (ALE210) | S           |
| 19537883         | TP151                     | ES1           | 0.50 - 0.50 | 1kg TUB                 | S           |
| 19537916         | TP152                     | ES1           | 0.50 - 0.50 | 60g VOC (ALE215)        | S           |
| 19537949         | TP153                     | ES1           | 0.50 - 0.50 | 250g Amber Jar (ALE210) | S           |
| 19537982         | TP154                     | ES1           | 0.50 - 0.50 | 1kg TUB                 | S           |
| 19538015         | TP155                     | ES1           | 0.50 - 0.50 | 60g VOC (ALE215)        | S           |
| 19538048         | TP156                     | ES1           | 0.50 - 0.50 | 250g Amber Jar (ALE210) | S           |
| 19538081         | TP157                     | ES1           | 0.50 - 0.50 | 1kg TUB                 | S           |
| 19538114         | TP158                     | ES1           | 0.50 - 0.50 | 60g VOC (ALE215)        | S           |
| 19538147         | TP159                     | ES1           | 0.50 - 0.50 | 250g Amber Jar (ALE210) | S           |
| 19538180         | TP160                     | ES1           | 0.50 - 0.50 | 1kg TUB                 | S           |
| 19538213         | TP161                     | ES1           | 0.50 - 0.50 | 60g VOC (ALE215)        | S           |
| 19538246         | TP162                     | ES1           | 0.50 - 0.50 | 250g Amber Jar (ALE210) | S           |
| 19538279         | TP163                     | ES1           | 0.50 - 0.50 | 1kg TUB                 | S           |
| 19538312         | TP164                     | ES1           | 0.50 - 0.50 | 60g VOC (ALE215)        | S           |
| 19538345         | TP165                     | ES1           | 0.50 - 0.50 | 250g Amber Jar (ALE210) | S           |
| 19538378         | TP166                     | ES1           | 0.50 - 0.50 | 1kg TUB                 | S           |
| 19538411         | TP167                     | ES1           | 0.50 - 0.50 | 60g VOC (ALE215)        | S           |
| 19538444         | TP168                     | ES1           | 0.50 - 0.50 | 250g Amber Jar (ALE210) | S           |
| 19538477         | TP169                     | ES1           | 0.50 - 0.50 | 1kg TUB                 | S           |



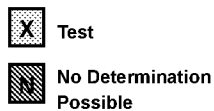


Validated

## CERTIFICATE OF ANALYSIS

SDG: 190313-14  
Location: Land at Stakers FarmClient Reference: A112666  
Order Number: C19/247Report Number: 498064  
Superseded Report: 497902

## Results Legend



## Sample Types -

S - Soil/Solid  
UNS - Unspecified Solid  
GW - Ground Water  
SW - Surface Water  
LE - Land Leachate  
PL - Prepared Leachate  
PR - Process Water  
SA - Saline Water  
TE - Trade Effluent  
TS - Treated Sewage  
US - Untreated Sewage  
RE - Recreational Water  
DW - Drinking Water Non-regulatory  
UNL - Unspecified Liquid  
SL - Sludge  
G - Gas  
OTH - Other

Lab Sample No(s)

Customer  
Sample Reference

AGS Reference

Depth (m)

Container

Sample Type

TPH CWG GC (S)

All

NDPs: 0  
Tests: 8

VOC MS (S)

All

NDPs: 0  
Tests: 16

19532764

TP10

ES1

0.50 - 0.50

1kg TUB

S

19532795

TP09

ES1

0.50 - 0.50

60g VOC (ALE215)

S

19532819

TP08

ES1

0.50 - 0.50

60g VOC (ALE215)

S

19532863

TP07

ES1

0.50 - 0.50

60g VOC (ALE215)

S

19532900

TP06

ES2

1.20 - 1.20

60g VOC (ALE215)

S

19532866

TP04

ES1

0.50 - 0.50

60g VOC (ALE215)

S

19532833

TP02

ES2

1.50 - 1.50

60g VOC (ALE215)

S

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

|          |      |     |             |                         |   |   |   |
|----------|------|-----|-------------|-------------------------|---|---|---|
| 19532671 | MS08 | EST | 0.30 - 0.30 | 1kg TUB                 | S |   |   |
| 19532711 | MS07 | EST | 0.30 - 0.30 | 60g VOC (ALE215)        | S |   | X |
|          |      |     |             | 250g Amber Jar (ALE210) | S | X |   |
|          |      |     |             | 1kg TUB                 | S |   |   |
| 19532814 | MS06 | EST | 0.40 - 0.40 | 60g VOC (ALE215)        | S |   | X |
|          |      |     |             | 250g Amber Jar (ALE210) | S | X |   |
|          |      |     |             | 1kg TUB                 | S |   |   |
| 19532778 | MS05 | EST | 0.20 - 0.20 | 60g VOC (ALE215)        | S |   | X |
|          |      |     |             | 250g Amber Jar (ALE210) | S |   |   |
|          |      |     |             | 1kg TUB                 | S |   |   |
| 19532743 | MS04 | EST | 0.30 - 0.30 | 60g VOC (ALE215)        | S |   | X |
|          |      |     |             | 250g Amber Jar (ALE210) | S | X |   |
|          |      |     |             | 1kg TUB                 | S |   |   |
| 19532735 | MS02 | EST | 0.30 - 0.30 | 60g VOC (ALE215)        | S |   | X |
|          |      |     |             | 250g Amber Jar (ALE210) | S | X |   |
|          |      |     |             | 1kg TUB                 | S |   |   |
| 19532723 | MS01 | EST | 0.30 - 0.30 | 60g VOC (ALE215)        | S |   | X |
|          |      |     |             | 250g Amber Jar (ALE210) | S |   |   |
|          |      |     |             | 1kg TUB                 | S |   |   |
| 19532764 | TP10 | EST | 0.50 - 0.50 | 60g VOC (ALE215)        | S |   | X |
|          |      |     |             | 250g Amber Jar (ALE210) | S |   |   |





# CERTIFICATE OF ANALYSIS

Validated

SDG: 190313-14  
Location: Land at Stakers Farm

Client Reference: A112666  
Order Number: C19/247

Report Number: 498064  
Superseded Report: 497902

## Results Legend

- ☒ Test  
☐ No Determination Possible

## Sample Types -

S - Soil/Solid  
UNS - Unspecified Solid  
GW - Ground Water  
SW - Surface Water  
LE - Land Leachate  
PL - Prepared Leachate  
PR - Process Water  
SA - Saline Water  
TE - Trade Effluent  
TS - Treated Sewage  
US - Untreated Sewage  
RE - Recreational Water  
DW - Drinking Water Non-regulatory  
UNL - Unspecified Liquid  
SL - Sludge  
G - Gas  
OTH - Other

| Lab Sample No(s)          | 19532671                | 19532683                                               | 19532695                                               |
|---------------------------|-------------------------|--------------------------------------------------------|--------------------------------------------------------|
| Customer Sample Reference | WS08                    | WS09                                                   | WS10                                                   |
| AGS Reference             | ES1                     | ES1                                                    | ES1                                                    |
| Depth (m)                 | 0.30 - 0.30             | 0.30 - 0.30                                            | 0.30 - 0.30                                            |
| Container                 | 250g Amber Jar (ALE210) | 60g VOC (ALE215)<br>250g Amber Jar (ALE210)<br>1kg TUB | 60g VOC (ALE215)<br>250g Amber Jar (ALE210)<br>1kg TUB |
| Sample Type               | S                       | S                                                      | S                                                      |
| Total Organic Carbon      | All                     | NDPs: 0<br>Tests: 16                                   | X                                                      |
| TPH CWG GC (S)            | All                     | NDPs: 0<br>Tests: 8                                    | X                                                      |
| VOC MS (S)                | All                     | NDPs: 0<br>Tests: 16                                   | X                                                      |



# CERTIFICATE OF ANALYSIS

Validated

SDG: 190313-14  
Location: Land at Stakers Farm

Client Reference: A112666  
Order Number: C19/247

Report Number: 498064  
Superseded Report: 497902

## Sample Descriptions

### Grain Sizes

|           |          |      |                 |        |             |        |            |             |       |
|-----------|----------|------|-----------------|--------|-------------|--------|------------|-------------|-------|
| very fine | <0.063mm | fine | 0.063mm - 0.1mm | medium | 0.1mm - 2mm | coarse | 2mm - 10mm | very coarse | >10mm |
|-----------|----------|------|-----------------|--------|-------------|--------|------------|-------------|-------|

| Lab Sample No(s) | Customer Sample Ref. | Depth (m)   | Colour      | Description     | Inclusions | Inclusions 2 |
|------------------|----------------------|-------------|-------------|-----------------|------------|--------------|
| 19532633         | TP02                 | 1.50 - 1.50 | Dark Brown  | Loamy Sand      | Stones     | Vegetation   |
| 19532666         | TP04                 | 0.50 - 0.50 | Dark Brown  | Loamy Sand      | Stones     | Vegetation   |
| 19532900         | TP06                 | 1.20 - 1.20 | Dark Brown  | Silty Clay Loam | Stones     | None         |
| 19532663         | TP07                 | 0.50 - 0.50 | Dark Brown  | Loamy Sand      | Vegetation | Stones       |
| 19532819         | TP08                 | 0.50 - 0.50 | Dark Brown  | Loamy Sand      | Vegetation | Stones       |
| 19532795         | TP09                 | 0.50 - 0.50 | Dark Brown  | Loamy Sand      | Stones     | Vegetation   |
| 19532764         | TP10                 | 0.50 - 0.50 | Dark Brown  | Silty Clay Loam | Stones     | Vegetation   |
| 19532723         | WS01                 | 0.30 - 0.30 | Light Brown | Sandy Loam      | Vegetation | Stones       |
| 19532735         | WS02                 | 0.30 - 0.30 | Dark Brown  | Loamy Sand      | Vegetation | Stones       |
| 19532743         | WS04                 | 0.30 - 0.30 | Dark Brown  | Sandy Loam      | Vegetation | Stones       |
| 19532778         | WS05                 | 0.20 - 0.20 | Dark Brown  | Sandy Loam      | Vegetation | None         |
| 19532914         | WS06                 | 0.40 - 0.40 | Dark Brown  | Silt Loam       | Stones     | Vegetation   |
| 19532711         | WS07                 | 0.30 - 0.30 | Dark Brown  | Silty Clay Loam | Vegetation | None         |
| 19532671         | WS08                 | 0.30 - 0.30 | Dark Brown  | Sandy Silt Loam | None       | Vegetation   |
| 19532683         | WS09                 | 0.30 - 0.30 | Dark Brown  | Silt Loam       | Vegetation | None         |
| 19532695         | WS10                 | 0.30 - 0.30 | Grey        | Loamy Sand      | Vegetation | Stones       |

These descriptions are only intended to act as a cross check if sample identities are questioned, and to provide a log of sample matrices with respect to MCERTS validation. They are not intended as full geological descriptions.

We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample.

Other coarse granular materials such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.





## CERTIFICATE OF ANALYSIS

Validated

SDG: 190313-14  
Location: Land at Stakers FarmClient Reference: A112666  
Order Number: C19/247Report Number: 498064  
Superseded Report: 497902

| Residue Legend                                   |                                                                                                                                                                  |           | Customer Sample Ref                                                                                                       |  | TP02           | TP04           | TP06           | TP07           | TP08           | TP09           |
|--------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|---------------------------------------------------------------------------------------------------------------------------|--|----------------|----------------|----------------|----------------|----------------|----------------|
| #                                                | ISO 17025 accredited.                                                                                                                                            |           | Depth (m)<br>Sample Type<br>Date Sampled<br>Sample Time<br>Date Received<br>SDG Ref<br>Lab Sample No.(s)<br>AGS Reference |  | 1.50 - 1.50    | 0.50 - 0.50    | 1.20 - 1.20    | 0.50 - 0.50    | 0.50 - 0.50    | 0.50 - 0.50    |
| M                                                | mCERTS accredited.                                                                                                                                               |           |                                                                                                                           |  | Soil/Solid (S) | Soil/Solid (S) | Soil/Solid (S) | Soil/Solid (S) | Soil/Solid (S) | Soil/Solid (S) |
| mg                                               | Aqueous / filtered sample.                                                                                                                                       |           |                                                                                                                           |  | 08/03/2019     | 08/03/2019     | 07/03/2019     | 07/03/2019     | 08/03/2019     | 08/03/2019     |
| dis.filt                                         | Disolved / filtered sample.                                                                                                                                      |           |                                                                                                                           |  |                |                |                |                |                |                |
| tot.unfilt                                       | Total / unfiltered sample.                                                                                                                                       |           |                                                                                                                           |  |                |                |                |                |                |                |
| *                                                | Subcontracted - refer to subcontractor report for accreditation status.                                                                                          |           |                                                                                                                           |  |                |                |                |                |                |                |
| **                                               | % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery |           |                                                                                                                           |  |                |                |                |                |                |                |
| (F)                                              | Trigger breach confirmed                                                                                                                                         |           |                                                                                                                           |  |                |                |                |                |                |                |
| 1-3+56                                           | Sample deviation (see appendix)                                                                                                                                  |           |                                                                                                                           |  |                |                |                |                |                |                |
| Component                                        | LOD/Units                                                                                                                                                        | Method    |                                                                                                                           |  |                |                |                |                |                |                |
| Moisture Content Ratio (% of as received sample) | %                                                                                                                                                                | PM024     |                                                                                                                           |  | 15             | 16             | 15             | 18             | 17             | 17             |
| 2,4,5-Trichlorophenol (2,4,5-T)*                 | <0.01 mg/kg                                                                                                                                                      | SUB       |                                                                                                                           |  |                |                |                | <0.01          |                |                |
| 2,4,5-TP (Fenoprop)*                             | <0.01 mg/kg                                                                                                                                                      | SUB       |                                                                                                                           |  |                |                |                | <0.01          |                |                |
| 2,4-D*                                           | <0.01 mg/kg                                                                                                                                                      | SUB       |                                                                                                                           |  |                |                |                | <0.01          |                |                |
| 2,4-DB*                                          | <0.01 mg/kg                                                                                                                                                      | SUB       |                                                                                                                           |  |                |                |                | <0.01          |                |                |
| 2,4-Dichloroprop (2,4 DP)*                       | <0.01 mg/kg                                                                                                                                                      | SUB       |                                                                                                                           |  |                |                |                | <0.01          |                |                |
| 4-Chlorophenoxyacetic acid (4-CPA)*              | <0.01 mg/kg                                                                                                                                                      | SUB       |                                                                                                                           |  |                |                |                | <0.01          |                |                |
| Acifluorfen*                                     | <0.01 mg/kg                                                                                                                                                      | SUB       |                                                                                                                           |  |                |                |                | <0.01          |                |                |
| Bentazone*                                       | <0.01 mg/kg                                                                                                                                                      | SUB       |                                                                                                                           |  |                |                |                | <0.01          |                |                |
| Bromoxynil*                                      | <0.01 mg/kg                                                                                                                                                      | SUB       |                                                                                                                           |  |                |                |                | <0.01          |                |                |
| Dicamba*                                         | <0.01 mg/kg                                                                                                                                                      | SUB       |                                                                                                                           |  |                |                |                | <0.01          |                |                |
| Diclofop*                                        | <0.01 mg/kg                                                                                                                                                      | SUB       |                                                                                                                           |  |                |                |                | <0.01          |                |                |
| Dinoseb*                                         | <0.01 mg/kg                                                                                                                                                      | SUB       |                                                                                                                           |  |                |                |                | <0.01          |                |                |
| DNOC*                                            | <0.01 mg/kg                                                                                                                                                      | SUB       |                                                                                                                           |  |                |                |                | <0.01          |                |                |
| Fluroxypyr*                                      | <0.01 mg/kg                                                                                                                                                      | SUB       |                                                                                                                           |  |                |                |                | <0.01          |                |                |
| Ioxynil*                                         | <0.01 mg/kg                                                                                                                                                      | SUB       |                                                                                                                           |  |                |                |                | <0.01          |                |                |
| 2-methyl-4-Chlorophenoxyacetic acid (MCPA)*      | <0.01 mg/kg                                                                                                                                                      | SUB       |                                                                                                                           |  |                |                |                | <0.01          |                |                |
| 4-(4-Chloro-o-tolyloxy) butyric acid (MCPB)*     | <0.01 mg/kg                                                                                                                                                      | SUB       |                                                                                                                           |  |                |                |                | <0.01          |                |                |
| Mecoprop (MCP)*                                  | <0.01 mg/kg                                                                                                                                                      | SUB       |                                                                                                                           |  |                |                |                | <0.01          |                |                |
| Propoxycarbazone-sodium*                         | <0.01 mg/kg                                                                                                                                                      | SUB       |                                                                                                                           |  |                |                |                | <0.01          |                |                |
| Triclopyr*                                       | <0.01 mg/kg                                                                                                                                                      | SUB       |                                                                                                                           |  |                |                |                | <0.01          |                |                |
| Triclosan*                                       | <0.01 mg/kg                                                                                                                                                      | SUB       |                                                                                                                           |  |                |                |                | <0.01          |                |                |
| EPH Surrogate % recovery**                       | %                                                                                                                                                                | TM061     |                                                                                                                           |  | 80.6           |                | 85.1           | 82.6           | 82.8           |                |
| EPH Range >C10 - C40                             | <35 mg/kg                                                                                                                                                        | TM061     |                                                                                                                           |  | <35            |                | <35            | <35            | <35            |                |
| Phenol                                           | <0.01 mg/kg                                                                                                                                                      | TM062 (S) |                                                                                                                           |  | <0.01          | <0.01          | <0.01          | <0.01          | <0.01          | <0.01          |
| Fraction Organic Carbon (FOC)                    | <0.002                                                                                                                                                           | TM132     |                                                                                                                           |  | <0.002         | 0.00291        | <0.002         | 0.00352        | 0.00376        | 0.00234        |
| pH                                               | 1 pH Units                                                                                                                                                       | TM133     |                                                                                                                           |  | 6.12           | 6.85           | 7.57           | 7.05           | 7.07           | 7.28           |
| Chromium, Hexavalent                             | <0.6 mg/kg                                                                                                                                                       | TM151     |                                                                                                                           |  | <0.6           | <0.6           | <0.6           | <0.6           | <0.6           | <0.6           |
| Cyanide, Easily liberatable (low level)          | <0.5 mg/kg                                                                                                                                                       | TM153     |                                                                                                                           |  | <0.5           | <0.5           | <0.5           | <0.5           | <0.5           | <0.5           |
| Chromium, Trivalent                              | <0.9 mg/kg                                                                                                                                                       | TM181     |                                                                                                                           |  | 43.7           | 19.4           | 21             | 26.6           | 20.1           | 30.8           |
| Arsenic                                          | <0.6 mg/kg                                                                                                                                                       | TM181     |                                                                                                                           |  | 9.78           | 8.15           | 8.45           | 13.1           | 9.73           | 10.8           |
| Beryllium                                        | <0.01 mg/kg                                                                                                                                                      | TM181     |                                                                                                                           |  | 0.819          | 0.547          | 0.705          | 0.713          | 0.59           | 1.02           |
| Cadmium                                          | <0.02 mg/kg                                                                                                                                                      | TM181     |                                                                                                                           |  | 0.31           | 0.244          | 0.236          | 0.285          | 0.252          | 0.174          |















# CERTIFICATE OF ANALYSIS

Validated

SDG: 190313-14  
Location: Land at Stakers Farm

Client Reference: A112666  
Order Number: C19/247

Report Number: 498064  
Superseded Report: 497902

## OC, OP Pesticides and Triazine Herb

| <div> <div> # ISO17025 accredited.<br/>M mCERTS accredited.<br/>AQ Aqueous / filtered sample.<br/>dis.filt Dissolved / filtered sample.<br/>tot.unfilt Total / unfiltered sample.<br/>+ Subcontracted - refer to subcontractor report for accreditation status.<br/>** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery.<br/>(F) Trigger breach confirmed<br/>1-3 Sample deviation (see appendix) </div> <div>Customer Sample Ref</div> </div> |             |        | TP07                                        | WS02                                        | WS06                                        |  |  |  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------|---------------------------------------------|---------------------------------------------|---------------------------------------------|--|--|--|
| <div> <div>Depth (m)</div> <div>Sample Type</div> <div>Date Sampled</div> <div>Sample Time</div> <div>Date Received</div> <div>SDG Ref</div> <div>Lab Sample No.(s)</div> <div>AGS Reference</div> </div>                                                                                                                                                                                                                                                                                                                                                      |             |        | 0.50 - 0.50<br>Soil/Solid (S)<br>07/03/2019 | 0.30 - 0.30<br>Soil/Solid (S)<br>08/03/2019 | 0.40 - 0.40<br>Soil/Solid (S)<br>07/03/2019 |  |  |  |
| Component                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | LOD/Units   | Method |                                             |                                             |                                             |  |  |  |
| Dichlorvos                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <0.05 mg/kg | TM073  | <0.05                                       | <0.05                                       | <0.05                                       |  |  |  |
| Mevinphos                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <0.05 mg/kg | TM073  | <0.05                                       | <0.05                                       | <0.05                                       |  |  |  |
| alpha-Hexachlorocyclohexane (HCH)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <0.05 mg/kg | TM073  | <0.05                                       | <0.05                                       | <0.05                                       |  |  |  |
| Diazinon                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <0.05 mg/kg | TM073  | <0.05                                       | <0.05                                       | <0.05                                       |  |  |  |
| gamma-Hexachlorocyclohexane (HCH / Lindane)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <0.05 mg/kg | TM073  | <0.05                                       | <0.05                                       | <0.05                                       |  |  |  |
| Heptachlor                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <0.05 mg/kg | TM073  | <0.05                                       | <0.05                                       | <0.05                                       |  |  |  |
| Aldrin                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <0.05 mg/kg | TM073  | <0.05                                       | <0.05                                       | <0.05                                       |  |  |  |
| beta-Hexachlorocyclohexane (HCH)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <0.05 mg/kg | TM073  | <0.05                                       | <0.05                                       | <0.05                                       |  |  |  |
| Methyl parathion                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <0.05 mg/kg | TM073  | <0.05                                       | <0.05                                       | <0.05                                       |  |  |  |
| delta-Hexachlorocyclohexane (HCH)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <0.05 mg/kg | TM073  | <0.05                                       | <0.05                                       | <0.05                                       |  |  |  |
| Malathion                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <0.05 mg/kg | TM073  | <0.05                                       | <0.05                                       | <0.05                                       |  |  |  |
| Fenitrothion                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <0.05 mg/kg | TM073  | <0.05                                       | <0.05                                       | <0.05                                       |  |  |  |
| Heptachlor epoxide                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <0.05 mg/kg | TM073  | <0.05                                       | <0.05                                       | <0.05                                       |  |  |  |
| Parathion                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <0.05 mg/kg | TM073  | <0.05                                       | <0.05                                       | <0.05                                       |  |  |  |
| Endosulphan I                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <0.05 mg/kg | TM073  | <0.05                                       | <0.05                                       | <0.05                                       |  |  |  |
| p,p-DDE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <0.05 mg/kg | TM073  | <0.05                                       | <0.05                                       | <0.05                                       |  |  |  |
| Dieldrin                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <0.05 mg/kg | TM073  | <0.05                                       | <0.05                                       | <0.05                                       |  |  |  |
| o,p'-DDD (TDE)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | <0.05 mg/kg | TM073  | <0.05                                       | <0.05                                       | <0.05                                       |  |  |  |
| Endrin                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <0.05 mg/kg | TM073  | <0.05                                       | <0.05                                       | <0.05                                       |  |  |  |
| p,p-TDE (DDD)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <0.05 mg/kg | TM073  | <0.05                                       | <0.05                                       | <0.05                                       |  |  |  |
| Ethion                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <0.05 mg/kg | TM073  | <0.05                                       | <0.05                                       | <0.05                                       |  |  |  |
| Endosulphan II                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | <0.05 mg/kg | TM073  | <0.05                                       | <0.05                                       | <0.05                                       |  |  |  |
| p,p-DDT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <0.05 mg/kg | TM073  | <0.05                                       | <0.05                                       | <0.05                                       |  |  |  |
| o,p-Methoxychlor                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <0.05 mg/kg | TM073  | <0.05                                       | <0.05                                       | <0.05                                       |  |  |  |
| p,p-Methoxychlor                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <0.05 mg/kg | TM073  | <0.05                                       | <0.05                                       | <0.05                                       |  |  |  |
| Endosulphan sulphate                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <0.05 mg/kg | TM073  | <0.05                                       | <0.05                                       | <0.05                                       |  |  |  |
| Azinphos-methyl                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <0.05 mg/kg | TM073  | <0.05                                       | <0.05                                       | <0.05                                       |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |             |        |                                             |                                             |                                             |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |             |        |                                             |                                             |                                             |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |             |        |                                             |                                             |                                             |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |             |        |                                             |                                             |                                             |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |             |        |                                             |                                             |                                             |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |             |        |                                             |                                             |                                             |  |  |  |























# CERTIFICATE OF ANALYSIS

Validated

SDG: 190313-14  
Location: Land at Stakers Farm

Client Reference: A112666  
Order Number: C19/247

Report Number: 498064  
Superseded Report: 497902

## Extractable Petroleum Hydrocarbons (EPH) By GC-FID EPH (DRO) (C10-C40)

| Sample No | Customer Sample Ref. | Depth       | Matrix (mg/kg) | EPH   | Interpretation             |
|-----------|----------------------|-------------|----------------|-------|----------------------------|
| 19534689  | TP07 ES1             | 0.50 - 0.50 | SOLID          | <35.0 | No interpretation possible |
| 19535071  | WS10 ES1             | 0.30 - 0.30 | SOLID          | <35.0 | No interpretation possible |
| 19537327  | WS01 ES1             | 0.30 - 0.30 | SOLID          | <35.0 | No interpretation possible |
| 19533935  | TP10 ES1             | 0.50 - 0.50 | SOLID          | <35.0 | No interpretation possible |
| 19537335  | WS05 ES1             | 0.20 - 0.20 | SOLID          | <35.0 | No interpretation possible |
| 19536152  | TP08 ES1             | 0.50 - 0.50 | SOLID          | <35.0 | No interpretation possible |
| 19536215  | TP02 ES2             | 1.50 - 1.50 | SOLID          | <35.0 | No interpretation possible |
| 19534009  | TP06 ES2             | 1.20 - 1.20 | SOLID          | <35.0 | No interpretation possible |

Extractable Petroleum Hydrocarbons (formally Diesel Range Organics) :- Any compound extractable in n-hexane within the carbon range C10-C40, includes Aliphatic (Min Oil), Aromatic (PAHs) and naturally occurring compounds.



## CERTIFICATE OF ANALYSIS

SDG: 190313-14  
Location: Land at Stakers Farm

Client Reference: A112666  
Order Number: C19/247

Report Number: 498064  
Superseded Report: 497902

## Asbestos Identification - Solid Samples

## Reliability Legend

# ISO17025 accredited.  
M mCERTS accredited.  
\* Subcontracted test.  
(F) Trigger breach confirmed  
1-5&#9@ Sample deviation (see appendix)

|                                                                                                                           |                                                                                                                 | Date of Analysis | Analysed By                  | Comments | Amosite<br>(Brown)<br>Asbestos | Chrysotile<br>(White)<br>Asbestos | Crocidolite<br>(Blue) Asbestos | Fibrous<br>Actinolite | Fibrous<br>Anthophyllite | Fibrous<br>Tremolite | Non-Asbestos<br>Fibre |
|---------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|------------------|------------------------------|----------|--------------------------------|-----------------------------------|--------------------------------|-----------------------|--------------------------|----------------------|-----------------------|
| Cust. Sample Ref.<br>Depth (m)<br>Sample Type<br>Date Sampled<br>Date Received<br>SDG<br>Original Sample<br>Method Number | TP02ES2<br>1.50 - 1.50<br>SOLID<br>08/03/2019 00:00:00<br>13/03/2019 06:04:00<br>190313-14<br>19532833<br>TM048 | 18/03/2019       | Lucy Caroe                   | -        | Not Detected<br>(#)            | Not Detected<br>(#)               | Not Detected<br>(#)            | Not Detected<br>(#)   | Not Detected<br>(#)      | Not Detected<br>(#)  | Not Detected          |
| Cust. Sample Ref.<br>Depth (m)<br>Sample Type<br>Date Sampled<br>Date Received<br>SDG<br>Original Sample<br>Method Number | TP04ES1<br>0.50 - 0.50<br>SOLID<br>08/03/2019 00:00:00<br>13/03/2019 06:04:00<br>190313-14<br>19532866<br>TM048 | 20/03/2019       | Barbara<br>Urbanek-Wals<br>h | -        | Not Detected<br>(#)            | Not Detected<br>(#)               | Not Detected<br>(#)            | Not Detected<br>(#)   | Not Detected<br>(#)      | Not Detected<br>(#)  | Not Detected          |
| Cust. Sample Ref.<br>Depth (m)<br>Sample Type<br>Date Sampled<br>Date Received<br>SDG<br>Original Sample<br>Method Number | TP06ES2<br>1.20 - 1.20<br>SOLID<br>07/03/2019 00:00:00<br>13/03/2019 06:04:00<br>190313-14<br>19532900<br>TM048 | 20/03/19         | Christian<br>Hallam          | -        | Not Detected<br>(#)            | Not Detected<br>(#)               | Not Detected<br>(#)            | Not Detected<br>(#)   | Not Detected<br>(#)      | Not Detected<br>(#)  | Not Detected          |
| Cust. Sample Ref.<br>Depth (m)<br>Sample Type<br>Date Sampled<br>Date Received<br>SDG<br>Original Sample<br>Method Number | TP07ES1<br>0.50 - 0.50<br>SOLID<br>07/03/2019 00:00:00<br>13/03/2019 06:04:00<br>190313-14<br>19532663<br>TM048 | 20/03/19         | Christian<br>Hallam          | -        | Not Detected<br>(#)            | Not Detected<br>(#)               | Not Detected<br>(#)            | Not Detected<br>(#)   | Not Detected<br>(#)      | Not Detected<br>(#)  | Not Detected          |
| Cust. Sample Ref.<br>Depth (m)<br>Sample Type<br>Date Sampled<br>Date Received<br>SDG<br>Original Sample<br>Method Number | TP08ES1<br>0.50 - 0.50<br>SOLID<br>08/03/2019 00:00:00<br>13/03/2019 06:04:00<br>190313-14<br>19532819<br>TM048 | 19/03/19         | Christian<br>Hallam          | -        | Not Detected<br>(#)            | Not Detected<br>(#)               | Not Detected<br>(#)            | Not Detected<br>(#)   | Not Detected<br>(#)      | Not Detected<br>(#)  | Not Detected          |
| Cust. Sample Ref.<br>Depth (m)<br>Sample Type<br>Date Sampled<br>Date Received<br>SDG<br>Original Sample<br>Method Number | TP09ES1<br>0.50 - 0.50<br>SOLID<br>08/03/2019 00:00:00<br>13/03/2019 06:04:00<br>190313-14<br>19532795<br>TM048 | 20/03/2019       | Marcin<br>Magdziarek         | -        | Not Detected<br>(#)            | Not Detected<br>(#)               | Not Detected<br>(#)            | Not Detected<br>(#)   | Not Detected<br>(#)      | Not Detected<br>(#)  | Not Detected          |
| Cust. Sample Ref.<br>Depth (m)<br>Sample Type<br>Date Sampled<br>Date Received<br>SDG<br>Original Sample<br>Method Number | TP10ES1<br>0.50 - 0.50<br>SOLID<br>07/03/2019 00:00:00<br>13/03/2019 06:04:00<br>190313-14<br>19532764<br>TM048 | 19/03/2019       | James<br>Richards            | -        | Not Detected<br>(#)            | Not Detected<br>(#)               | Not Detected<br>(#)            | Not Detected<br>(#)   | Not Detected<br>(#)      | Not Detected<br>(#)  | Not Detected          |
| Cust. Sample Ref.<br>Depth (m)<br>Sample Type<br>Date Sampled<br>Date Received<br>SDG<br>Original Sample<br>Method Number | WS01ES1<br>0.30 - 0.30<br>SOLID<br>08/03/2019 00:00:00<br>13/03/2019 06:04:00<br>190313-14<br>19532723<br>TM048 | 19/03/19         | Christian<br>Hallam          | -        | Not Detected<br>(#)            | Not Detected<br>(#)               | Not Detected<br>(#)            | Not Detected<br>(#)   | Not Detected<br>(#)      | Not Detected<br>(#)  | Not Detected          |



## CERTIFICATE OF ANALYSIS

**SDG:** 190313-14  
**Location:** Land at Stakers Farm

**Client Reference:** A112666  
**Order Number:** C19/247

**Report Number:** 498064  
**Superseded Report:** 497902

|                                                                                                                           |                                                                                                                 | Date of Analysis | Analysed By                  | Comments | Amosite<br>(Brown)<br>Asbestos | Chrysotile<br>(White)<br>Asbestos | Crocidolite<br>(Blue) Asbestos | Fibrous<br>Actinolite | Fibrous<br>Anthophyllite | Fibrous<br>Tremolite | Non-Asbestos<br>Fibre |
|---------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|------------------|------------------------------|----------|--------------------------------|-----------------------------------|--------------------------------|-----------------------|--------------------------|----------------------|-----------------------|
| Cust. Sample Ref.<br>Depth (m)<br>Sample Type<br>Date Sampled<br>Date Received<br>SDG<br>Original Sample<br>Method Number | WS02E51<br>0.30 - 0.30<br>SOLID<br>08/03/2019 00:00:00<br>13/03/2019 06:04:00<br>190313-14<br>19532735<br>TM048 | 20/03/2019       | Barbara<br>Urbanek-Wals<br>h | -        | Not Detected<br>(#)            | Not Detected<br>(#)               | Not Detected<br>(#)            | Not Detected<br>(#)   | Not Detected<br>(#)      | Not Detected<br>(#)  | Not Detected          |
| Cust. Sample Ref.<br>Depth (m)<br>Sample Type<br>Date Sampled<br>Date Received<br>SDG<br>Original Sample<br>Method Number | WS04E51<br>0.30 - 0.30<br>SOLID<br>08/03/2019 00:00:00<br>13/03/2019 06:04:00<br>190313-14<br>19532743<br>TM048 | 20/03/19         | Lucy Caroe                   | -        | Not Detected<br>(#)            | Not Detected<br>(#)               | Not Detected<br>(#)            | Not Detected<br>(#)   | Not Detected<br>(#)      | Not Detected<br>(#)  | Not Detected          |
| Cust. Sample Ref.<br>Depth (m)<br>Sample Type<br>Date Sampled<br>Date Received<br>SDG<br>Original Sample<br>Method Number | WS05E51<br>0.20 - 0.20<br>SOLID<br>08/03/2019 00:00:00<br>13/03/2019 06:04:00<br>190313-14<br>19532778<br>TM048 | 19/03/2019       | Paul Poynton                 | -        | Not Detected<br>(#)            | Not Detected<br>(#)               | Not Detected<br>(#)            | Not Detected<br>(#)   | Not Detected<br>(#)      | Not Detected<br>(#)  | Not Detected          |
| Cust. Sample Ref.<br>Depth (m)<br>Sample Type<br>Date Sampled<br>Date Received<br>SDG<br>Original Sample<br>Method Number | WS06E51<br>0.40 - 0.40<br>SOLID<br>07/03/2019 00:00:00<br>13/03/2019 06:04:00<br>190313-14<br>19532914<br>TM048 | 19/03/2019       | Barbara<br>Urbanek-Wals<br>h | -        | Not Detected<br>(#)            | Not Detected<br>(#)               | Not Detected<br>(#)            | Not Detected<br>(#)   | Not Detected<br>(#)      | Not Detected<br>(#)  | Not Detected          |
| Cust. Sample Ref.<br>Depth (m)<br>Sample Type<br>Date Sampled<br>Date Received<br>SDG<br>Original Sample<br>Method Number | WS07E51<br>0.30 - 0.30<br>SOLID<br>08/03/2019 00:00:00<br>13/03/2019 06:04:00<br>190313-14<br>19532711<br>TM048 | 20/03/19         | Lucy Caroe                   | -        | Not Detected<br>(#)            | Not Detected<br>(#)               | Not Detected<br>(#)            | Not Detected<br>(#)   | Not Detected<br>(#)      | Not Detected<br>(#)  | Not Detected          |
| Cust. Sample Ref.<br>Depth (m)<br>Sample Type<br>Date Sampled<br>Date Received<br>SDG<br>Original Sample<br>Method Number | WS08E51<br>0.30 - 0.30<br>SOLID<br>07/03/2019 00:00:00<br>13/03/2019 06:04:00<br>190313-14<br>19532671<br>TM048 | 19/03/2019       | Barbara<br>Urbanek-Wals<br>h | -        | Not Detected<br>(#)            | Not Detected<br>(#)               | Not Detected<br>(#)            | Not Detected<br>(#)   | Not Detected<br>(#)      | Not Detected<br>(#)  | Not Detected          |
| Cust. Sample Ref.<br>Depth (m)<br>Sample Type<br>Date Sampled<br>Date Received<br>SDG<br>Original Sample<br>Method Number | WS09E51<br>0.30 - 0.30<br>SOLID<br>07/03/2019 00:00:00<br>13/03/2019 06:04:00<br>190313-14<br>19532683<br>TM048 | 19/03/2019       | Lucy Caroe                   | -        | Not Detected<br>(#)            | Not Detected<br>(#)               | Not Detected<br>(#)            | Not Detected<br>(#)   | Not Detected<br>(#)      | Not Detected<br>(#)  | Not Detected          |
| Cust. Sample Ref.<br>Depth (m)<br>Sample Type<br>Date Sampled<br>Date Received<br>SDG<br>Original Sample<br>Method Number | WS10E51<br>0.30 - 0.30<br>SOLID<br>07/03/2019 00:00:00<br>13/03/2019 06:04:00<br>190313-14<br>19532695<br>TM048 | 19/03/2019       | Paul Poynton                 | -        | Not Detected<br>(#)            | Not Detected<br>(#)               | Not Detected<br>(#)            | Not Detected<br>(#)   | Not Detected<br>(#)      | Not Detected<br>(#)  | Not Detected          |





# CERTIFICATE OF ANALYSIS

Validated

SDG: 190313-14  
Location: Land at Stakers Farm

Client Reference: A112666  
Order Number: C19/247

Report Number: 498064  
Superseded Report: 497902

## CEN 10:1 SINGLE STAGE LEACHATE TEST

### CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

#### Client Reference

Mass Sample taken (kg) 0.114

Mass of dry sample (kg) 0.090

Particle Size &lt;4mm &gt;95%

#### Site Location

Land at Stakers Farm

Natural Moisture Content (%) 26.6

Dry Matter Content (%) 79

#### Case

SDG 190313-14

Lab Sample Number(s) 19532735

Sampled Date 08-Mar-2019

Customer Sample Ref. WS02 ES1

Depth (m) 0.30 - 0.30

#### Eluate Analysis

| Eluate Analysis    | C <sub>2</sub> Conc <sup>n</sup> in 10:1 eluate (mg/l) |                    | A <sub>2</sub> 10:1 conc <sup>n</sup> leached (mg/kg) |                    |   |   |   |
|--------------------|--------------------------------------------------------|--------------------|-------------------------------------------------------|--------------------|---|---|---|
|                    | Result                                                 | Limit of Detection | Result                                                | Limit of Detection |   |   |   |
| TPH CWC (W)        |                                                        |                    |                                                       |                    |   |   |   |
| MTBE GC-FID        | <0.003                                                 | <0.003             | <0.03                                                 | <0.03              | - | - | - |
| Benzene by GC      | <0.007                                                 | <0.007             | <0.07                                                 | <0.07              | - | - | - |
| Toluene by GC      | <0.004                                                 | <0.004             | <0.04                                                 | <0.04              | - | - | - |
| Ethylbenzene by GC | <0.005                                                 | <0.005             | <0.05                                                 | <0.05              | - | - | - |
| m & p Xylene by GC | <0.008                                                 | <0.008             | <0.08                                                 | <0.08              | - | - | - |
| o Xylene by GC     | <0.003                                                 | <0.003             | <0.03                                                 | <0.03              | - | - | - |
| Sum of BTEX by GC  | <0.028                                                 | <0.028             | <0.28                                                 | <0.28              | - | - | - |
| GRO TOT (C5-C10)   | <0.01                                                  | <0.01              | <0.1                                                  | <0.1               | - | - | - |
| EPH (C6-C10)       | <0.1                                                   | <0.1               | <1                                                    | <1                 | - | - | - |

#### Leach Test Information

Date Prepared 14-Mar-2019  
pH (pH Units) 8.26  
Conductivity (µS/cm) 11.00  
Temperature (°C) 17.60  
Volume Leachant (Litres) 0.876





# CERTIFICATE OF ANALYSIS

Validated

SDG: 190313-14  
Location: Land at Stakers Farm

Client Reference: A112666  
Order Number: C19/247

Report Number: 498064  
Superseded Report: 497902

## CEN 10:1 SINGLE STAGE LEACHATE TEST

### CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

#### Client Reference

Mass Sample taken (kg) 0.108

Mass of dry sample (kg) 0.090

Particle Size &lt;4mm &gt;95%

#### Site Location

Land at Stakers Farm

Natural Moisture Content (%) 20.5

Dry Matter Content (%) 83

#### Case

SDG 190313-14

Lab Sample Number(s) 19532795

Sampled Date 08-Mar-2019

Customer Sample Ref. TP09 ES1

Depth (m) 0.50 - 0.50

#### Eluate Analysis

| Eluate Analysis    | C <sub>2</sub> Conc <sup>n</sup> in 10:1 eluate (mg/l) |                    | A <sub>2</sub> 10:1 conc <sup>n</sup> leached (mg/kg) |                    |   |   |   |
|--------------------|--------------------------------------------------------|--------------------|-------------------------------------------------------|--------------------|---|---|---|
|                    | Result                                                 | Limit of Detection | Result                                                | Limit of Detection |   |   |   |
| TPH CWC (W)        |                                                        |                    |                                                       |                    |   |   |   |
| MTBE GC-FID        | <0.003                                                 | <0.003             | <0.03                                                 | <0.03              | - | - | - |
| Benzene by GC      | <0.007                                                 | <0.007             | <0.07                                                 | <0.07              | - | - | - |
| Toluene by GC      | <0.004                                                 | <0.004             | <0.04                                                 | <0.04              | - | - | - |
| Ethylbenzene by GC | <0.005                                                 | <0.005             | <0.05                                                 | <0.05              | - | - | - |
| m & p Xylene by GC | <0.008                                                 | <0.008             | <0.08                                                 | <0.08              | - | - | - |
| o Xylene by GC     | <0.003                                                 | <0.003             | <0.03                                                 | <0.03              | - | - | - |
| Sum of BTEX by GC  | <0.028                                                 | <0.028             | <0.28                                                 | <0.28              | - | - | - |
| GRO TOT (C5-C10)   | <0.01                                                  | <0.01              | <0.1                                                  | <0.1               | - | - | - |
| EPH (C6-C10)       | <0.1                                                   | <0.1               | <1                                                    | <1                 | - | - | - |

#### Leach Test Information

Date Prepared 14-Mar-2019

pH (pH Units) 8.88

Conductivity (µS/cm) 18.30

Temperature (°C) 16.80

Volume Leachant (Litres) 0.882

Mcerts Certification does not apply to leachates

23/03/2019 12:05:23

APM DISTRICT COUNCIL 71/20/RES

12.04.22 23/03/2019







## CERTIFICATE OF ANALYSIS

Validated

SDG: 190313-14  
Location: Land at Stakers FarmClient Reference: A112666  
Order Number: C19/247Report Number: 498064  
Superseded Report: 497902

## CEN 10:1 SINGLE STAGE LEACHATE TEST

## CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

## Client Reference

Mass Sample taken (kg) 0.107

Mass of dry sample (kg) 0.090

Particle Size &lt;4mm &gt;95%

## Site Location

Land at Stakers Farm

Natural Moisture Content (%) 19

Dry Matter Content (%) 84

## Case

SDG 190313-14

Lab Sample Number(s) 19532914

Sampled Date 07-Mar-2019

Customer Sample Ref. WS06 ES1

Depth (m) 0.40 - 0.40

## Eluate Analysis

| Eluate Analysis    | C <sub>2</sub> Conc <sup>n</sup> in 10:1 eluate (mg/l) |                    | A <sub>2</sub> 10:1 conc <sup>n</sup> leached (mg/kg) |                    |   |   |   |
|--------------------|--------------------------------------------------------|--------------------|-------------------------------------------------------|--------------------|---|---|---|
|                    | Result                                                 | Limit of Detection | Result                                                | Limit of Detection |   |   |   |
| TPH CWC (W)        |                                                        |                    |                                                       |                    |   |   |   |
| MTBE GC-FID        | <0.003                                                 | <0.003             | <0.03                                                 | <0.03              | - | - | - |
| Benzene by GC      | <0.007                                                 | <0.007             | <0.07                                                 | <0.07              | - | - | - |
| Toluene by GC      | <0.004                                                 | <0.004             | <0.04                                                 | <0.04              | - | - | - |
| Ethylbenzene by GC | <0.005                                                 | <0.005             | <0.05                                                 | <0.05              | - | - | - |
| m & p Xylene by GC | <0.008                                                 | <0.008             | <0.08                                                 | <0.08              | - | - | - |
| o Xylene by GC     | <0.003                                                 | <0.003             | <0.03                                                 | <0.03              | - | - | - |
| Sum of BTEX by GC  | <0.028                                                 | <0.028             | <0.28                                                 | <0.28              | - | - | - |
| GRO TOT (C5-C10)   | <0.01                                                  | <0.01              | <0.1                                                  | <0.1               | - | - | - |
| EPH (C6-C10)       | <0.1                                                   | <0.1               | <1                                                    | <1                 | - | - | - |

## Leach Test Information

Date Prepared 14-Mar-2019  
pH (pH Units) 8.75  
Conductivity (µS/cm) 20.50  
Temperature (°C) 10.70  
Volume Leachant (Litres) 0.883



# CERTIFICATE OF ANALYSIS

Validated

SDG: 190313-14 Client Reference: A112666 Report Number: 498064  
Location: Land at Stakers Farm Order Number: C19/247 Superseded Report: 497902

## Table of Results - Appendix

| Method No | Reference                                                                                                                                                   | Description                                                                                                                             |
|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| PM001     |                                                                                                                                                             | Preparation of Samples for Metals Analysis                                                                                              |
| PM024     | Modified BS 1377                                                                                                                                            | Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material                                   |
| PM115     |                                                                                                                                                             | Leaching Procedure for CEN One Stage Leach Test 2:1 & 10:1 1 Step                                                                       |
| SUB       |                                                                                                                                                             | Subcontracted Test                                                                                                                      |
| TM043     | Method 2320B, AWWA/APHA, 20th Ed., 1999 / BS 2690: Part109 1984                                                                                             | Determination of alkalinity in aqueous samples                                                                                          |
| TM048     | HSG 248, Asbestos: The analysts' guide for sampling, analysis and clearance procedures                                                                      | Identification of Asbestos in Bulk Material                                                                                             |
| TM061     | Method for the Determination of EPH,Massachusetts Dept.of EP, 1998                                                                                          | Determination of Extractable Petroleum Hydrocarbons by GC-FID (C10-C40)                                                                 |
| TM062 (S) | National Grid Property Holdings Methods for the Collection & Analysis of Samples from National Grid Sites version 1 Sec 3.9                                 | Determination of Phenols in Soils by HPLC                                                                                               |
| TM073     | MEWAM BOOK 60 1980,95 1985, HMSO / Modified: US EPA Method 8081A & 8141A                                                                                    | Determination of organochlorine and organophosphorous pesticides by GCMS                                                                |
| TM089     | Modified: US EPA Methods 8020 & 602                                                                                                                         | Determination of Gasoline Range Hydrocarbons (GRO) by Headspace GC-FID (C4-C12)                                                         |
| TM099     | BS 2690: Part 7:1968 / BS 6068: Part2.11:1984                                                                                                               | Determination of Ammonium in Water Samples using the Kone Analyser                                                                      |
| TM116     | Modified: US EPA Method 8260, 8120, 8020, 624, 610 & 602                                                                                                    | Determination of Volatile Organic Compounds by Headspace / GC-MS                                                                        |
| TM132     | In - house Method                                                                                                                                           | ELTRA CS800 Operators Guide                                                                                                             |
| TM133     | BS 1377: Part 3 1990:BS 6068-2.5                                                                                                                            | Determination of pH in Soil and Water using the GLpH pH Meter                                                                           |
| TM151     | Method 3500D, AWWA/APHA, 20th Ed., 1999                                                                                                                     | Determination of Hexavalent Chromium using Kone analyser                                                                                |
| TM152     | Method 3125B, AWWA/APHA, 20th Ed., 1999                                                                                                                     | Analysis of Aqueous Samples by ICP-MS                                                                                                   |
| TM153     | Method 4500A,B,C, I, M AWWA/APHA, 20th Ed., 1999                                                                                                            | Determination of Total Cyanide, Free (Easily Liberatable) Cyanide and Thiocyanate using the Skalar SANS+ System Segmented Flow Analyser |
| TM172     | Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria                                                            | EPH in Waters                                                                                                                           |
| TM173     | Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria                                                            | Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GC-FID                                                        |
| TM178     | Modified: US EPA Method 8100                                                                                                                                | Determination of Polynuclear Aromatic Hydrocarbons (PAH) by GC-MS in Waters                                                             |
| TM181     | US EPA Method 6010B                                                                                                                                         | Determination of Routine Metals in Soil by iCap 6500 Duo ICP-OES                                                                        |
| TM183     | BS EN 23506:2002, (BS 6068-2.74:2002) ISBN 0 580 38924 3                                                                                                    | Determination of Trace Level Mercury in Waters and Leachates by PSA Cold Vapour Atomic Fluorescence Spectrometry                        |
| TM184     | EPA Methods 325.1 & 325.2,                                                                                                                                  | The Determination of Anions in Aqueous Matrices using the Kone Spectrophotometric Analysers                                             |
| TM218     | Shaker extraction - EPA method 3546.                                                                                                                        | The determination of PAH in soil samples by GC-MS                                                                                       |
| TM222     | In-House Method                                                                                                                                             | Determination of Hot Water Soluble Boron in Soils (10:1 Water:soil) by IRIS Emission Spectrometer                                       |
| TM243     |                                                                                                                                                             | Mixed Anions In Soils By Kone                                                                                                           |
| TM245     | By GC-FID                                                                                                                                                   | Determination of GRO by Headspace in waters                                                                                             |
| TM256     | The measurement of Electrical Conductivity and the Laboratory determination of pH Value of Natural, Treated and Wastewaters. HMSO, 1978. ISBN 011 751428 4. | Determination of pH in Water and Leachate using the GLpH pH Meter                                                                       |
| TM259     | by HPLC                                                                                                                                                     | Determination of Phenols in Waters and Leachates by HPLC                                                                                |

NA = not applicable.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden (Method codes TM) or ALS Life Sciences Ltd Aberdeen (Method codes S).



# CERTIFICATE OF ANALYSIS

Validated

SDG: 190313-14  
Location: Land at Stakers Farm

Client Reference: A112666  
Order Number: C19/247

Report Number: 498064  
Superseded Report: 497902

## Test Completion Dates

Lab Sample No(s)  
Customer Sample Ref.

AGS Ref.  
Depth  
Type

|                                     | 19532833       | 19532866       | 19532900       | 19532663       | 19532819       | 19532795       | 19532764       | 19532723       | 19532735       | 19532743       |
|-------------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
|                                     | TP02           | TP04           | TP06           | TP07           | TP08           | TP09           | TP10           | W001           | W002           | W004           |
|                                     | ES2            | ES1            | ES2            | ES1            | ES1            | ES1            | ES1            | ES1            | ES1            | ES1            |
|                                     | 1.50 - 1.50    | 0.50 - 0.50    | 1.20 - 1.20    | 0.50 - 0.50    | 0.50 - 0.50    | 0.50 - 0.50    | 0.50 - 0.50    | 0.30 - 0.30    | 0.30 - 0.30    | 0.30 - 0.30    |
|                                     | Soil/Solid (S) | Soil/Solid (S) | Soil/Solid (S) | Soil/Solid (S) | Soil/Solid (S) | Soil/Solid (S) | Soil/Solid (S) | Soil/Solid (S) | Soil/Solid (S) | Soil/Solid (S) |
| Acid herbicides*                    |                |                |                | 22-Mar-2019    |                |                |                |                | 22-Mar-2019    |                |
| Alkalinity Filtered as CaCO3        |                |                |                |                |                | 20-Mar-2019    |                |                | 20-Mar-2019    |                |
| Ammoniacal Nitrogen                 |                |                |                |                |                | 19-Mar-2019    |                |                | 19-Mar-2019    |                |
| Anions by Kone (soil)               |                | 15-Mar-2019    |                |                |                | 15-Mar-2019    |                |                | 15-Mar-2019    | 15-Mar-2019    |
| Anions by Kone (w)                  |                |                |                |                |                | 16-Mar-2019    |                |                | 16-Mar-2019    |                |
| Asbestos ID in Solid Samples        | 18-Mar-2019    | 20-Mar-2019    | 20-Mar-2019    | 20-Mar-2019    | 19-Mar-2019    | 20-Mar-2019    | 19-Mar-2019    | 19-Mar-2019    | 20-Mar-2019    | 20-Mar-2019    |
| Boron Water Soluble                 | 19-Mar-2019    | 18-Mar-2019    | 18-Mar-2019    | 18-Mar-2019    | 18-Mar-2019    | 18-Mar-2019    | 18-Mar-2019    | 18-Mar-2019    | 18-Mar-2019    | 18-Mar-2019    |
| CEN 10:1 Leachate (1 Stage)         |                |                |                |                |                | 14-Mar-2019    |                |                | 14-Mar-2019    |                |
| CEN Readings                        |                |                |                |                |                | 15-Mar-2019    |                |                | 15-Mar-2019    |                |
| Chromium III                        | 19-Mar-2019    | 19-Mar-2019    | 19-Mar-2019    | 19-Mar-2019    | 19-Mar-2019    | 19-Mar-2019    | 19-Mar-2019    | 19-Mar-2019    | 19-Mar-2019    | 19-Mar-2019    |
| Cyanide Comp/Free/Total/Thiocyanate | 20-Mar-2019    | 20-Mar-2019    | 21-Mar-2019    | 20-Mar-2019    | 20-Mar-2019    | 20-Mar-2019    | 21-Mar-2019    | 20-Mar-2019    | 21-Mar-2019    | 20-Mar-2019    |
| Dissolved Metals by ICP-MS          |                |                |                |                |                | 19-Mar-2019    |                |                | 19-Mar-2019    |                |
| EPH (DRO) (C10-C40) Aqueous (W)     |                |                |                |                |                | 20-Mar-2019    |                |                | 20-Mar-2019    |                |
| EPH by FID                          | 18-Mar-2019    |                | 18-Mar-2019    | 18-Mar-2019    | 18-Mar-2019    |                | 18-Mar-2019    | 18-Mar-2019    |                |                |
| EPH CWG (Aliphatic) GC (S)          |                | 20-Mar-2019    |                |                |                | 20-Mar-2019    |                |                | 20-Mar-2019    | 20-Mar-2019    |
| EPH CWG (Aromatic) GC (S)           |                | 20-Mar-2019    |                |                |                | 20-Mar-2019    |                |                | 20-Mar-2019    | 20-Mar-2019    |
| GRO by GC-FID (S)                   | 15-Mar-2019    | 15-Mar-2019    | 15-Mar-2019    | 15-Mar-2019    | 15-Mar-2019    | 16-Mar-2019    | 15-Mar-2019    | 16-Mar-2019    | 15-Mar-2019    | 15-Mar-2019    |
| GRO by GC-FID (W)                   |                |                |                |                |                | 16-Mar-2019    |                |                | 16-Mar-2019    |                |
| Hexavalent Chromium (s)             | 19-Mar-2019    | 19-Mar-2019    | 19-Mar-2019    | 19-Mar-2019    | 19-Mar-2019    | 19-Mar-2019    | 19-Mar-2019    | 19-Mar-2019    | 19-Mar-2019    | 19-Mar-2019    |
| Mercury Dissolved                   |                |                |                |                |                | 18-Mar-2019    |                |                | 18-Mar-2019    |                |
| Metals in solid samples by OES      | 15-Mar-2019    | 18-Mar-2019    | 18-Mar-2019    | 18-Mar-2019    | 18-Mar-2019    | 18-Mar-2019    | 18-Mar-2019    | 18-Mar-2019    | 18-Mar-2019    | 18-Mar-2019    |
| OC, OP Pesticides and Triazine Hero |                |                |                | 20-Mar-2019    |                |                |                |                | 20-Mar-2019    |                |
| PAH by GCMS                         | 20-Mar-2019    | 18-Mar-2019    | 20-Mar-2019    | 20-Mar-2019    | 20-Mar-2019    | 18-Mar-2019    | 20-Mar-2019    | 20-Mar-2019    | 18-Mar-2019    | 18-Mar-2019    |
| PAH in waters by GC-MS (diss fill)  |                |                |                |                |                | 20-Mar-2019    |                |                | 20-Mar-2019    |                |
| pH                                  | 14-Mar-2019    | 14-Mar-2019    | 14-Mar-2019    | 14-Mar-2019    | 14-Mar-2019    | 14-Mar-2019    | 14-Mar-2019    | 14-Mar-2019    | 14-Mar-2019    | 14-Mar-2019    |
| pH Value of Filtered Water          |                |                |                |                |                | 17-Mar-2019    |                |                | 17-Mar-2019    |                |
| Phenols by HPLC (S)                 | 20-Mar-2019    | 20-Mar-2019    | 23-Mar-2019    | 20-Mar-2019    | 22-Mar-2019    | 20-Mar-2019    | 21-Mar-2019    | 21-Mar-2019    | 21-Mar-2019    | 20-Mar-2019    |
| Phenols by HPLC (W)                 |                |                |                |                |                | 20-Mar-2019    |                |                | 20-Mar-2019    |                |
| Sample description                  | 13-Mar-2019    | 13-Mar-2019    | 13-Mar-2019    | 13-Mar-2019    | 13-Mar-2019    | 13-Mar-2019    | 13-Mar-2019    | 13-Mar-2019    | 13-Mar-2019    | 13-Mar-2019    |
| Total EPH (aq)                      |                |                |                |                |                | 20-Mar-2019    |                |                | 20-Mar-2019    |                |
| Total Organic Carbon                | 15-Mar-2019    | 19-Mar-2019    | 19-Mar-2019    | 20-Mar-2019    | 19-Mar-2019    | 20-Mar-2019    | 19-Mar-2019    | 19-Mar-2019    | 19-Mar-2019    | 19-Mar-2019    |
| TPH CWG GC (S)                      |                | 20-Mar-2019    |                |                |                | 20-Mar-2019    |                |                | 20-Mar-2019    | 20-Mar-2019    |
| VOC MS (S)                          | 20-Mar-2019    | 20-Mar-2019    | 19-Mar-2019    | 20-Mar-2019    | 20-Mar-2019    | 19-Mar-2019    | 20-Mar-2019    | 20-Mar-2019    | 20-Mar-2019    | 20-Mar-2019    |



## CERTIFICATE OF ANALYSIS

SDG: 190313-14  
Location: Land at Stakers FarmClient Reference: A112666  
Order Number: C19/247Report Number: 498064  
Superseded Report: 497902Lab Sample No(s)  
Customer Sample Ref.AGS Ref.  
Depth  
Type

|                                          | 19532778       | 19532914       | 19532711       | 19532671       | 19532683       | 19532695       |
|------------------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|
|                                          | WS05           | WS06           | WS07           | WS08           | WS09           | WS10           |
|                                          | ES1            | ES1            | ES1            | ES1            | ES1            | ES1            |
|                                          | 0.20 - 0.20    | 0.40 - 0.40    | 0.30 - 0.30    | 0.30 - 0.30    | 0.30 - 0.30    | 0.30 - 0.30    |
|                                          | Soil/Solid (S) | Soil/Solid (S) | Soil/Solid (S) | Soil/Solid (S) | Soil/Solid (S) | Soil/Solid (S) |
| Acid herbicides*                         |                | 22-Mar-2019    |                |                |                |                |
| Alkalinity Filtered as CaCO <sub>3</sub> |                | 20-Mar-2019    |                |                |                |                |
| Ammoniacal Nitrogen                      |                | 19-Mar-2019    |                |                |                |                |
| Anions by Kone (soil)                    |                | 15-Mar-2019    | 15-Mar-2019    | 15-Mar-2019    | 18-Mar-2019    |                |
| Anions by Kone (w)                       |                | 16-Mar-2019    |                |                |                |                |
| Asbestos ID in Solid Samples             | 19-Mar-2019    | 19-Mar-2019    | 20-Mar-2019    | 19-Mar-2019    | 19-Mar-2019    | 19-Mar-2019    |
| Boron Water Soluble                      | 18-Mar-2019    | 18-Mar-2019    | 18-Mar-2019    | 18-Mar-2019    | 19-Mar-2019    | 18-Mar-2019    |
| CEN 10:1 Leachate (1 Stage)              |                | 14-Mar-2019    |                |                |                |                |
| CEN Readings                             |                | 15-Mar-2019    |                |                |                |                |
| Chromium III                             | 19-Mar-2019    | 19-Mar-2019    | 19-Mar-2019    | 19-Mar-2019    | 19-Mar-2019    | 19-Mar-2019    |
| Cyanide Comp/Free/Total/Thiocyanate      | 21-Mar-2019    | 20-Mar-2019    | 21-Mar-2019    | 21-Mar-2019    | 21-Mar-2019    | 21-Mar-2019    |
| Dissolved Metals by ICP-MS               |                | 19-Mar-2019    |                |                |                |                |
| EPH (DRO) (C10-C40) Aqueous (W)          |                | 20-Mar-2019    |                |                |                |                |
| EPH by FID                               | 18-Mar-2019    |                |                |                |                | 18-Mar-2019    |
| EPH CWG (Aliphatic) GC (S)               |                | 20-Mar-2019    | 19-Mar-2019    | 20-Mar-2019    | 19-Mar-2019    |                |
| EPH CWG (Aromatic) GC (S)                |                | 20-Mar-2019    | 19-Mar-2019    | 20-Mar-2019    | 19-Mar-2019    |                |
| GRO by GC-FID (S)                        | 15-Mar-2019    | 16-Mar-2019    | 16-Mar-2019    | 15-Mar-2019    | 15-Mar-2019    | 15-Mar-2019    |
| GRO by GC-FID (W)                        |                | 16-Mar-2019    |                |                |                |                |
| Hexavalent Chromium (s)                  | 19-Mar-2019    | 19-Mar-2019    | 19-Mar-2019    | 19-Mar-2019    | 19-Mar-2019    | 19-Mar-2019    |
| Mercury Dissolved                        |                | 18-Mar-2019    |                |                |                |                |
| Metals in solid samples by OES           | 18-Mar-2019    | 18-Mar-2019    | 18-Mar-2019    | 18-Mar-2019    | 15-Mar-2019    | 20-Mar-2019    |
| OC, OP Pesticides and Triazine Herb      |                | 20-Mar-2019    |                |                |                |                |
| PAH by GCMS                              | 20-Mar-2019    | 18-Mar-2019    | 18-Mar-2019    | 18-Mar-2019    | 18-Mar-2019    | 20-Mar-2019    |
| PAH in waters by GC-MS (diss.filt)       |                | 20-Mar-2019    |                |                |                |                |
| pH                                       | 14-Mar-2019    | 14-Mar-2019    | 14-Mar-2019    | 17-Mar-2019    | 17-Mar-2019    | 17-Mar-2019    |
| pH Value of Filtered Water               |                | 17-Mar-2019    |                |                |                |                |
| Phenols by HPLC (S)                      | 23-Mar-2019    | 20-Mar-2019    | 20-Mar-2019    | 21-Mar-2019    | 21-Mar-2019    | 21-Mar-2019    |
| Phenols by HPLC (W)                      |                | 20-Mar-2019    |                |                |                |                |
| Sample description                       | 13-Mar-2019    | 13-Mar-2019    | 13-Mar-2019    | 13-Mar-2019    | 13-Mar-2019    | 13-Mar-2019    |
| Total EPH (aq)                           |                | 20-Mar-2019    |                |                |                |                |
| Total Organic Carbon                     | 19-Mar-2019    | 19-Mar-2019    | 19-Mar-2019    | 15-Mar-2019    | 19-Mar-2019    | 19-Mar-2019    |
| TPH CWG GC (S)                           |                | 20-Mar-2019    | 19-Mar-2019    | 20-Mar-2019    | 19-Mar-2019    |                |
| VOC MS (S)                               | 20-Mar-2019    | 19-Mar-2019    | 20-Mar-2019    | 20-Mar-2019    | 20-Mar-2019    | 20-Mar-2019    |



## CERTIFICATE OF ANALYSIS

Validated

SDG: 190313-14  
Location: Land at Stakers FarmClient Reference: A112666  
Order Number: C19/247Report Number: 498064  
Superseded Report: 497902

## ASSOCIATED AQC DATA

Alkalinity Filtered as CaCO<sub>3</sub>

| Component                                      | Method Code | QC 1955                         |
|------------------------------------------------|-------------|---------------------------------|
| Total Alkalinity Filtered as CaCO <sub>3</sub> | TM043       | <b>110.0</b><br>100.35 : 114.15 |

## Ammoniacal Nitrogen

| Component                | Method Code | QC 1988                        | QC 1903                        |
|--------------------------|-------------|--------------------------------|--------------------------------|
| Ammoniacal Nitrogen as N | TM099       | <b>102.0</b><br>93.14 : 108.60 | <b>102.0</b><br>93.14 : 108.60 |

## Anions by Kone (soil)

| Component                                             | Method Code | QC 1953        | QC 1956        | QC 1957        |
|-------------------------------------------------------|-------------|----------------|----------------|----------------|
| Chloride (soluble)                                    | TM243       | 78.01 : 122.19 | 78.01 : 122.19 | 78.01 : 122.19 |
| Water Soluble Sulphate as SO <sub>4</sub> 2:1 Extract | TM243       | 75.60 : 131.10 | 75.60 : 131.10 | 75.60 : 131.10 |

## Anions by Kone (w)

| Component                             | Method Code | QC 1904                        |
|---------------------------------------|-------------|--------------------------------|
| Chloride                              | TM184       | <b>105.0</b><br>92.93 : 115.43 |
| Phosphate (Ortho as PO <sub>4</sub> ) | TM184       | 96.40 : 108.40                 |
| Sulphate (soluble)                    | TM184       | <b>100.0</b><br>90.53 : 113.03 |
| TON as NO <sub>3</sub>                | TM184       | 96.26 : 111.21                 |

## Boron Water Soluble

| Component           | Method Code | QC 1956                       | QC 1975                       | QC 1973                       |
|---------------------|-------------|-------------------------------|-------------------------------|-------------------------------|
| Water Soluble Boron | TM222       | <b>92.5</b><br>86.05 : 109.75 | <b>92.5</b><br>86.05 : 109.75 | <b>95.0</b><br>86.05 : 109.75 |

## Cyanide Comp/Free/Total/Thiocyanate



# CERTIFICATE OF ANALYSIS

Validated

SDG: 190313-14  
Location: Land at Stakers Farm

Client Reference: A112666  
Order Number: C19/247

Report Number: 498064  
Superseded Report: 497902

## Cyanide Comp/Free/Total/Thiocyanate

| Component     | Method Code | QC 1996                         | QC 1906                         | QC 1918                        |
|---------------|-------------|---------------------------------|---------------------------------|--------------------------------|
| Free Cyanide  | TM153       | <b>96.3</b><br>87.60 : 108.63   | <b>97.8</b><br>87.60 : 108.63   | <b>96.5</b><br>87.60 : 108.63  |
| Thiocyanate   | TM153       | <b>94.01</b><br>92.90 : 108.39  | <b>97.01</b><br>92.90 : 108.39  | <b>97.6</b><br>92.90 : 108.39  |
| Total Cyanide | TM153       | <b>102.14</b><br>87.00 : 103.00 | <b>105.71</b><br>87.00 : 103.00 | <b>105.0</b><br>87.00 : 103.00 |

## Dissolved Metals by ICP-MS

| Component  | Method Code | QC 1975                         | QC 1988                         |
|------------|-------------|---------------------------------|---------------------------------|
| Aluminium  | TM152       | <b>103.67</b><br>94.19 : 114.31 | <b>103.33</b><br>94.19 : 114.31 |
| Antimony   | TM152       | <b>108.17</b><br>79.80 : 122.00 | <b>107.67</b><br>79.80 : 122.00 |
| Arsenic    | TM152       | <b>104.0</b><br>90.42 : 111.32  | <b>104.0</b><br>90.42 : 111.32  |
| Barium     | TM152       | <b>107.5</b><br>90.79 : 113.16  | <b>107.33</b><br>90.79 : 113.16 |
| Beryllium  | TM152       | <b>98.17</b><br>93.25 : 120.04  | <b>99.33</b><br>93.25 : 120.04  |
| Bismuth    | TM152       | <b>104.33</b><br>94.65 : 117.05 | <b>105.33</b><br>94.65 : 117.05 |
| Borate     | TM152       | <b>103.7</b><br>88.00 : 112.00  | <b>103.09</b><br>88.00 : 112.00 |
| Boron      | TM152       | <b>104.0</b><br>86.68 : 117.67  | <b>103.33</b><br>86.68 : 117.67 |
| Cadmium    | TM152       | <b>106.0</b><br>94.60 : 112.40  | <b>105.17</b><br>94.60 : 112.40 |
| Calcium    | TM152       | <b>107.33</b><br>83.40 : 121.11 | <b>108.0</b><br>83.40 : 121.11  |
| Chromium   | TM152       | <b>101.5</b><br>93.28 : 110.91  | <b>101.67</b><br>93.28 : 110.91 |
| Cobalt     | TM152       | <b>102.0</b><br>84.39 : 114.26  | <b>102.17</b><br>84.39 : 114.26 |
| Copper     | TM152       | <b>103.33</b><br>88.86 : 118.72 | <b>102.83</b><br>88.86 : 118.72 |
| Iron       | TM152       | <b>103.33</b><br>92.00 : 113.00 | <b>102.67</b><br>92.00 : 113.00 |
| Lead       | TM152       | <b>103.83</b><br>89.25 : 115.12 | <b>104.67</b><br>89.25 : 115.12 |
| Lithium    | TM152       | <b>96.33</b><br>89.26 : 119.04  | <b>98.0</b><br>89.26 : 119.04   |
| Magnesium  | TM152       | <b>108.67</b><br>86.35 : 113.36 | <b>108.0</b><br>86.35 : 113.36  |
| Manganese  | TM152       | <b>102.5</b><br>94.24 : 112.74  | <b>102.83</b><br>94.24 : 112.74 |
| Molybdenum | TM152       | <b>100.5</b><br>87.00 : 108.89  | <b>101.0</b><br>87.00 : 108.89  |
| Nickel     | TM152       | <b>103.0</b><br>92.11 : 110.56  | <b>102.5</b><br>92.11 : 110.56  |
| Phosphorus | TM152       | <b>105.67</b><br>90.52 : 115.47 | <b>104.67</b><br>90.52 : 115.47 |
| Potassium  | TM152       | <b>107.33</b><br>98.63 : 110.48 | <b>107.33</b><br>98.63 : 110.48 |





# CERTIFICATE OF ANALYSIS

Validated

SDG: 190313-14  
Location: Land at Stakers Farm

Client Reference: A112666  
Order Number: C19/247

Report Number: 498064  
Superseded Report: 497902

## EPH CWG (Aromatic) GC (S)

| Component                  | Method Code | QC 1987                        | QC 1962                        | QC 1999                       | QC 1909                        | QC 1903                        | QC 1901                        |
|----------------------------|-------------|--------------------------------|--------------------------------|-------------------------------|--------------------------------|--------------------------------|--------------------------------|
| Total Aromatics >EC12-EC35 | TM173       | <b>93.33</b><br>65.78 : 102.90 | <b>85.33</b><br>65.82 : 105.00 | <b>90.0</b><br>67.75 : 104.04 | <b>89.33</b><br>65.82 : 105.00 | <b>94.67</b><br>65.78 : 102.90 | <b>77.33</b><br>68.16 : 102.29 |

## GRO by GC-FID (S)

| Component | Method Code | QC 1909                        | QC 1911                        |
|-----------|-------------|--------------------------------|--------------------------------|
| QC        | TM089       | <b>99.94</b><br>74.55 : 125.46 | <b>87.79</b><br>72.28 : 114.54 |

## GRO by GC-FID (W)

| Component          | Method Code | QC 1988                         |
|--------------------|-------------|---------------------------------|
| Benzene by GC      | TM245       | <b>92.5</b><br>84.10 : 116.73   |
| Ethylbenzene by GC | TM245       | <b>95.5</b><br>84.11 : 114.89   |
| m & p Xylene by GC | TM245       | <b>94.75</b><br>83.73 : 116.33  |
| MTBE GC-FID        | TM245       | <b>90.5</b><br>84.42 : 117.50   |
| o Xylene by GC     | TM245       | <b>97.0</b><br>84.33 : 114.72   |
| QC                 | TM245       | <b>102.95</b><br>60.71 : 137.65 |
| Toluene by GC      | TM245       | <b>94.0</b><br>84.73 : 116.85   |

## Hexavalent Chromium (s)

| Component           | Method Code | QC 1971                       | QC 1905                       | QC 1911                       |
|---------------------|-------------|-------------------------------|-------------------------------|-------------------------------|
| Hexavalent Chromium | TM151       | <b>98.0</b><br>90.20 : 107.00 | <b>98.0</b><br>90.20 : 107.00 | <b>98.0</b><br>90.20 : 107.00 |

## Mercury Dissolved

| Component                | Method Code | QC 1927                        |
|--------------------------|-------------|--------------------------------|
| Mercury Dissolved (CVAF) | TM183       | <b>114.0</b><br>76.80 : 117.12 |

## Metals in solid samples by OES





# CERTIFICATE OF ANALYSIS

Validated

SDG: 190313-14  
Location: Land at Stakers Farm

Client Reference: A112666  
Order Number: C19/247

Report Number: 498064  
Superseded Report: 497902

## Metals in solid samples by OES

| Component  | Method Code | QC 1929                         | QC 1954                         | QC 1984                         | QC 1919                         | QC 1970                         | QC 1995                         |
|------------|-------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|
| Aluminium  | TM181       | <b>100.88</b><br>77.84 : 119.01 | <b>114.16</b><br>77.84 : 119.01 | <b>108.85</b><br>77.84 : 119.01 | <b>97.35</b><br>77.84 : 119.01  | <b>92.92</b><br>77.84 : 119.01  | <b>99.12</b><br>77.84 : 119.01  |
| Antimony   | TM181       | <b>99.19</b><br>84.28 : 107.67  | <b>95.93</b><br>84.28 : 107.67  | <b>102.03</b><br>84.28 : 107.67 | <b>100.81</b><br>84.28 : 107.67 | <b>101.63</b><br>84.28 : 107.67 | <b>102.03</b><br>84.28 : 107.67 |
| Arsenic    | TM181       | <b>102.33</b><br>87.05 : 109.36 | <b>106.98</b><br>87.05 : 109.36 | <b>99.71</b><br>87.05 : 109.36  | <b>100.87</b><br>87.05 : 109.36 | <b>104.36</b><br>87.05 : 109.36 | <b>103.78</b><br>87.05 : 109.36 |
| Barium     | TM181       | <b>96.33</b><br>82.49 : 109.34  | <b>103.67</b><br>82.49 : 109.34 | <b>100.92</b><br>82.49 : 109.34 | <b>94.5</b><br>82.49 : 109.34   | <b>98.17</b><br>82.49 : 109.34  | <b>98.17</b><br>82.49 : 109.34  |
| Beryllium  | TM181       | <b>100.75</b><br>85.44 : 109.61 | <b>104.85</b><br>85.44 : 109.61 | <b>99.25</b><br>85.44 : 109.61  | <b>98.51</b><br>85.44 : 109.61  | <b>101.87</b><br>85.44 : 109.61 | <b>98.13</b><br>85.44 : 109.61  |
| Boron      | TM181       | <b>92.55</b><br>73.51 : 104.66  | <b>102.58</b><br>73.51 : 104.66 | <b>97.13</b><br>73.51 : 104.66  | <b>89.4</b><br>73.51 : 104.66   | <b>91.12</b><br>73.51 : 104.66  | <b>90.54</b><br>73.51 : 104.66  |
| Cadmium    | TM181       | <b>93.0</b><br>81.46 : 106.43   | <b>100.41</b><br>81.46 : 106.43 | <b>96.3</b><br>81.46 : 106.43   | <b>94.24</b><br>81.46 : 106.43  | <b>96.71</b><br>81.46 : 106.43  | <b>91.77</b><br>81.46 : 106.43  |
| Chromium   | TM181       | <b>96.75</b><br>79.78 : 102.80  | <b>101.01</b><br>79.78 : 102.80 | <b>97.77</b><br>79.78 : 102.80  | <b>95.13</b><br>79.78 : 102.80  | <b>95.13</b><br>79.78 : 102.80  | <b>95.74</b><br>79.78 : 102.80  |
| Cobalt     | TM181       | <b>93.08</b><br>80.74 : 99.26   | <b>96.54</b><br>80.74 : 99.26   | <b>90.57</b><br>80.74 : 99.26   | <b>91.19</b><br>80.74 : 99.26   | <b>93.4</b><br>80.74 : 99.26    | <b>93.08</b><br>80.74 : 99.26   |
| Copper     | TM181       | <b>96.83</b><br>82.40 : 105.45  | <b>100.18</b><br>82.40 : 105.45 | <b>96.65</b><br>82.40 : 105.45  | <b>95.07</b><br>82.40 : 105.45  | <b>95.95</b><br>82.40 : 105.45  | <b>95.95</b><br>82.40 : 105.45  |
| Iron       | TM181       | <b>100.0</b><br>82.95 : 110.58  | <b>107.94</b><br>82.95 : 110.58 | <b>102.38</b><br>82.95 : 110.58 | <b>97.62</b><br>82.95 : 110.58  | <b>94.44</b><br>82.95 : 110.58  | <b>98.41</b><br>82.95 : 110.58  |
| Lead       | TM181       | <b>93.92</b><br>78.24 : 104.05  | <b>97.07</b><br>78.24 : 104.05  | <b>91.22</b><br>78.24 : 104.05  | <b>95.95</b><br>78.24 : 104.05  | <b>94.14</b><br>78.24 : 104.05  | <b>107.21</b><br>78.24 : 104.05 |
| Manganese  | TM181       | <b>110.28</b><br>94.29 : 119.51 | <b>115.28</b><br>94.29 : 119.51 | <b>109.17</b><br>94.29 : 119.51 | <b>107.78</b><br>94.29 : 119.51 | <b>110.0</b><br>94.29 : 119.51  | <b>110.28</b><br>94.29 : 119.51 |
| Mercury    | TM181       | <b>98.55</b><br>83.74 : 105.34  | <b>102.42</b><br>83.74 : 105.34 | <b>96.38</b><br>83.74 : 105.34  | <b>97.83</b><br>83.74 : 105.34  | <b>100.48</b><br>83.74 : 105.34 | <b>100.24</b><br>83.74 : 105.34 |
| Molybdenum | TM181       | <b>99.18</b><br>87.11 : 106.87  | <b>102.06</b><br>87.11 : 106.87 | <b>99.59</b><br>87.11 : 106.87  | <b>99.18</b><br>87.11 : 106.87  | <b>99.18</b><br>87.11 : 106.87  | <b>98.35</b><br>87.11 : 106.87  |
| Nickel     | TM181       | <b>94.87</b><br>81.92 : 102.18  | <b>99.27</b><br>81.92 : 102.18  | <b>94.62</b><br>81.92 : 102.18  | <b>93.64</b><br>81.92 : 102.18  | <b>92.91</b><br>81.92 : 102.18  | <b>91.93</b><br>81.92 : 102.18  |
| Phosphorus | TM181       | <b>110.91</b><br>94.56 : 124.28 | <b>113.94</b><br>94.56 : 124.28 | <b>106.67</b><br>94.56 : 124.28 | <b>105.86</b><br>94.56 : 124.28 | <b>111.72</b><br>94.56 : 124.28 | <b>118.18</b><br>94.56 : 124.28 |
| Selenium   | TM181       | <b>102.75</b><br>86.28 : 110.48 | <b>106.67</b><br>86.28 : 110.48 | <b>101.96</b><br>86.28 : 110.48 | <b>101.96</b><br>86.28 : 110.48 | <b>100.0</b><br>86.28 : 110.48  | <b>98.43</b><br>86.28 : 110.48  |
| Strontium  | TM181       | <b>95.32</b><br>79.13 : 102.79  | <b>101.34</b><br>79.13 : 102.79 | <b>96.88</b><br>79.13 : 102.79  | <b>93.32</b><br>79.13 : 102.79  | <b>93.1</b><br>79.13 : 102.79   | <b>93.99</b><br>79.13 : 102.79  |
| Thallium   | TM181       | <b>65.04</b><br>82.94 : 111.86  | <b>69.47</b><br>82.94 : 111.86  | <b>65.49</b><br>82.94 : 111.86  | <b>101.33</b><br>82.94 : 111.86 | <b>100.0</b><br>82.94 : 111.86  | <b>100.44</b><br>82.94 : 111.86 |
| Tin        | TM181       | <b>102.66</b><br>90.25 : 108.86 | <b>105.32</b><br>90.25 : 108.86 | <b>100.76</b><br>90.25 : 108.86 | <b>101.52</b><br>90.25 : 108.86 | <b>100.0</b><br>90.25 : 108.86  | <b>98.86</b><br>90.25 : 108.86  |
| Titanium   | TM181       | <b>84.73</b><br>66.23 : 102.06  | <b>88.55</b><br>66.23 : 102.06  | <b>80.15</b><br>66.23 : 102.06  | <b>75.57</b><br>66.23 : 102.06  | <b>86.26</b><br>66.23 : 102.06  | <b>81.68</b><br>66.23 : 102.06  |
| Vanadium   | TM181       | <b>98.9</b><br>86.37 : 107.94   | <b>106.23</b><br>86.37 : 107.94 | <b>103.3</b><br>86.37 : 107.94  | <b>97.8</b><br>86.37 : 107.94   | <b>99.27</b><br>86.37 : 107.94  | <b>99.27</b><br>86.37 : 107.94  |
| Zinc       | TM181       | <b>101.23</b><br>84.68 : 113.99 | <b>106.16</b><br>84.68 : 113.99 | <b>103.29</b><br>84.68 : 113.99 | <b>101.64</b><br>84.68 : 113.99 | <b>100.21</b><br>84.68 : 113.99 | <b>100.0</b><br>84.68 : 113.99  |



# CERTIFICATE OF ANALYSIS

Validated

SDG: 190313-14  
Location: Land at Stakers Farm

Client Reference: A112666  
Order Number: C19/247

Report Number: 498064  
Superseded Report: 497902

## Metals in solid samples by OES

| Component  | Method Code | QC 1999                         |
|------------|-------------|---------------------------------|
| Aluminium  | TM181       | <b>107.08</b><br>77.84 : 119.01 |
| Antimony   | TM181       | <b>100.0</b><br>84.28 : 107.67  |
| Arsenic    | TM181       | <b>101.45</b><br>87.05 : 109.36 |
| Barium     | TM181       | <b>101.83</b><br>82.49 : 109.34 |
| Beryllium  | TM181       | <b>102.24</b><br>85.44 : 109.61 |
| Boron      | TM181       | <b>92.55</b><br>73.51 : 104.66  |
| Cadmium    | TM181       | <b>99.59</b><br>81.46 : 106.43  |
| Chromium   | TM181       | <b>96.35</b><br>79.78 : 102.80  |
| Cobalt     | TM181       | <b>91.19</b><br>80.74 : 99.26   |
| Copper     | TM181       | <b>101.76</b><br>82.40 : 105.45 |
| Iron       | TM181       | <b>98.41</b><br>82.95 : 110.58  |
| Lead       | TM181       | <b>90.32</b><br>78.24 : 104.05  |
| Manganese  | TM181       | <b>125.83</b><br>94.29 : 119.51 |
| Mercury    | TM181       | <b>96.62</b><br>83.74 : 105.34  |
| Molybdenum | TM181       | <b>97.12</b><br>87.11 : 106.87  |
| Nickel     | TM181       | <b>91.69</b><br>81.92 : 102.18  |
| Phosphorus | TM181       | <b>107.88</b><br>94.56 : 124.28 |
| Selenium   | TM181       | <b>98.04</b><br>86.28 : 110.48  |
| Strontium  | TM181       | <b>94.88</b><br>79.13 : 102.79  |
| Thallium   | TM181       | <b>64.6</b><br>82.94 : 111.86   |
| Tin        | TM181       | <b>98.86</b><br>90.25 : 108.86  |
| Titanium   | TM181       | <b>83.21</b><br>66.23 : 102.06  |
| Vanadium   | TM181       | <b>102.56</b><br>86.37 : 107.94 |
| Zinc       | TM181       | <b>97.95</b><br>84.68 : 113.99  |

## OC, OP Pesticides and Triazine Herb



# CERTIFICATE OF ANALYSIS

Validated

SDG: 190313-14  
Location: Land at Stakers Farm

Client Reference: A112666  
Order Number: C19/247

Report Number: 498064  
Superseded Report: 497902

## OC, OP Pesticides and Triazine Herb

| Component                 | Method Code | QC 1998                        |
|---------------------------|-------------|--------------------------------|
| Atrazine (Raw)            | TM073       | <b>84.49</b><br>78.55 : 119.92 |
| Azinphos methyl (Raw)     | TM073       | <b>72.44</b><br>58.68 : 154.71 |
| cis-Chlordane (Raw)       | TM073       | <b>82.19</b><br>71.90 : 129.99 |
| Diazinon (Raw)            | TM073       | <b>81.63</b><br>70.00 : 130.00 |
| Dichlorvos (Raw)          | TM073       | <b>89.89</b><br>70.00 : 130.00 |
| Dieldrin (Raw)            | TM073       | <b>83.41</b><br>70.00 : 130.00 |
| gamma-HCH (Lindane) (Raw) | TM073       | <b>80.82</b><br>71.48 : 129.99 |
| Heptachlor (Raw)          | TM073       | <b>83.08</b><br>66.39 : 134.63 |
| Hexachlorobenzene (Raw)   | TM073       | <b>86.55</b><br>47.15 : 124.32 |
| Malathion (Raw)           | TM073       | <b>81.85</b><br>70.00 : 130.00 |
| p,p-DDT (Raw)             | TM073       | <b>84.48</b><br>70.00 : 130.00 |
| Parathion (Raw)           | TM073       | <b>81.3</b><br>64.13 : 127.88  |

## PAH by GCMS

| Component             | Method Code | QC 1940                        | QC 1945                       |
|-----------------------|-------------|--------------------------------|-------------------------------|
| Acenaphthene          | TM218       | <b>90.0</b><br>80.97 : 105.99  | <b>84.0</b><br>80.97 : 105.99 |
| Acenaphthylene        | TM218       | <b>88.0</b><br>80.24 : 105.29  | <b>83.0</b><br>80.24 : 105.29 |
| Anthracene            | TM218       | <b>103.5</b><br>79.32 : 108.94 | <b>81.5</b><br>79.32 : 108.94 |
| Benz(a)anthracene     | TM218       | <b>110.5</b><br>79.72 : 116.84 | <b>86.0</b><br>79.72 : 116.84 |
| Benzo(a)pyrene        | TM218       | <b>100.5</b><br>79.52 : 108.45 | <b>90.0</b><br>79.52 : 108.45 |
| Benzo(b)fluoranthene  | TM218       | <b>100.0</b><br>77.35 : 112.97 | <b>87.0</b><br>77.35 : 112.97 |
| Benzo(ghi)perylene    | TM218       | <b>102.0</b><br>77.68 : 107.38 | <b>87.5</b><br>77.68 : 107.38 |
| Benzo(k)fluoranthene  | TM218       | <b>98.0</b><br>82.61 : 111.93  | <b>97.0</b><br>82.61 : 111.93 |
| Chrysene              | TM218       | <b>106.0</b><br>80.28 : 111.42 | <b>84.5</b><br>80.28 : 111.42 |
| Dibenzo(ah)anthracene | TM218       | <b>95.5</b><br>79.17 : 106.41  | <b>85.0</b><br>79.17 : 106.41 |
| Fluoranthene          | TM218       | <b>107.0</b><br>79.07 : 112.75 | <b>80.0</b><br>79.07 : 112.75 |
| Fluorene              | TM218       | <b>96.0</b><br>80.52 : 110.90  | <b>85.0</b><br>80.52 : 110.90 |
| Indeno(123cd)pyrene   | TM218       | <b>88.5</b><br>76.97 : 113.36  | <b>80.0</b><br>76.97 : 113.36 |



# CERTIFICATE OF ANALYSIS

Validated

SDG: 190313-14  
Location: Land at Stakers Farm

Client Reference: A112666  
Order Number: C19/247

Report Number: 498064  
Superseded Report: 497902

PAH by GCMS

|              |       | QC 1940                        | QC 1945                       |
|--------------|-------|--------------------------------|-------------------------------|
| Naphthalene  | TM218 | <b>89.5</b><br>79.37 : 105.57  | <b>89.5</b><br>79.37 : 105.57 |
| Phenanthrene | TM218 | <b>104.0</b><br>79.34 : 111.91 | <b>83.0</b><br>79.34 : 111.91 |
| Pyrene       | TM218 | <b>107.0</b><br>78.80 : 115.76 | <b>79.5</b><br>78.80 : 115.76 |

PAH in waters by GC-MS (diss filt)

| Component                          | Method Code | QC 1931                        |
|------------------------------------|-------------|--------------------------------|
| Acenaphthene (diss.filt)           | TM178       | <b>100.4</b><br>94.00 : 120.40 |
| Acenaphthylene (diss.filt)         | TM178       | <b>94.4</b><br>91.20 : 117.60  |
| Anthracene (diss.filt)             | TM178       | <b>99.6</b><br>91.20 : 112.80  |
| Benzo(a)anthracene (diss.filt)     | TM178       | <b>92.0</b><br>86.80 : 115.60  |
| Benzo(a)pyrene (diss.filt)         | TM178       | <b>96.0</b><br>90.40 : 116.80  |
| Benzo(b)fluoranthene (diss.filt)   | TM178       | <b>96.4</b><br>86.40 : 117.60  |
| Benzo(g,h,i)perylene (diss.filt)   | TM178       | <b>100.8</b><br>87.60 : 121.20 |
| Benzo(k)fluoranthene (diss.filt)   | TM178       | <b>104.0</b><br>91.20 : 124.80 |
| Chrysene (diss.filt)               | TM178       | <b>104.4</b><br>95.20 : 124.00 |
| Dibenzo(a,h)anthracene (diss.filt) | TM178       | <b>96.0</b><br>84.80 : 118.40  |
| Fluoranthene (diss.filt)           | TM178       | <b>105.2</b><br>91.20 : 120.00 |
| Fluorene (diss.filt)               | TM178       | <b>98.8</b><br>93.20 : 119.60  |
| Indeno(1,2,3-cd)pyrene (diss.filt) | TM178       | <b>100.4</b><br>86.80 : 115.60 |
| Naphthalene (diss.filt)            | TM178       | <b>104.8</b><br>90.40 : 126.40 |
| Phenanthrene (diss.filt)           | TM178       | <b>102.0</b><br>94.40 : 118.40 |
| Pyrene (diss.filt)                 | TM178       | <b>105.6</b><br>93.60 : 120.00 |

pH

| Component | Method Code | QC 1986                        | QC 1977                         |
|-----------|-------------|--------------------------------|---------------------------------|
| pH        | TM133       | <b>99.31</b><br>98.63 : 101.37 | <b>100.11</b><br>97.03 : 101.14 |

pH Value of Filtered Water



# CERTIFICATE OF ANALYSIS

Validated

SDG: 190313-14  
Location: Land at Stakers Farm

Client Reference: A112666  
Order Number: C19/247

Report Number: 498064  
Superseded Report: 497902

## pH Value of Filtered Water

| Component                  | Method Code | QC 1990                         |
|----------------------------|-------------|---------------------------------|
| pH Value of Filtered Water | TM256       | <b>101.08</b><br>99.73 : 102.16 |

## Phenols by HPLC (S)

| Component                          | Method Code | QC 1954                         | QC 1990                         | QC 1908                         | QC 1950                         |
|------------------------------------|-------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|
| 2,3,5 Trimethyl-Phenol by HPLC (S) | TM062 (S)   | <b>106.49</b><br>83.23 : 109.71 | <b>101.95</b><br>83.23 : 109.71 | <b>96.1</b><br>83.23 : 109.71   | <b>104.55</b><br>83.23 : 109.71 |
| 2-Isopropyl Phenol by HPLC (S)     | TM062 (S)   | <b>93.57</b><br>76.34 : 104.11  | <b>88.89</b><br>76.34 : 104.11  | <b>83.04</b><br>76.34 : 104.11  | <b>89.47</b><br>76.34 : 104.11  |
| Catechol by HPLC (S)               | TM062 (S)   | <b>80.0</b><br>22.43 : 157.02   | <b>69.52</b><br>22.43 : 157.02  | <b>60.95</b><br>22.43 : 157.02  | <b>78.1</b><br>22.43 : 157.02   |
| Cresols by HPLC (S)                | TM062 (S)   | <b>110.44</b><br>92.94 : 114.26 | <b>106.05</b><br>92.94 : 114.26 | <b>98.75</b><br>92.94 : 114.26  | <b>107.72</b><br>92.94 : 114.26 |
| Naphthol by HPLC (S)               | TM062 (S)   | <b>129.29</b><br>75.62 : 124.38 | <b>122.14</b><br>75.62 : 124.38 | <b>116.43</b><br>75.62 : 124.38 | <b>128.57</b><br>75.62 : 124.38 |
| Phenol by HPLC (S)                 | TM062 (S)   | <b>113.91</b><br>79.53 : 120.47 | <b>109.93</b><br>79.53 : 120.47 | <b>102.65</b><br>79.53 : 120.47 | <b>112.58</b><br>79.53 : 120.47 |
| Resorcinol HPLC (S)                | TM062 (S)   | <b>101.89</b><br>71.43 : 129.59 | <b>98.11</b><br>71.43 : 129.59  | <b>91.82</b><br>71.43 : 129.59  | <b>99.37</b><br>71.43 : 129.59  |
| Xylenols by HPLC (S)               | TM062 (S)   | <b>102.71</b><br>89.90 : 107.23 | <b>98.33</b><br>89.90 : 107.23  | <b>92.19</b><br>89.90 : 107.23  | <b>100.83</b><br>89.90 : 107.23 |

## Phenols by HPLC (W)

| Component                          | Method Code | QC 1908                         |
|------------------------------------|-------------|---------------------------------|
| 2,3,5 Trimethyl-Phenol by HPLC (W) | TM259       | <b>102.0</b><br>93.10 : 108.70  |
| 2-Isopropyl Phenol by HPLC (W)     | TM259       | <b>103.0</b><br>83.72 : 106.28  |
| Cresols by HPLC (W)                | TM259       | <b>114.67</b><br>90.02 : 130.15 |
| Naphthol by HPLC (W)               | TM259       | <b>113.0</b><br>101.61 : 116.04 |
| Phenol by HPLC (W)                 | TM259       | <b>111.0</b><br>95.00 : 119.00  |
| Xylenols by HPLC (W)               | TM259       | <b>103.17</b><br>98.67 : 108.67 |

## Total Organic Carbon

| Component            | Method Code | QC 1917                        | QC 1939                        | QC 1979                        | QC 1959                        | QC 1998                       |
|----------------------|-------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|-------------------------------|
| Total Organic Carbon | TM132       | <b>94.53</b><br>88.47 : 112.82 | <b>87.89</b><br>88.47 : 112.82 | <b>96.09</b><br>88.47 : 112.82 | <b>90.63</b><br>88.47 : 112.82 | <b>87.5</b><br>69.88 : 102.67 |

## VOC MS (S)



# CERTIFICATE OF ANALYSIS

Validated

SDG: 190313-14  
Location: Land at Stakers Farm

Client Reference: A112666  
Order Number: C19/247

Report Number: 498064  
Superseded Report: 497902

VOC MS (S)

| Component                 | Method Code | QC 1964                        | QC 1992                        | QC 1935                        |
|---------------------------|-------------|--------------------------------|--------------------------------|--------------------------------|
| 1,1,1,2-tetrachloroethane | TM116       | <b>103.0</b><br>79.10 : 119.66 | <b>102.6</b><br>77.56 : 115.55 | <b>101.6</b><br>77.56 : 115.55 |
| 1,1,1-Trichloroethane     | TM116       | <b>103.6</b><br>87.51 : 115.37 | <b>106.2</b><br>73.73 : 118.05 | <b>110.4</b><br>73.73 : 118.05 |
| 1,1,2-Trichloroethane     | TM116       | <b>87.8</b><br>75.16 : 112.70  | <b>100.8</b><br>77.12 : 116.04 | <b>100.0</b><br>77.12 : 116.04 |
| 1,1-Dichloroethane        | TM116       | <b>108.0</b><br>89.44 : 121.71 | <b>114.0</b><br>74.46 : 129.15 | <b>113.8</b><br>74.46 : 129.15 |
| 1,2-Dichloroethane        | TM116       | <b>111.4</b><br>86.58 : 129.62 | <b>123.2</b><br>87.98 : 127.86 | <b>120.6</b><br>87.98 : 127.86 |
| 1,4-Dichlorobenzene       | TM116       | <b>110.6</b><br>71.61 : 124.63 | <b>101.8</b><br>72.76 : 126.34 | <b>95.8</b><br>72.76 : 126.34  |
| 2-Chlorotoluene           | TM116       | <b>95.6</b><br>66.81 : 118.43  | <b>96.6</b><br>72.40 : 116.20  | <b>94.2</b><br>72.40 : 116.20  |
| 4-Chlorotoluene           | TM116       | <b>93.6</b><br>65.88 : 114.76  | <b>95.4</b><br>66.90 : 112.46  | <b>92.2</b><br>66.90 : 112.46  |
| Benzene                   | TM116       | <b>100.6</b><br>88.66 : 121.07 | <b>108.0</b><br>91.01 : 117.67 | <b>109.0</b><br>91.01 : 117.67 |
| Carbon Disulphide         | TM116       | <b>102.2</b><br>75.11 : 124.81 | <b>109.0</b><br>74.91 : 122.14 | <b>107.4</b><br>74.91 : 122.14 |
| Carbontetrachloride       | TM116       | <b>108.2</b><br>82.35 : 126.46 | <b>107.4</b><br>80.31 : 124.50 | <b>108.0</b><br>80.31 : 124.50 |
| Chlorobenzene             | TM116       | <b>101.6</b><br>82.88 : 122.42 | <b>101.0</b><br>75.00 : 115.53 | <b>98.6</b><br>75.00 : 115.53  |
| Chloroform                | TM116       | <b>113.0</b><br>93.02 : 122.86 | <b>115.4</b><br>87.40 : 122.49 | <b>113.6</b><br>87.40 : 122.49 |
| Chloromethane             | TM116       | <b>104.4</b><br>52.88 : 131.36 | <b>128.8</b><br>65.05 : 142.63 | <b>128.0</b><br>65.05 : 142.63 |
| Cis-1,2-Dichloroethene    | TM116       | <b>106.4</b><br>78.27 : 128.90 | <b>115.6</b><br>80.67 : 126.72 | <b>113.6</b><br>80.67 : 126.72 |
| Dibromomethane            | TM116       | <b>88.4</b><br>71.69 : 119.43  | <b>96.6</b><br>67.80 : 121.75  | <b>95.6</b><br>67.80 : 121.75  |
| Dichloromethane           | TM116       | <b>115.2</b><br>89.49 : 128.89 | <b>123.8</b><br>81.11 : 133.25 | <b>123.2</b><br>81.11 : 133.25 |
| Ethylbenzene              | TM116       | <b>97.2</b><br>75.93 : 116.76  | <b>92.4</b><br>75.92 : 110.41  | <b>95.2</b><br>75.92 : 110.41  |
| Hexachlorobutadiene       | TM116       | <b>72.8</b><br>7.32 : 139.00   | <b>67.2</b><br>12.82 : 152.73  | <b>68.6</b><br>12.82 : 152.73  |
| Isopropylbenzene          | TM116       | <b>97.0</b><br>52.15 : 132.52  | <b>88.6</b><br>54.21 : 117.17  | <b>97.6</b><br>54.21 : 117.17  |
| Naphthalene               | TM116       | <b>110.0</b><br>80.29 : 135.77 | <b>109.2</b><br>80.86 : 128.81 | <b>102.8</b><br>80.86 : 128.81 |
| o-Xylene                  | TM116       | <b>89.6</b><br>68.16 : 107.61  | <b>88.4</b><br>82.80 : 107.93  | <b>92.6</b><br>82.80 : 107.93  |
| p/m-Xylene                | TM116       | <b>92.2</b><br>73.52 : 108.71  | <b>87.0</b><br>68.32 : 108.91  | <b>90.7</b><br>68.32 : 108.91  |
| Sec-Butylbenzene          | TM116       | <b>93.0</b><br>44.71 : 117.87  | <b>74.8</b><br>44.91 : 118.40  | <b>83.8</b><br>44.91 : 118.40  |
| Tetrachloroethene         | TM116       | <b>111.2</b><br>81.43 : 126.65 | <b>95.4</b><br>76.95 : 121.02  | <b>97.0</b><br>76.95 : 121.02  |
| Toluene                   | TM116       | <b>85.8</b><br>85.50 : 114.89  | <b>97.2</b><br>74.24 : 107.42  | <b>98.0</b><br>74.24 : 107.42  |
| Trichloroethene           | TM116       | <b>104.2</b><br>79.80 : 112.33 | <b>105.4</b><br>77.61 : 111.54 | <b>105.6</b><br>77.61 : 111.54 |



# CERTIFICATE OF ANALYSIS

Validated

SDG: 190313-14  
Location: Land at Stakers Farm

Client Reference: A112666  
Order Number: C19/247

Report Number: 498064  
Superseded Report: 497902

VOC MS (S)

|                        |       | QC 1964                        | QC 1992                        | QC 1935                        |
|------------------------|-------|--------------------------------|--------------------------------|--------------------------------|
| Trichlorofluoromethane | TM116 | <b>104.6</b><br>88.86 : 128.82 | <b>110.2</b><br>71.31 : 128.41 | <b>110.6</b><br>71.31 : 128.41 |
| Vinyl Chloride         | TM116 | <b>92.0</b><br>64.90 : 133.10  | <b>104.2</b><br>68.26 : 133.45 | <b>106.4</b><br>68.26 : 133.45 |

The above information details the reference name of the analytical quality control sample (AQC) that has been run with the samples contained in this report for the different methods of analysis .

The figure detailed is the percentage recovery result for the AQC .

The subscript numbers below are the percentage recovery lower control limit (LCL) and the upper control limit (UCL). The percentage recovery result for the AQC should be between these limits to be statistically in control .



## CERTIFICATE OF ANALYSIS

|              |                                                                                           |                       |                                                             |
|--------------|-------------------------------------------------------------------------------------------|-----------------------|-------------------------------------------------------------|
| Work Order   | PR1923814                                                                                 | Issue Date            | 22-Mar-2019                                                 |
| Customer     | ALS Life Sciences Ltd                                                                     | Laboratory            | ALS Czech Republic, s.r.o.                                  |
| Contact      | Reporting                                                                                 | Contact               | Client Service                                              |
| Address      | Unit 7-8 Hawarden Business Park<br>Manor Road, Hawarden<br>CH5 3US Deeside United Kingdom | Address               | Na Harfe 336/9 Prague 9 - Vysocany<br>190 00 Czech Republic |
| E-mail       |                                                                                           | E-mail                |                                                             |
| Telephone    |                                                                                           | Telephone             |                                                             |
| Project      | 190313-14                                                                                 | Page                  | 1 of 2                                                      |
| Order number | ---                                                                                       | Date Samples Received | 14-Mar-2019                                                 |
|              |                                                                                           | Quote number          | PR2018ALSAL-GB0004<br>(CZ-256-18-0022)                      |
| Site         | ---                                                                                       | Date of test          | 18-Mar-2019 - 22-Mar-2019                                   |
| Sampled by   | client                                                                                    | QC Level              | ALS CR Standard Quality Control<br>Schedule                 |

### General Comments

This report shall not be reproduced except in full, without prior written approval from the laboratory.  
The laboratory declares that the test results relate only to the listed samples.

### Responsible for accuracy

#### Signatories

Zdeněk Jiráček



#### Position

Environmental Business Unit  
Manager

Testing Laboratory No. 1163  
Accredited by CAI according to  
CSN EN ISO/IEC 17025:2005







## Analytical Results

Sub-Matrix: SOIL

Client sample ID

Laboratory sample ID

Client sampling date / time

|                            |            |        |          | 19536004<br>TP07  |       | 19535987<br>WS02  |       | 19535864<br>WS06  |       |
|----------------------------|------------|--------|----------|-------------------|-------|-------------------|-------|-------------------|-------|
|                            |            |        |          | PR1923814-001     |       | PR1923814-002     |       | PR1923814-003     |       |
|                            |            |        |          | 07-Mar-2019 00:00 |       | 08-Mar-2019 00:00 |       | 07-Mar-2019 00:00 |       |
| Parameter                  | Method     | LOR    | Unit     | Result            | MU    | Result            | MU    | Result            | MU    |
| <b>Physical Parameters</b> |            |        |          |                   |       |                   |       |                   |       |
| Dry matter @ 105°C         | S-DRY-GRCI | 0.10   | %        | 81.3              | ±5.0% | 77.6              | ±5.0% | 83.1              | ±5.0% |
| <b>Pesticides</b>          |            |        |          |                   |       |                   |       |                   |       |
| 2,4,5-T                    | S-PESLMSA1 | 0.0100 | mg/kg DW | <0.0100           | ---   | <0.0100           | ---   | <0.0100           | ---   |
| 2,4,5-TP                   | S-PESLMSA1 | 0.0100 | mg/kg DW | <0.0100           | ---   | <0.0100           | ---   | <0.0100           | ---   |
| 2,4-D                      | S-PESLMSA1 | 0.0100 | mg/kg DW | <0.0100           | ---   | <0.0100           | ---   | <0.0100           | ---   |
| 2,4-DB                     | S-PESLMSA1 | 0.0100 | mg/kg DW | <0.0100           | ---   | <0.0100           | ---   | <0.0100           | ---   |
| 2,4-DP (isomers)           | S-PESLMSA1 | 0.0100 | mg/kg DW | <0.0100           | ---   | <0.0100           | ---   | <0.0100           | ---   |
| 4-CPA                      | S-PESLMSA1 | 0.0100 | mg/kg DW | <0.0100           | ---   | <0.0100           | ---   | <0.0100           | ---   |
| Bentazone                  | S-PESLMSA1 | 0.0100 | mg/kg DW | <0.0100           | ---   | <0.0100           | ---   | <0.0100           | ---   |
| Dinoseb                    | S-PESLMSA1 | 0.0100 | mg/kg DW | <0.0100           | ---   | <0.0100           | ---   | <0.0100           | ---   |
| Fluroxypyr                 | S-PESLMSA1 | 0.0100 | mg/kg DW | <0.0100           | ---   | <0.0100           | ---   | <0.0100           | ---   |
| MCPA                       | S-PESLMSA1 | 0.0100 | mg/kg DW | <0.0100           | ---   | <0.0100           | ---   | <0.0100           | ---   |
| MCPB                       | S-PESLMSA1 | 0.0100 | mg/kg DW | <0.0100           | ---   | <0.0100           | ---   | <0.0100           | ---   |
| MCPB (isomers)             | S-PESLMSA1 | 0.0100 | mg/kg DW | <0.0100           | ---   | <0.0100           | ---   | <0.0100           | ---   |
| Acifluorfen                | S-PESLMSA1 | 0.0100 | mg/kg DW | <0.0100           | ---   | <0.0100           | ---   | <0.0100           | ---   |
| Bromoxynil                 | S-PESLMSA1 | 0.0100 | mg/kg DW | <0.0100           | ---   | <0.0100           | ---   | <0.0100           | ---   |
| DNOC                       | S-PESLMSA1 | 0.0100 | mg/kg DW | <0.0100           | ---   | <0.0100           | ---   | <0.0100           | ---   |
| Dicamba                    | S-PESLMSA1 | 0.0100 | mg/kg DW | <0.0100           | ---   | <0.0100           | ---   | <0.0100           | ---   |
| Diclofop                   | S-PESLMSA1 | 0.0100 | mg/kg DW | <0.0100           | ---   | <0.0100           | ---   | <0.0100           | ---   |
| Ioxynil                    | S-PESLMSA1 | 0.0100 | mg/kg DW | <0.0100           | ---   | <0.0100           | ---   | <0.0100           | ---   |
| Propoxycarbazone-sodium    | S-PESLMSA1 | 0.0100 | mg/kg DW | <0.0100           | ---   | <0.0100           | ---   | <0.0100           | ---   |
| Triclopyr                  | S-PESLMSA1 | 0.0100 | mg/kg DW | <0.0100           | ---   | <0.0100           | ---   | <0.0100           | ---   |
| Triclosan                  | S-PESLMSA1 | 0.0100 | mg/kg DW | <0.0100           | ---   | <0.0100           | ---   | <0.0100           | ---   |

If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, delivery date in brackets without a time component will be displayed instead. Measurement uncertainty is expressed as expanded measurement uncertainty with coverage factor k = 2, representing 95% confidence level.

Key: LOR = Limit of reporting; MU = Measurement Uncertainty

### The end of result part of the certificate of analysis

#### Brief Method Summaries

| Analytical Methods                                                                       | Method Descriptions                                                                                                                                                                                                                                    |
|------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Location of test performance: Na Harfe 338/9 Prague 9 - Vysocany, Czech Republic 190 00. |                                                                                                                                                                                                                                                        |
| S-DRY-GRCI                                                                               | CZ_SOP_D06_01_045 (CSN ISO 11465, CSN EN 12880, CSN EN 14346), CZ_SOP_D06_07_048 (CSN ISO 11465, CSN EN 12880, CSN EN 14346, CSN 46 5735) Determination of dry matter by gravimetry and determination of moisture by calculation from measured values. |
| S-PESLMSA1                                                                               | CZ_SOP_D06_03_182.B (CSN EN 15637, US EPA 1694) Determination of acidic herbicides and drug residues by liquid chromatography method with MS/MS detection.                                                                                             |

A \*\* symbol preceding any method indicates laboratory or subcontractor non-accredited test. In the case when a procedure belonging to an accredited method was used for non-accredited matrix, would apply that the reported results are non-accredited. Please refer to General Comment section on front page for information. If the report contains subcontracted analysis, those are made in a subcontracted laboratory outside the laboratories ALS Czech Republic, s.r.o.

The calculation methods of summation parameters are available on request in the client service.



# CERTIFICATE OF ANALYSIS

|           |                      |                   |         |                    |        |
|-----------|----------------------|-------------------|---------|--------------------|--------|
| SDG:      | 190313-14            | Client Reference: | A112666 | Report Number:     | 498064 |
| Location: | Land at Stakers Farm | Order Number:     | C19/247 | Superseded Report: | 497902 |

## Appendix

1. Results are expressed on a dry weight basis (dried at 35°C) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH<sub>4</sub> by the BRE method, VOC TICs and SVOC TICs.

2. Samples will be run in duplicate upon request, but an additional charge may be incurred.

3. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for all sample types unless the sample is destroyed on testing. The prepared soil sub sample that is analysed for asbestos will be retained for a period of 6 months after the analysis date. All bulk samples will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALS reserve the right to charge for samples received and stored but not analysed.

4. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.

5. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.

6. When requested, the individual sub sample scheduled will be analysed in house for the presence of asbestos fibres and asbestos containing material by our documented in house method TM048 based on HSG 248 (2005), which is accredited to ISO17025. If a specific asbestos fibre type is not found this will be reported as "Not detected". If no asbestos fibre types are found all will be reported as "Not detected" and the sub sample analysed deemed to be clear of asbestos. If an asbestos fibre type is found it will be reported as detected (for each fibre type found). Testing can be carried out on asbestos positive samples, but, due to Health and Safety considerations, may be replaced by alternative tests or reported as No Determination Possible (NDP). The quantity of asbestos present is not determined unless specifically requested.

7. If no separate volatile sample is supplied by the client, or if a headspace or sediment is present in the volatile sample, the integrity of the data may be compromised. This will be flagged up as an invalid VOC on the test schedule and the result marked as deviating on the test certificate.

8. If appropriate preserved bottles are not received preservation will take place on receipt. However, the integrity of the data may be compromised.

9. NDP - No determination possible due to insufficient/unsuitable sample.

10. Metals in water are performed on a filtered sample, and therefore represent dissolved metals - total metals must be requested separately.

11. Results relate only to the items tested.

12. LoDs (Limit of Detection) for wet tests reported on a dry weight basis are not corrected for moisture content.

13. **Surrogate recoveries** - Surrogates are added to your sample to monitor recovery of the test requested. A % recovery is reported, results are not corrected for the recovery measured. Typical recoveries for organics tests are 70-130%. Recoveries in soils are affected by organic rich or clay rich matrices. Waters can be affected by remediation fluids or high amounts of sediment. Test results are only ever reported if all of the associated quality checks pass; it is assumed that all recoveries outside of the values above are due to matrix affect.

14. **Product analyses** - Organic analyses on products can only be semi-quantitative due to the matrix effects and high dilution factors employed.

15. Phenols monohydric by HPLC include phenol, cresols (2-Methylphenol, 3-Methylphenol and 4-Methylphenol) and Xylenols (2,3 Dimethylphenol, 2,4 Dimethylphenol, 2,5 Dimethylphenol, 2,6 Dimethylphenol, 3,4 Dimethylphenol, 3,5 Dimethylphenol).

16. Total of 5 speciated phenols by HPLC includes Phenol, 2,3,5-Trimethyl Phenol, 2-Isopropylphenol, Cresols and Xylenols (as detailed in 15).

17. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

18. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.

19. Mercury results quoted on soils will not include volatile mercury as the analysis is performed on a dried and crushed sample.

20. For leachate preparations other than Zero Headspace Extraction (ZHE) volatile loss may occur.

## General

21. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.

22. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

23. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C5-C12 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

24. **Tentatively Identified Compounds (TICs)** are non-target peaks in VOC and SVOC analysis. All non-target peaks detected with a concentration above the LoD are subjected to a mass spectral library search. Non-target peaks with a library search confidence of >75% are reported based on the best mass spectral library match. When a non-target peak with a library search confidence of <75% is detected it is reported as "mixed hydrocarbons". Non-target compounds identified from the scan data are semi-quantified relative to one of the deuterated internal standards, under the same chromatographic conditions as the target compounds. This result is reported as a semi-quantitative value and reported as Tentatively Identified Compounds (TICs). TICs are outside the scope of UKAS accreditation and are not moisture corrected.

## Sample Deviations

If a sample is classed as deviated then the associated results may be compromised.

|   |                                                                             |
|---|-----------------------------------------------------------------------------|
| 1 | Container with Headspace provided for volatiles analysis                    |
| 2 | Incorrect container received                                                |
| 3 | Deviation from method                                                       |
| 5 | Sampled on date not provided                                                |
| 6 | Sample holding time exceeded in laboratory                                  |
| 7 | Sample holding time exceeded due to late arrival of instructions or samples |

## Asbestos

### Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials are obtained from supplied bulk materials which have been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

The results for identification of asbestos in soils are obtained from a homogenised sub sample which has been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

| Asbestos Type         | Common Name    |
|-----------------------|----------------|
| Chrysotile            | White Asbestos |
| Amosite               | Brown Asbestos |
| Crocidolite           | Blue Asbestos  |
| Fibrous Actinolite    | -              |
| Fibrous Anthophyllite | -              |
| Fibrous Tremolite     | -              |

### Visual Estimation Of Fibre Content

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: - Trace - Where only one or two asbestos fibres were identified.

**Further guidance on typical asbestos fibre content of manufactured products can be found in HSG 264.**

**The identification of asbestos containing materials and soils falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.**

**Land at Stakers Farm, Yapton**  
**Ground Investigation – Interpretative Report**



**Appendix G – Groundwater and Gas Monitoring Results**

# WYG GEO-ENVIRONMENT

The Pavilion, 1st Floor, Botleigh Grange Office Campus, Hedge End, Southampton,  
SO30 2AF



## GROUND GAS MONITORING RECORD SHEET

| <b>Client:</b> Dandara                            |                   |                 |                                                    | <b>Job No:</b> A112666           |                 |                |                               |                 |       |                             |                                           | <b>Instruments Used:</b> Gas analyser, Dip meter |                                   |                           |                          |                          |         |
|---------------------------------------------------|-------------------|-----------------|----------------------------------------------------|----------------------------------|-----------------|----------------|-------------------------------|-----------------|-------|-----------------------------|-------------------------------------------|--------------------------------------------------|-----------------------------------|---------------------------|--------------------------|--------------------------|---------|
| <b>Project Name:</b> Land at Stakers Farm, YAPTON |                   |                 |                                                    | <b>Date:</b> 20/03/2019          |                 |                |                               |                 |       |                             |                                           | <b>Make / Model :</b> GA5000, BGS DipTape        |                                   |                           |                          |                          |         |
| <b>Weather:</b> 12 Degrees, cloudy                |                   |                 |                                                    | <b>Monitored By:</b> E. Holcroft |                 |                |                               |                 |       |                             |                                           | <b>Serial Number:</b>                            |                                   |                           |                          |                          |         |
| Exploratory<br>Hole No.                           | Peak <sup>1</sup> |                 | Time to reach<br>steady<br>concentration<br>(secs) | Steady <sup>2</sup>              |                 |                |                               |                 |       | Flow Rate<br>Peak<br>(L/hr) | Time to<br>reach<br>steady flow<br>(secs) | Flow Rate<br>Steady<br>(L/hr)                    | Atmospheric<br>Pressure<br>(mbar) | Water<br>Depth<br>(m bgl) | Base<br>Depth<br>(m bgl) | Water<br>Level<br>(mAOD) | Remarks |
|                                                   | CH <sub>4</sub>   | CO <sub>2</sub> |                                                    | CH <sub>4</sub>                  | CO <sub>2</sub> | O <sub>2</sub> | H <sub>2</sub> S <sup>3</sup> | CO <sup>3</sup> | VOC   |                             |                                           |                                                  |                                   |                           |                          |                          |         |
|                                                   | (% vol)           | (% vol)         |                                                    | (% vol)                          | (% vol)         | (% vol)        | (ppm)                         | (ppm)           | (ppm) |                             |                                           |                                                  |                                   |                           |                          |                          |         |
| WS01                                              | 0.2               | 3.3             | 45.0                                               | 0.2                              | 3.3             | 16.2           | 0.0                           | 0.0             | NT    | 0.0                         |                                           | 0                                                | 1036.00                           | DRY                       | 2.95                     | <b>DRY</b>               |         |
| WS04                                              | 0.2               | 1.2             | 50.0                                               | 0.2                              | 1.2             | 18.3           | 0.0                           | 0.0             | NT    | 0.0                         |                                           | 0                                                | 1036.00                           | DRY                       | 5.97                     | <b>DRY</b>               |         |
| WS05                                              | 0.2               | 0.7             | 55.0                                               | 0.2                              | 0.7             | 20.1           | 0.0                           | 3.0             | NT    | 0.0                         |                                           | 0                                                | 1035.00                           | 3.89                      | 5.71                     | <b>2.46</b>              |         |
| WS06                                              | 0.2               | 0.9             | 55.0                                               | 0.2                              | 0.9             | 19.4           | 0.0                           | 1.0             | NT    | 0.0                         |                                           | 0                                                | 1035.00                           | 2.55                      | 2.97                     | <b>2.66</b>              |         |
| WS09                                              | 0.3               | 1.1             | 30.0                                               | 0.3                              | 1.1             | 17.2           | 0.0                           | 0.0             | NT    | 0.0                         |                                           | 0                                                | 1035.00                           | 3.79                      | 5.05                     | <b>2.75</b>              |         |
| WS10                                              | 0.2               | 0.7             | 30.0                                               | 0.2                              | 0.7             | 18.5           | 0.0                           | 0.0             | NT    | 0.0                         |                                           | 0                                                | 1035.00                           | DRY                       | 2.90                     | <b>DRY</b>               |         |

### Background Atmospheric pressure:

|                                 | Day<br>-3                  | Day<br>-2           | Day<br>-1           | Day<br>0            | Falling, Steady or<br>Rising |
|---------------------------------|----------------------------|---------------------|---------------------|---------------------|------------------------------|
| Weather Conditions              | cloudy sunny spells shower | Cloudy sunny spells | Cloudy sunny spells | Cloudy sunny spells |                              |
| Atmospheric Pressure (millibar) | 1006.0                     | 1020.0              | 1027.0              | 1034.0              |                              |

Atmospheric pressure obtained from:

[http://www.metoffice.gov.uk/weather/uk/uk\\_latest\\_pressure.html](http://www.metoffice.gov.uk/weather/uk/uk_latest_pressure.html)

### Ambient Gas Levels:

|                   | CH <sub>4</sub><br>(%) | CO <sub>2</sub><br>(%) | O <sub>2</sub><br>(%) | H <sub>2</sub> S<br>(%) | CO<br>(%) | VOC<br>ppm | Atmos<br>(mbar) |
|-------------------|------------------------|------------------------|-----------------------|-------------------------|-----------|------------|-----------------|
| Before Monitoring | 0.2                    | 0.1                    | 21.2                  | 0.0                     | 0.0       | NT         | 1034            |
| After Monitoring  | 0.2                    | 0.1                    | 21.8                  | 0.0                     | 0.0       | NT         | 1036            |

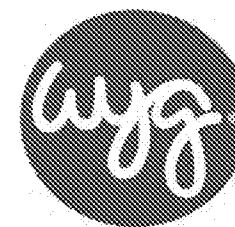
1 The peak reading is the maximum recorded level during a monitoring event.

2 The steady reading is the level which remained constant after approximately 1 minute.

3 Recorded values are calculated from the Ambient Gas readings (live zero)

# WYG GEO-ENVIRONMENT

The Pavilion, 1st Floor, Botleigh Grange Office Campus, Hedge End, Southampton,  
SO30 2AF



## GROUND GAS MONITORING RECORD SHEET

|                                            |                   |                 |                                                    |                           |                 |                |                               |                 |       |                             |                                        |                                           |                                   |                           |                          |                          |                  |
|--------------------------------------------|-------------------|-----------------|----------------------------------------------------|---------------------------|-----------------|----------------|-------------------------------|-----------------|-------|-----------------------------|----------------------------------------|-------------------------------------------|-----------------------------------|---------------------------|--------------------------|--------------------------|------------------|
| Client: Dandara                            |                   |                 |                                                    | Job No: A112666           |                 |                |                               |                 |       |                             |                                        | Instruments Used: Gas analyser, Dip meter |                                   |                           |                          |                          |                  |
| Project Name: Land at Stakers Farm, YAPTON |                   |                 |                                                    | Date: 12/04/2019          |                 |                |                               |                 |       |                             |                                        | Make / Model : GA5000, BGS DipTape        |                                   |                           |                          |                          |                  |
| Weather: 8 - 9°C, sunny, slight wind       |                   |                 |                                                    | Monitored By: E. Holcroft |                 |                |                               |                 |       |                             |                                        | Serial Number:                            |                                   |                           |                          |                          |                  |
| Exploratory<br>Hole No.                    | Peak <sup>1</sup> |                 | Time to reach<br>steady<br>concentration<br>(secs) | Steady <sup>2</sup>       |                 |                |                               |                 |       | Flow Rate<br>Peak<br>(L/hr) | Time to reach<br>steady flow<br>(secs) | Flow Rate<br>Steady<br>(L/hr)             | Atmospheric<br>Pressure<br>(mbar) | Water<br>Depth<br>(m bgl) | Base<br>Depth<br>(m bgl) | Water<br>Level<br>(mAOD) | Remarks          |
|                                            | CH <sub>4</sub>   | CO <sub>2</sub> |                                                    | CH <sub>4</sub>           | CO <sub>2</sub> | O <sub>2</sub> | H <sub>2</sub> S <sup>3</sup> | CO <sup>3</sup> | VOC   |                             |                                        |                                           |                                   |                           |                          |                          |                  |
|                                            | (% vol)           | (% vol)         |                                                    | (% vol)                   | (% vol)         | (% vol)        | (ppm)                         | (ppm)           | (ppm) |                             |                                        |                                           |                                   |                           |                          |                          |                  |
| WS01                                       | 0.1               | 3.7             | 35.0                                               | 0.1                       | 3.7             | 15.6           | 0.0                           | 0.0             | NT    | 0.0                         | 35.0                                   | 0                                         | 1030.00                           | Dry                       | 3.06                     | DRY                      |                  |
| WS04                                       | 0.1               | 2.3             | 45.0                                               | 0.1                       | 2.3             | 18.4           | 0.0                           | 0.0             | NT    | -0.2                        | 45.0                                   | -0.1                                      | 1029.00                           | Dry                       | 3.07                     | DRY                      |                  |
| WS05                                       | 0.1               | 1.9             | 35.0                                               | 0.1                       | 1.9             | 16.2           | 0.0                           | 1.0             | NT    | 0.1                         | 35.0                                   | 0.1                                       | 1029.00                           | 4.25                      | 5.82                     | 2.10                     |                  |
| WS06                                       | 0.2               | 2.4             | 35.0                                               | 0.2                       | 2.4             | 17.9           | 0.0                           | 2.0             | NT    | 0.0                         | 35.0                                   | 0                                         | 1030.00                           | Dry                       | 2.85                     | Dry                      |                  |
| WS09                                       | 0.2               | 2.8             | 45.0                                               | 0.2                       | 2.8             | 16.0           | 0.0                           | 0.0             | NT    | 0.0                         | 45.0                                   | -0.1                                      | 1027.00                           | 4.16                      | 4.90                     | 2.38                     |                  |
| WS10                                       | 0.2               | 2.1             | 45.0                                               | 0.2                       | 2.1             | 17.1           | 0.0                           | 0.0             | NT    | 0.0                         | 45                                     | 0                                         | 1029.00                           | Dry                       | 3.04                     | DRY                      | peak CO was 1ppm |

### Background Atmospheric pressure:

|                                 | Day<br>-3             | Day<br>-2            | Day<br>-1 | Day<br>0             | Falling, Steady or<br>Rising |
|---------------------------------|-----------------------|----------------------|-----------|----------------------|------------------------------|
| Weather Conditions              | Showers, sunny spells | Cloudy, sunny spells | Sunny     | Cloudy, sunny spells |                              |
| Atmospheric Pressure (millibar) | 1012.0                | 1018.0               | 1026.0    | 1027.0               |                              |

Atmospheric pressure obtained from:

[http://www.metoffice.gov.uk/weather/uk/uk\\_latest\\_pressure.html](http://www.metoffice.gov.uk/weather/uk/uk_latest_pressure.html)

### Ambient Gas Levels:

|                   | CH <sub>4</sub><br>(%) | CO <sub>2</sub><br>(%) | O <sub>2</sub><br>(%) | H <sub>2</sub> S<br>(%) | CO<br>(%) | VOC<br>ppm | Atmos<br>(mbar) |
|-------------------|------------------------|------------------------|-----------------------|-------------------------|-----------|------------|-----------------|
| Before Monitoring | 0.2                    | 0.1                    | 21.2                  | 0.0                     | 0.0       | NT         | 1027            |
| After Monitoring  | 0.1                    | 0.1                    | 21.1                  | 0.0                     | 0.0       | NT         | 1030            |

1 The peak reading is the maximum recorded level during a monitoring event.

2 The steady reading is the level which remained constant after approximately 1 minute.

3 Recorded values are calculated from the Ambient Gas readings (live zero)

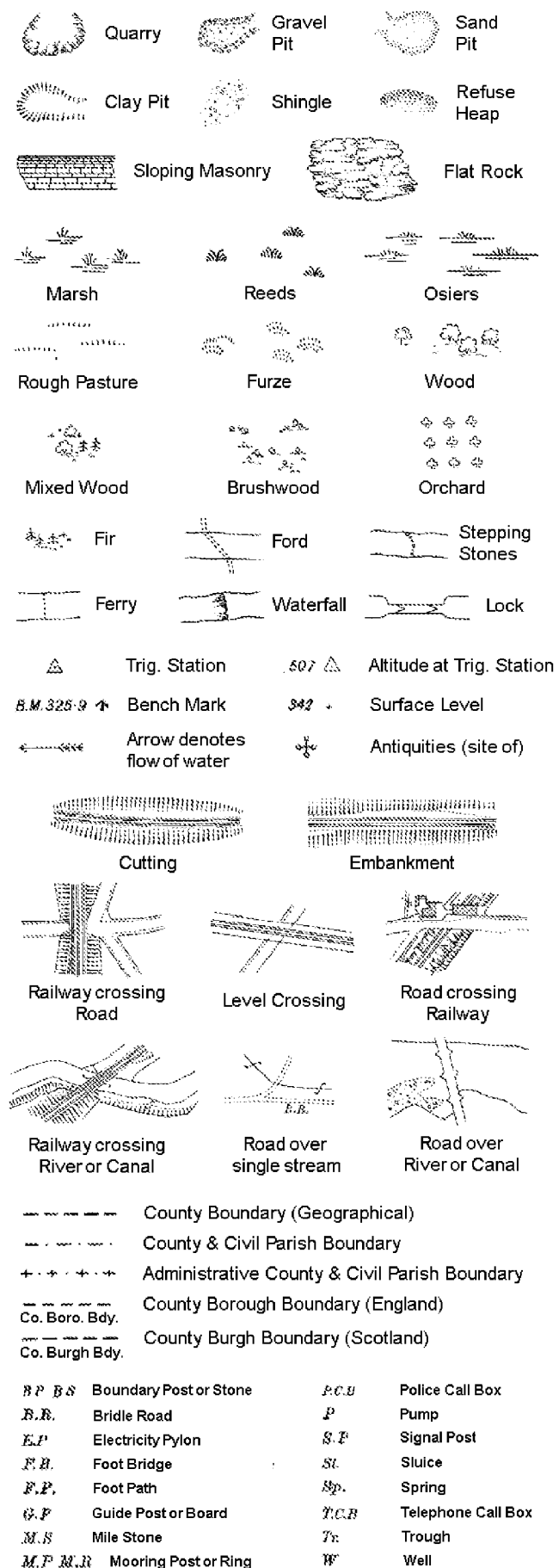
**Land at Stakers Farm, Yapton**  
**Ground Investigation – Interpretative Report**



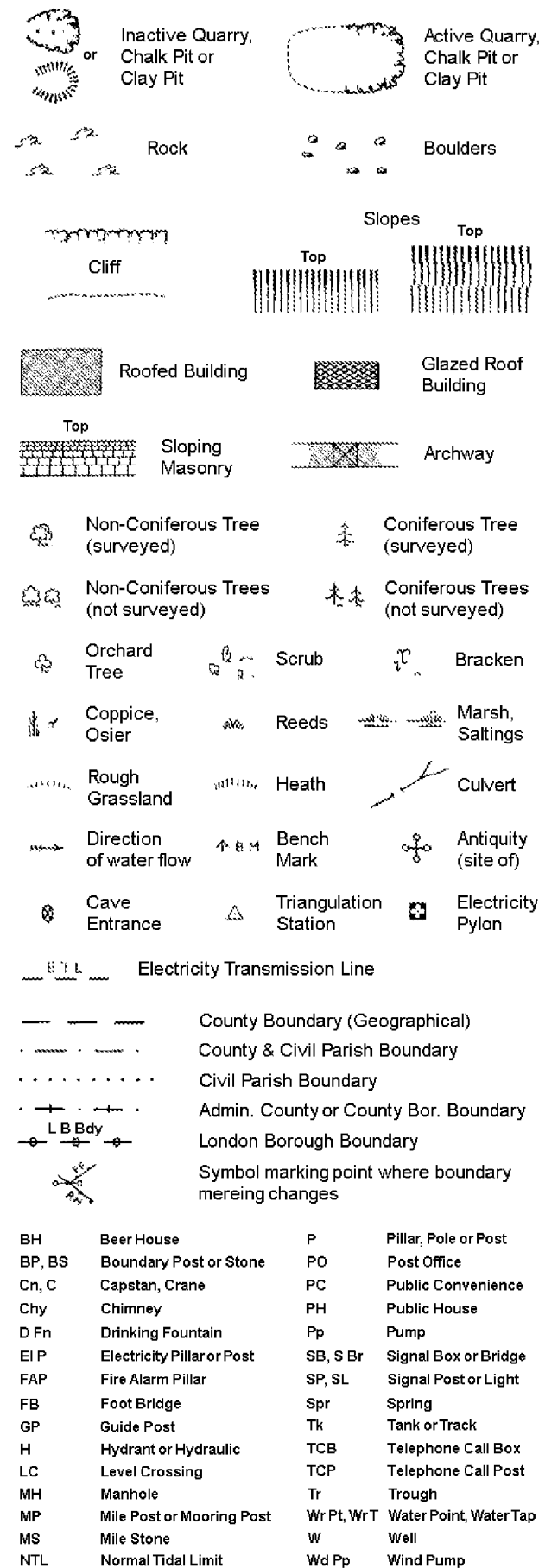
**Appendix H – Envirocheck Report (February 2019)**

# Historical Mapping Legends

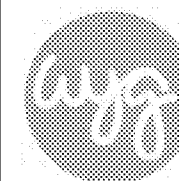
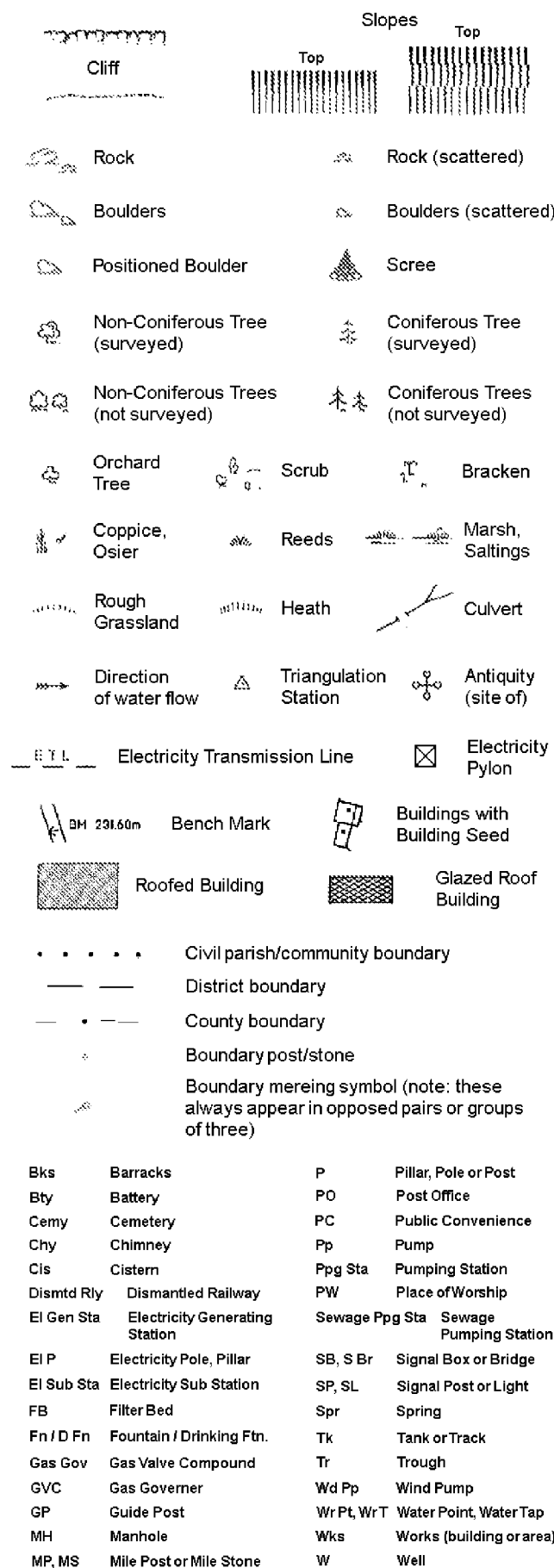
## Ordnance Survey County Series and Ordnance Survey Plan 1:2,500



## Ordnance Survey Plan, Additional SIMs and Supply of Unpublished Survey Information 1:2,500 and 1:1,250



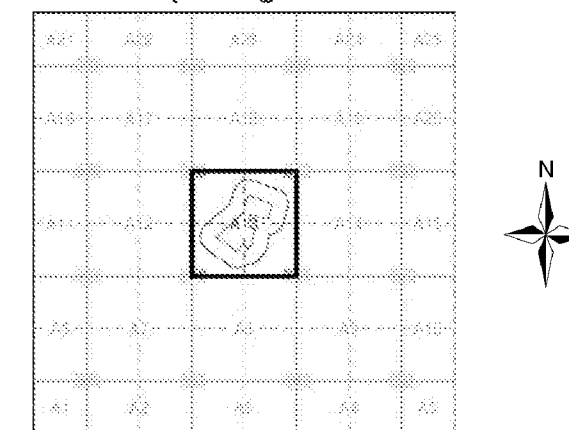
## Large-Scale National Grid Data 1:2,500 and 1:1,250



## Historical Mapping & Photography included:

| Mapping Type                   | Scale   | Date        | Pg |
|--------------------------------|---------|-------------|----|
| Sussex                         | 1:2,500 | 1876 - 1877 | 2  |
| Sussex                         | 1:2,500 | 1897        | 3  |
| Sussex                         | 1:2,500 | 1912        | 4  |
| Sussex                         | 1:2,500 | 1938 - 1939 | 5  |
| Ordnance Survey Plan           | 1:2,500 | 1974 - 1975 | 6  |
| Additional SIMs                | 1:2,500 | 1978 - 1992 | 7  |
| Additional SIMs                | 1:2,500 | 1982 - 1988 | 8  |
| Additional SIMs                | 1:2,500 | 1987 - 1992 | 9  |
| Ordnance Survey Plan           | 1:2,500 | 1989        | 10 |
| Additional SIMs                | 1:2,500 | 1992        | 11 |
| Large-Scale National Grid Data | 1:2,500 | 1994        | 12 |
| Large-Scale National Grid Data | 1:2,500 | 1995        | 13 |
| Historical Aerial Photography  | 1:2,500 | 1999        | 14 |

## Historical Map - Segment A13



## Order Details

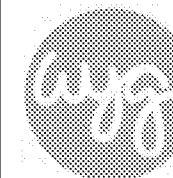
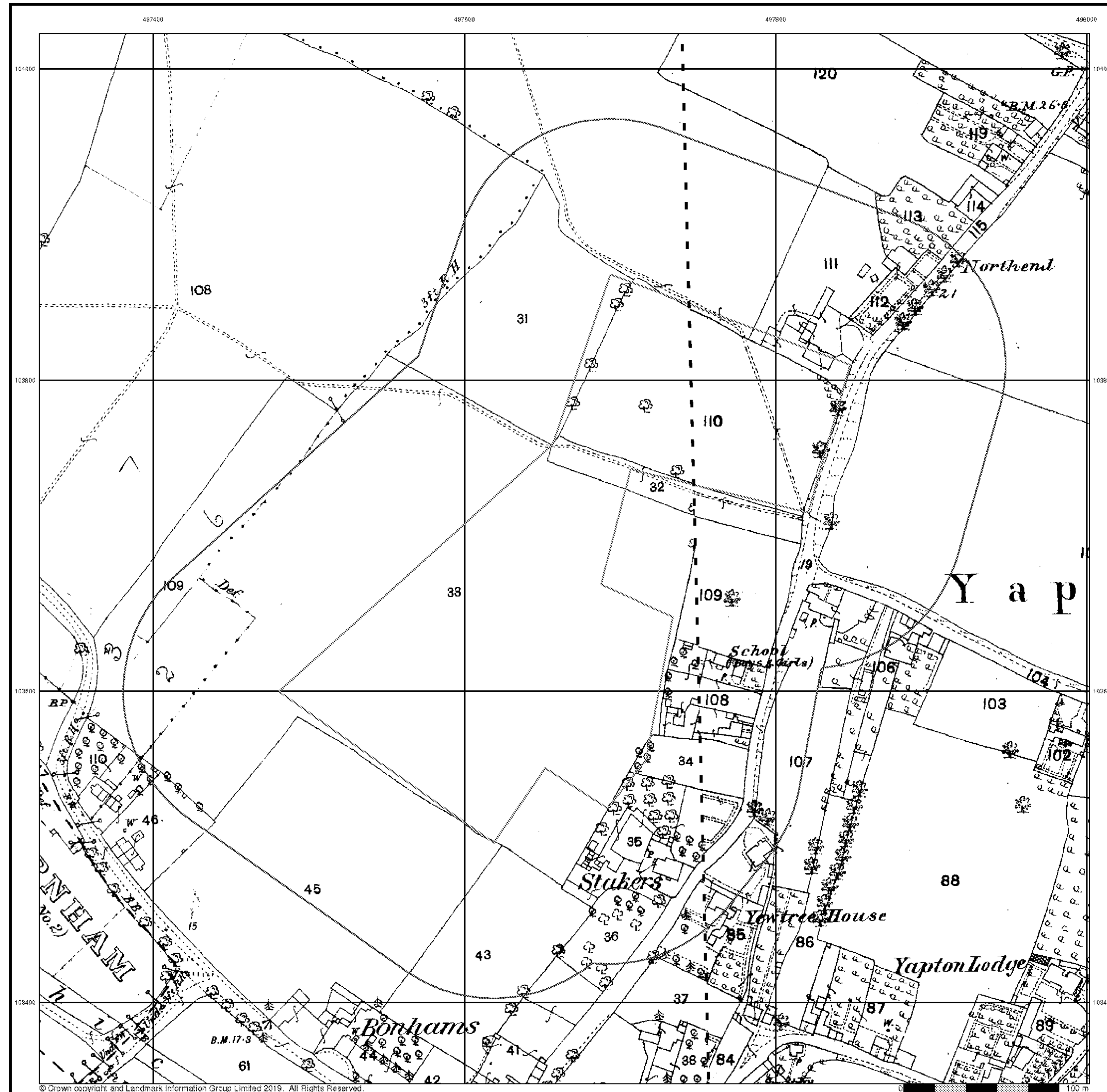
Order Number: 195300019\_1\_1  
Customer Ref: A112666  
National Grid Reference: 497670, 103690  
Slice: A  
Site Area (Ha): 5.34  
Search Buffer (m): 100

## Site Details

Land at Stakers Farm, North End Road, Yapton, ARUNDEL, BN18 0DU

**Landmark**  
INFORMATION GROUP

Tel: 0844 844 9952  
Fax: 0844 844 9951  
Web: www.envirocheck.co.uk



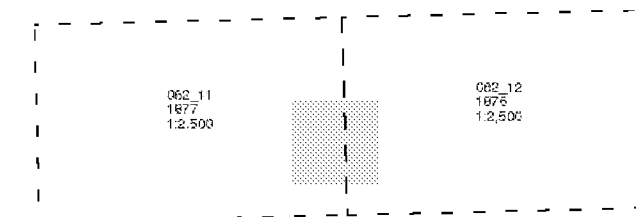
Sussex

Published 1876 - 1877

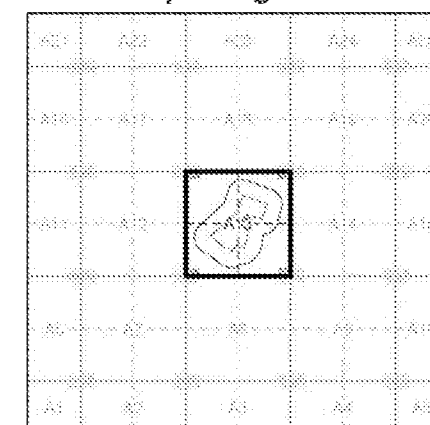
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

Order Number: 195300019\_1\_1  
 Customer Ref: A112666  
 National Grid Reference: 497670, 103690  
 Slice: A  
 Site Area (Ha): 5.34  
 Search Buffer (m): 100

Site Details

Land at Stakers Farm, North End Road, Yapton, ARUNDEL, BN18 0DU

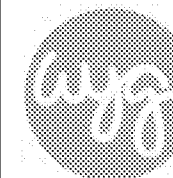
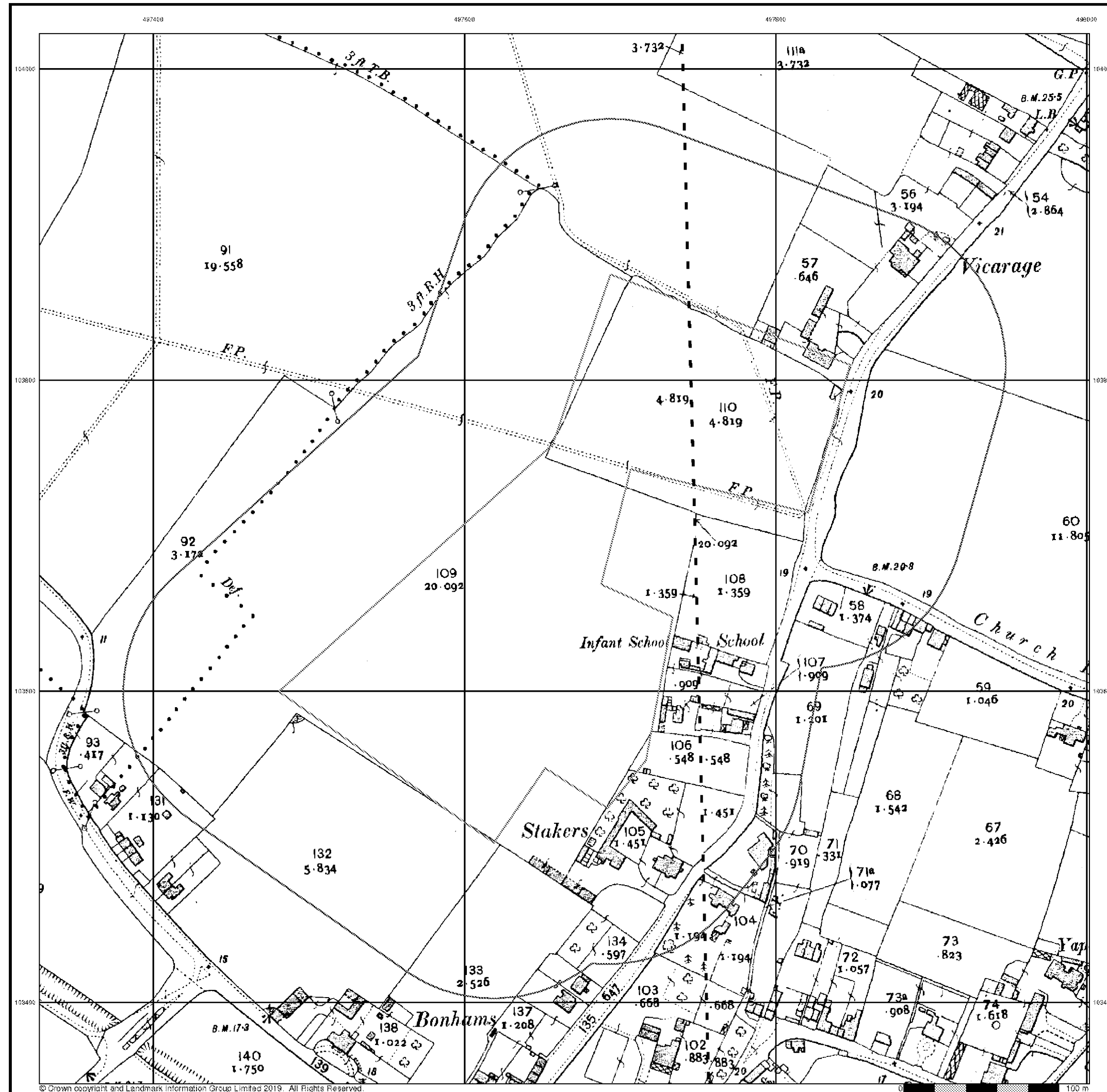
**Landmark**  
 INFORMATION GROUP

Tel: 0844 844 9952  
 Fax: 0844 844 9951  
 Web: www.envirocheck.co.uk





A Landmark Information Group Service v50.0 25-Feb-2019 Page 3 of 14



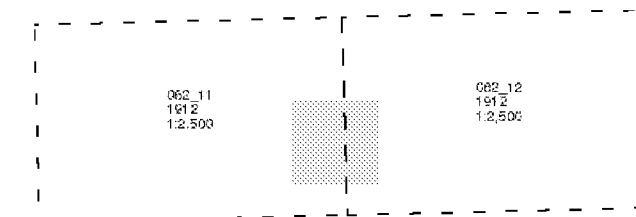
Sussex

Published 1912

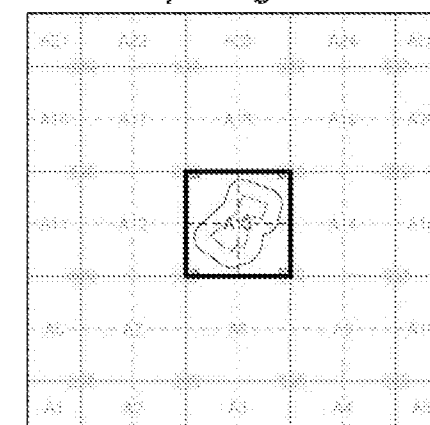
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

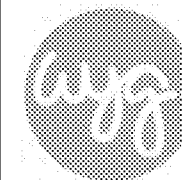
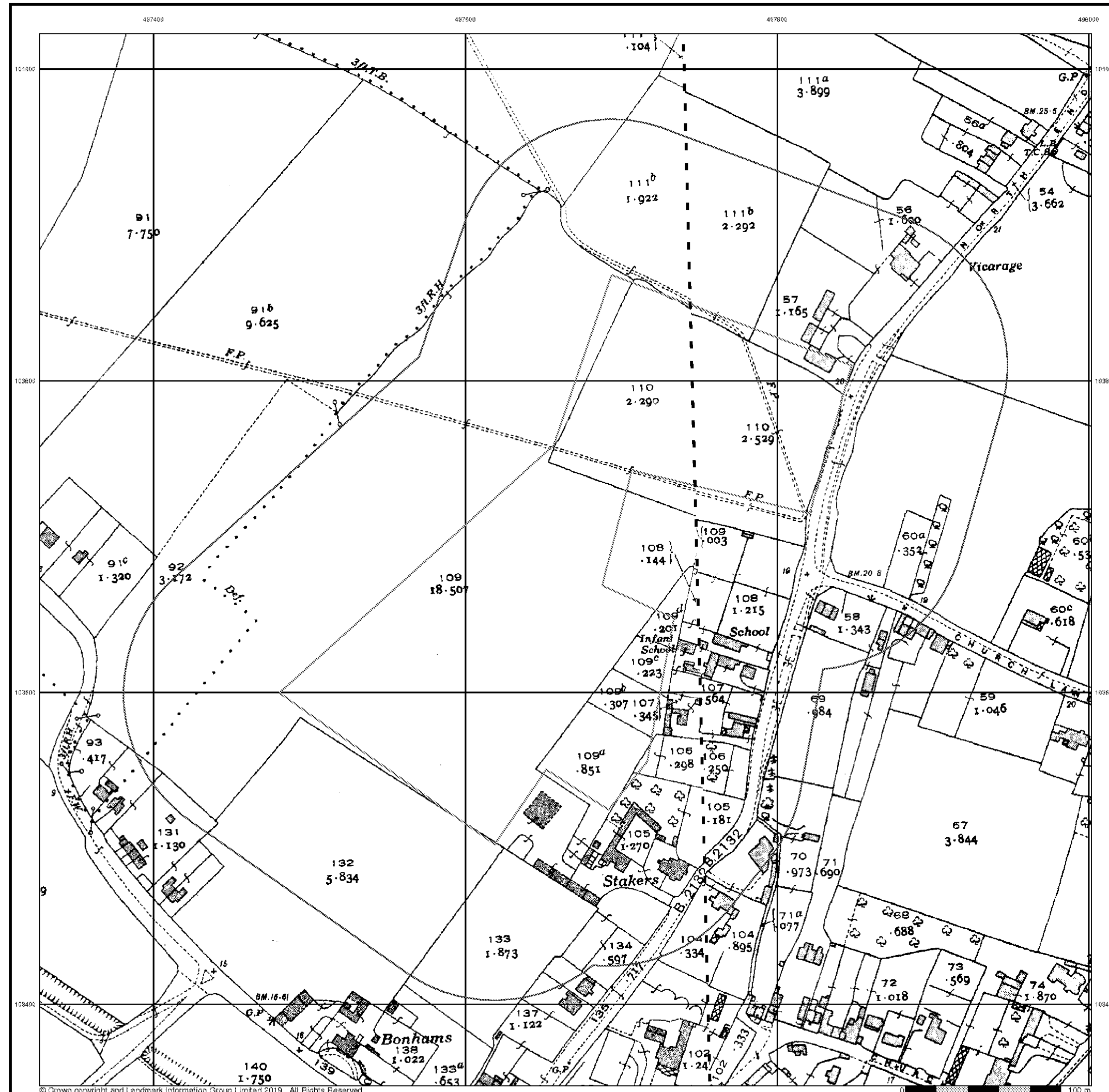
Order Number: 195300019\_1\_1  
 Customer Ref: A112666  
 National Grid Reference: 497670, 103690  
 Slice: A  
 Site Area (Ha): 5.34  
 Search Buffer (m): 100

Site Details

Land at Stakers Farm, North End Road, Yapton, ARUNDEL, BN18 0DU

**Landmark**  
 INFORMATION GROUP

Tel: 0844 844 9952  
 Fax: 0844 844 9951  
 Web: www.envirocheck.co.uk



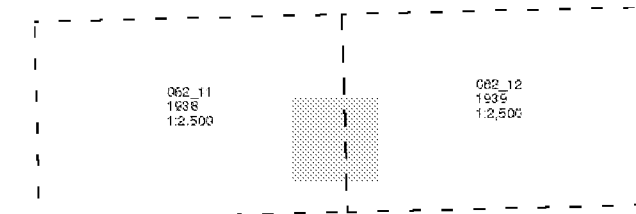
Sussex

Published 1938 - 1939

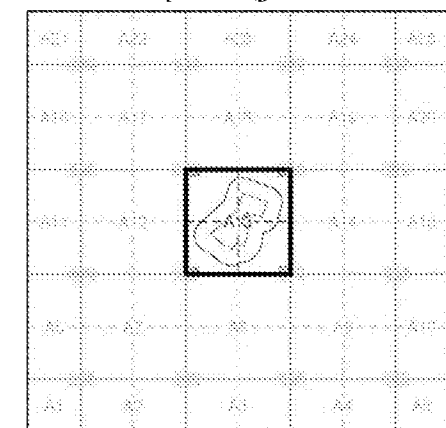
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

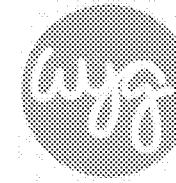
Order Number: 195300019\_1\_1  
Customer Ref: A112666  
National Grid Reference: 497670, 103690  
Slice: A  
Site Area (Ha): 5.34  
Search Buffer (m): 100

Site Details

Land at Stakers Farm, North End Road, Yapton, ARUNDEL, BN18 0DU

Landmark  
INFORMATION GROUP

Tel: 0844 844 9952  
Fax: 0844 844 9951  
Web: www.envirocheck.co.uk



## Ordnance Survey Plan

Published 1974 - 1975

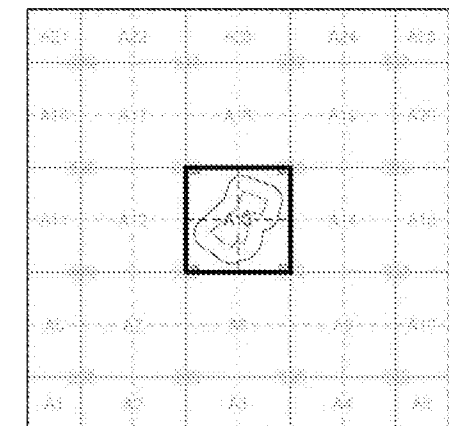
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

### Map Name(s) and Date(s)

|                           |                           |
|---------------------------|---------------------------|
| SU9704<br>1975<br>1:2,500 | SU9604<br>1974<br>1:2,500 |
| SU9703<br>1975<br>1:2,500 | SU9603<br>1974<br>1:2,500 |

### Historical Map - Segment A13



### Order Details

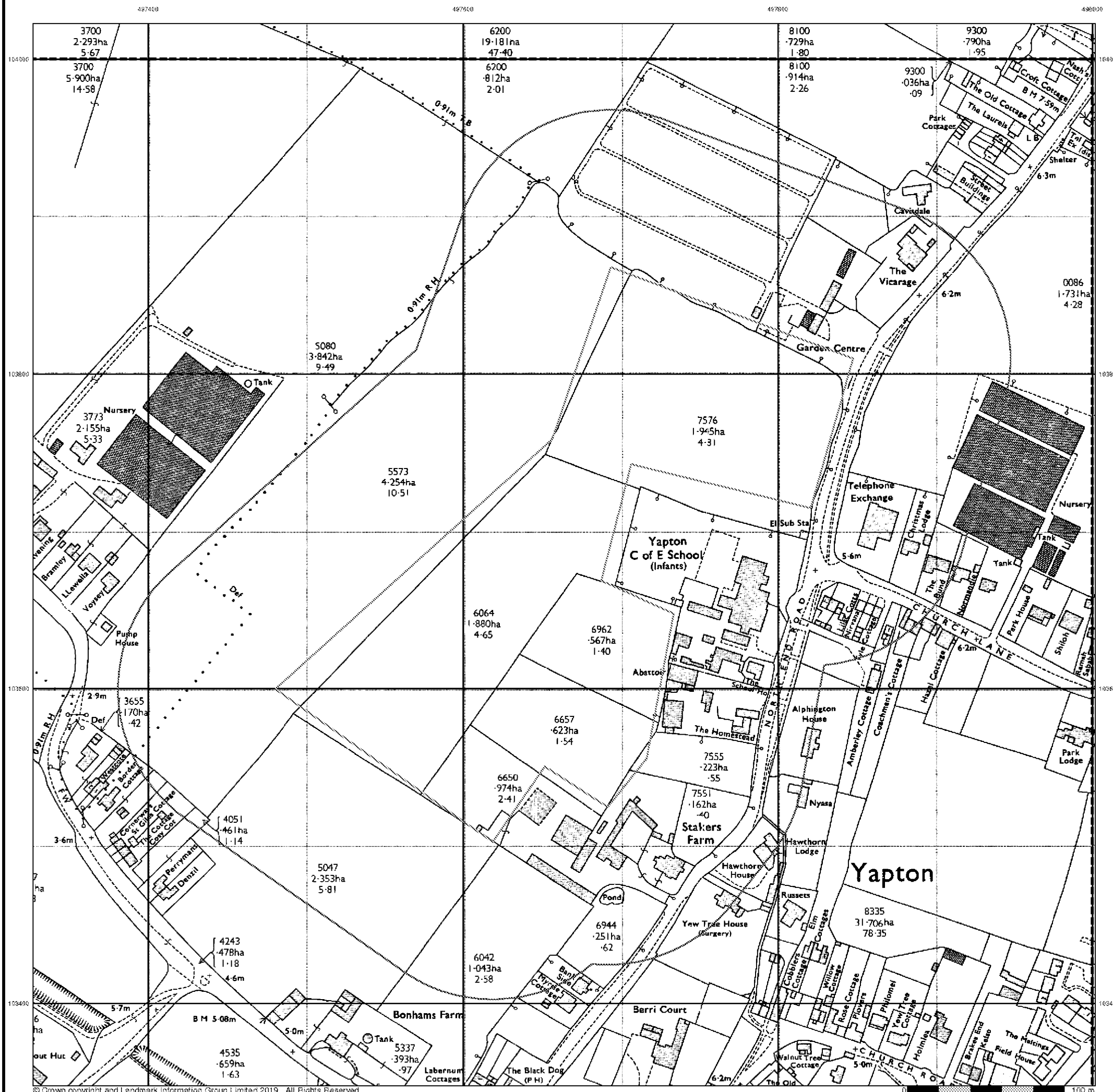
Order Number: 195300019\_1\_1  
Customer Ref: A112666  
National Grid Reference: 497670, 103690  
Slice: A  
Site Area (Ha): 5.34  
Search Buffer (m): 100

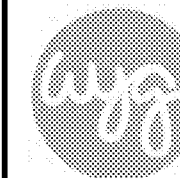
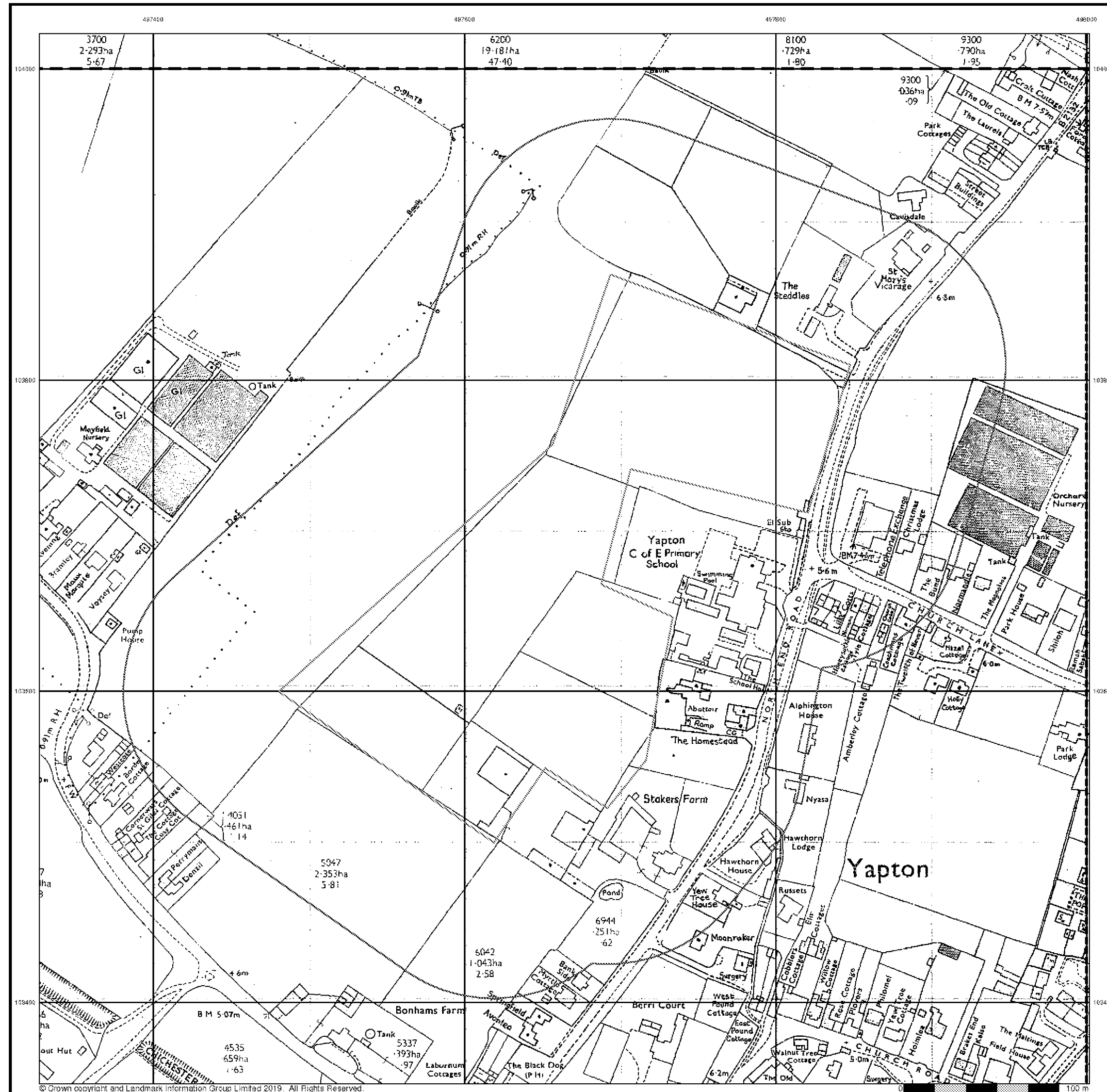
### Site Details

Land at Stakers Farm, North End Road, Yapton, ARUNDEL, BN18 0DU

**Landmark**  
INFORMATION GROUP

Tel: 0844 844 9952  
Fax: 0844 844 9951  
Web: [www.envirocheck.co.uk](http://www.envirocheck.co.uk)





## Additional SIMs

Published 1978 - 1992

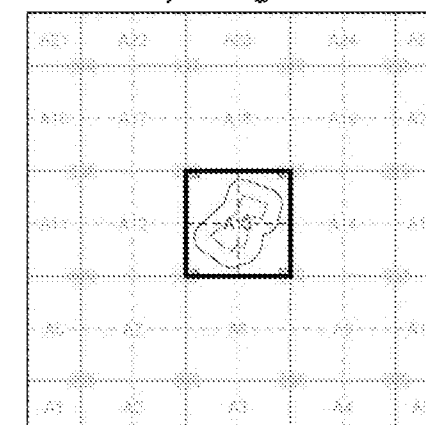
Source map scale - 1:2,500

The SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') are further, minor editions of mapping which were produced and published in between the main editions as an area was updated. They date from 1947 to 1994, and contain detailed information on buildings, roads and land-use. These maps were produced at both 1:2,500 and 1:1,250 scales.

## Map Name(s) and Date(s)

|                           |                           |
|---------------------------|---------------------------|
| SU8704<br>1984<br>1:2,500 | SU8804<br>1992<br>1:2,500 |
| SU8703<br>1982<br>1:2,500 | SU8803<br>1978<br>1:2,500 |

## Historical Map - Segment A13



## Order Details

Order Number: 195300019\_1\_1  
 Customer Ref: A112666  
 National Grid Reference: 497670, 103690  
 Slice: A  
 Site Area (Ha): 5.34  
 Search Buffer (m): 100

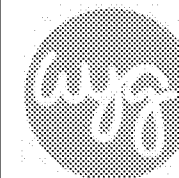
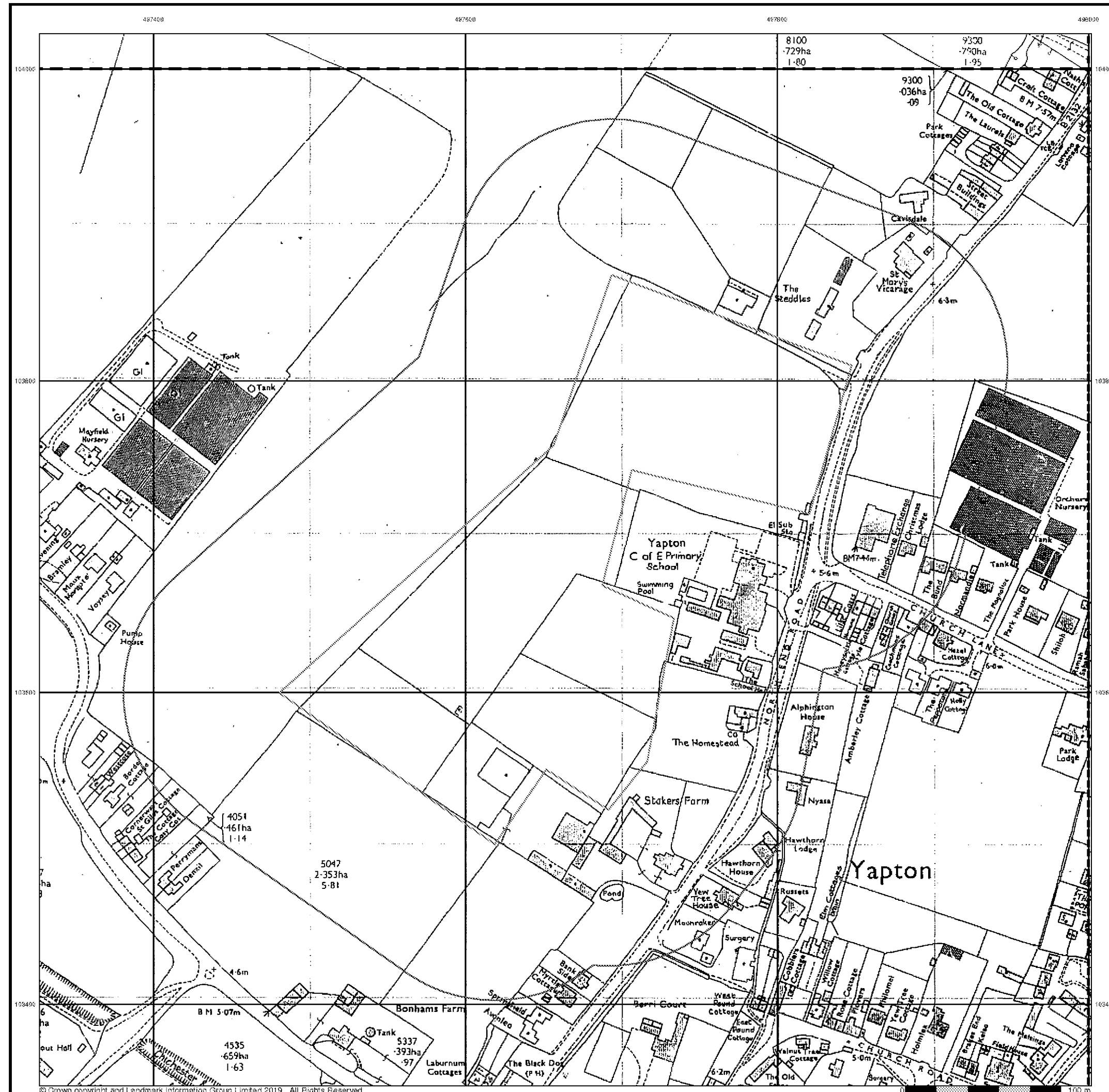
## Site Details

Land at Stakers Farm, North End Road, Yapton, ARUNDEL, BN18 0DU

**Landmark**  
 INFORMATION GROUP

Tel: 0844 844 9952  
 Fax: 0844 844 9951  
 Web: www.envirocheck.co.uk





### Additional SIMs

**Published 1982 - 1988**

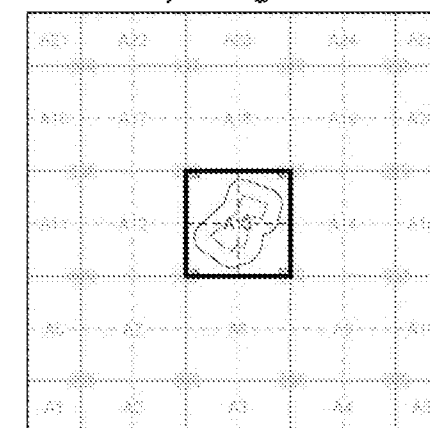
**Source map scale - 1:2,500**

The SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') are further, minor editions of mapping which were produced and published in between the main editions as an area was updated. They date from 1947 to 1994, and contain detailed information on buildings, roads and land-use. These maps were produced at both 1:2,500 and 1:1,250 scales.

### Map Name(s) and Date(s)

|         |         |
|---------|---------|
| SU8704  |         |
| 1987    |         |
| 1:2,500 |         |
| SU8703  | SU8803  |
| 1988    | 1982    |
| 1:2,500 | 1:2,500 |

### Historical Map - Segment A13



### Order Details

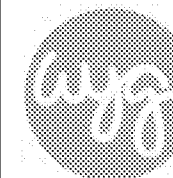
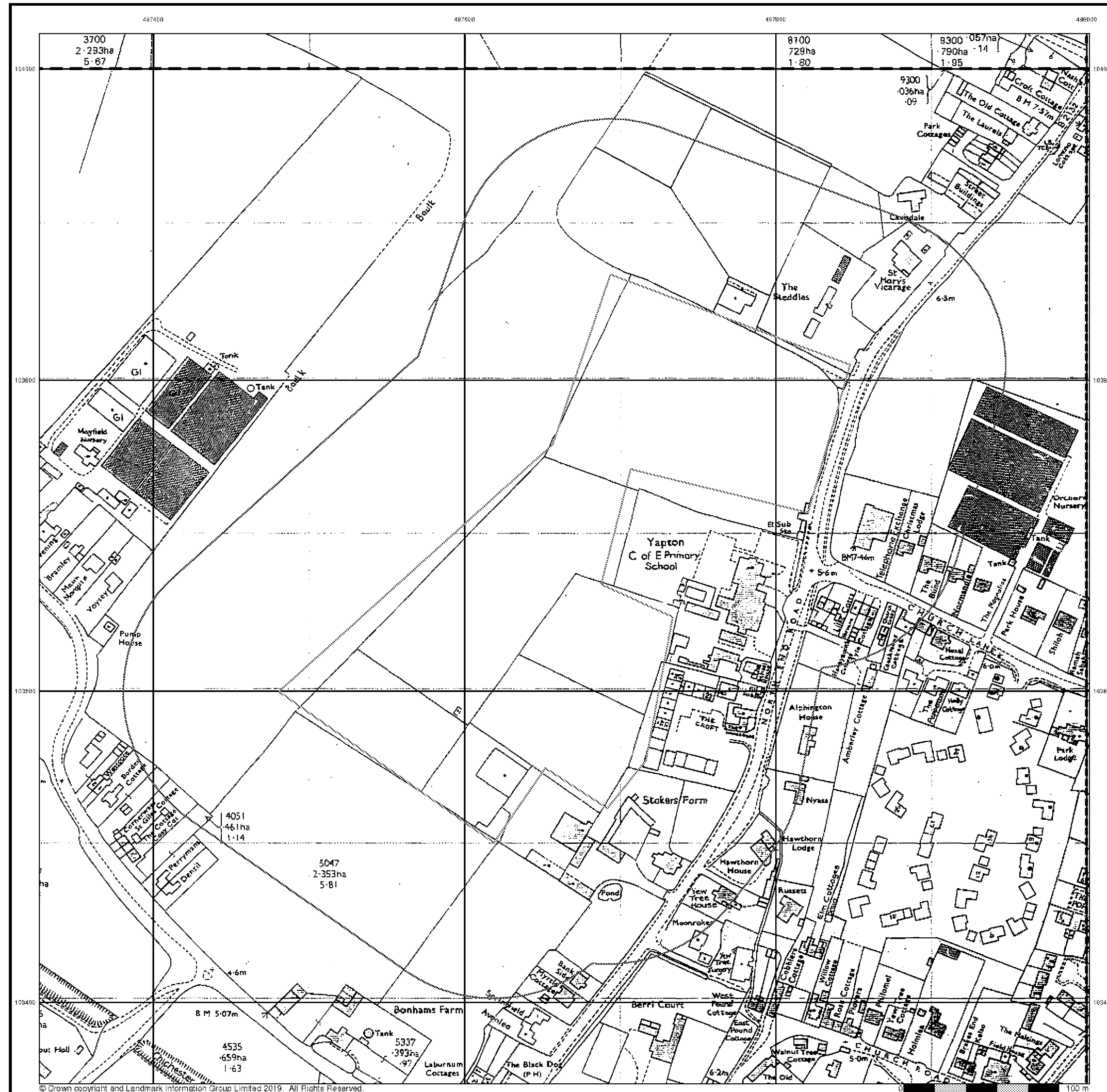
Order Number: 195300019\_1\_1  
 Customer Ref: A112666  
 National Grid Reference: 497670, 103690  
 Slice: A  
 Site Area (Ha): 5.34  
 Search Buffer (m): 100

### Site Details

Land at Stakers Farm, North End Road, Yapton, ARUNDEL, BN18 0DU

**Landmark**  
INFORMATION GROUP

Tel: 0844 844 9952  
 Fax: 0844 844 9951  
 Web: [www.envirocheck.co.uk](http://www.envirocheck.co.uk)



## Additional SIMs

**Published 1987 - 1992**

**Source map scale - 1:2,500**

The SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') are further, minor editions of mapping which were produced and published in between the main editions as an area was updated. They date from 1947 to 1994, and contain detailed information on buildings, roads and land-use. These maps were produced at both 1:2,500 and 1:1,250 scales.

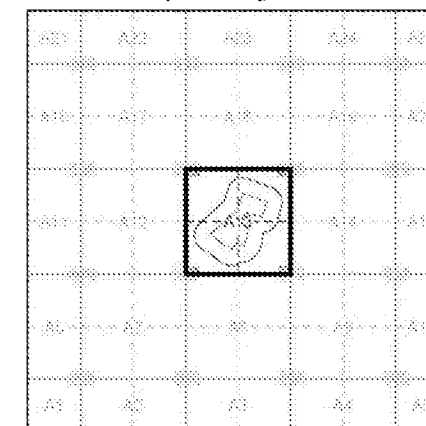
## Map Name(s) and Date(s)

SU8704  
1992  
1:2,500

SU8703  
1989  
1:2,500

SU8803  
1987  
1:2,500

## Historical Map - Segment A13



## Order Details

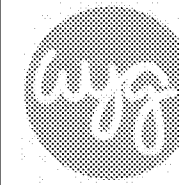
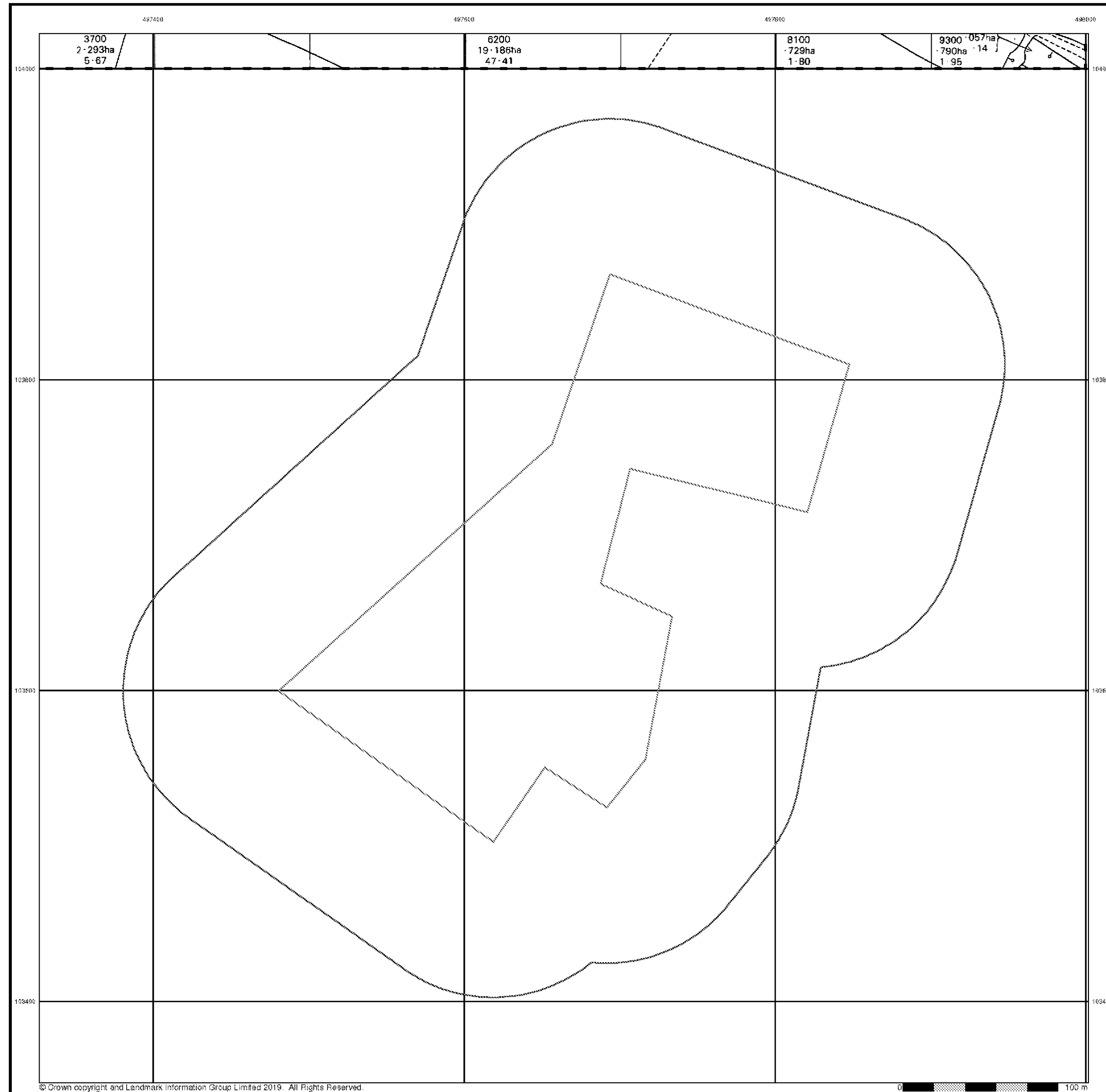
Order Number: 195300019\_1\_1  
Customer Ref: A112666  
National Grid Reference: 497670, 103690  
Slice: A  
Site Area (Ha): 5.34  
Search Buffer (m): 100

## Site Details

Land at Stakers Farm, North End Road, Yapton, ARUNDEL, BN18 0DU

**Landmark**  
INFORMATION GROUP

Tel: 0844 844 9952  
Fax: 0844 844 9951  
Web: www.envirocheck.co.uk



## Ordnance Survey Plan

Published 1989

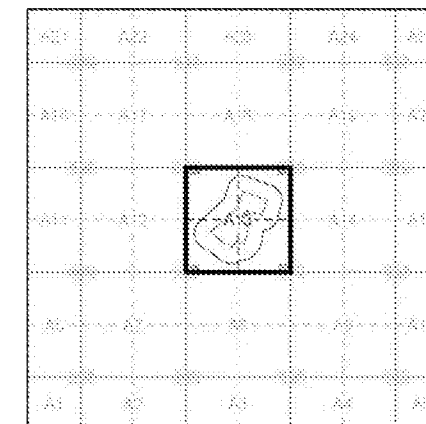
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

### Map Name(s) and Date(s)

SU9704  
1989  
1:2,500

### Historical Map - Segment A13



### Order Details

Order Number: 195300019\_1\_1  
Customer Ref: A112666  
National Grid Reference: 497670, 103690  
Slice: A  
Site Area (Ha): 5.34  
Search Buffer (m): 100

### Site Details

Land at Stakers Farm, North End Road, Yapton, ARUNDEL,  
BN18 0DU

**Landmark**  
\*\*\* INFORMATION GROUP

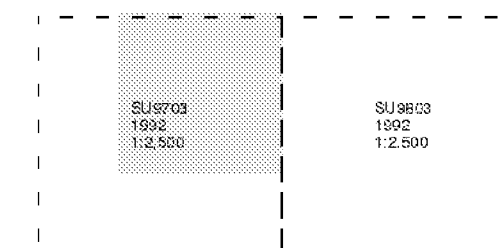
Tel: 0844 844 9952  
Fax: 0844 844 9951  
Web: www.envirocheck.co.uk



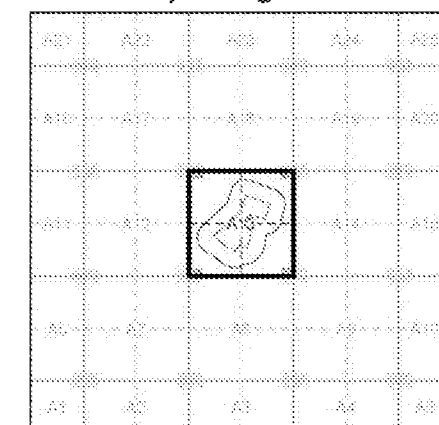


The SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') are further, minor editions of mapping which were produced and published in between the main editions as an area was updated. They date from 1947 to 1994, and contain detailed information on buildings, roads and land-use. These maps were produced at both 1:2,500 and 1:1,250 scales.

## Map Name(s) and Date(s)



## Historical Map - Segment A13



## Order Details

Order Number: 195300019\_1\_1  
Customer Ref: A112666  
National Grid Reference: 497670, 103690  
Slice: A  
Site Area (Ha): 5.34  
Search Buffer (m): 100

## Site Details

Land at Stakers Farm, North End Road, Yapton, ARUNDEL,  
BN18 0DU

**Landmark**  
 INFORMATION GROUP

Tel: 0844 844 9952  
Fax: 0844 844 9951  
Web: [www.envirocheck.co.uk](http://www.envirocheck.co.uk)

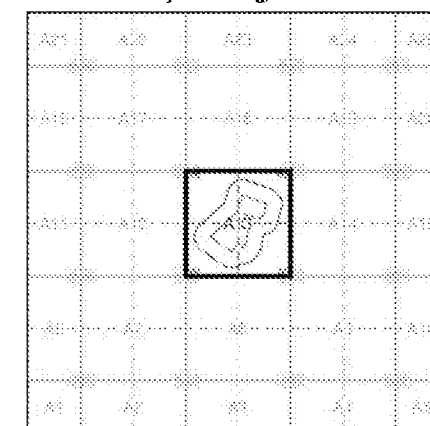


'Large Scale National Grid Data' superseded SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') in 1992, and continued to be produced until 1999. These maps were the fore-runners of digital mapping and so provide detailed information on houses and roads, but tend to show less topographic features such as vegetation. These maps were produced at both 1:2,500 and 1:1,250 scales.

## Map Name(s) and Date(s)

|        |        |
|--------|--------|
| SUS704 | SUS804 |
| 1994   | 1994   |
| 12,500 | 12,500 |
| SUS703 | SUS803 |
| 1994   | 1994   |
| 12,500 | 12,500 |

## Historical Map - Segment A13



## Order Details

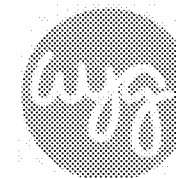
|                          |                |
|--------------------------|----------------|
| Order Number:            | 195300019_1_1  |
| Customer Ref:            | A112666        |
| National Grid Reference: | 497670, 103690 |
| Slice:                   | A              |
| Site Area (Ha):          | 5.34           |
| Search Buffer (m):       | 100            |

## Site Details

Land at Stakers Farm, North End Road, Yapton, ARUNDEL,  
BN18 0DU

## Landmark

Tel: 0844 844 9952  
Fax: 0844 844 9951  
Web: [www.envirocheck.co.uk](http://www.envirocheck.co.uk)



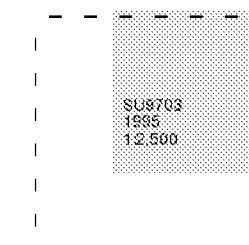
## Large-Scale National Grid Data

Published 1995

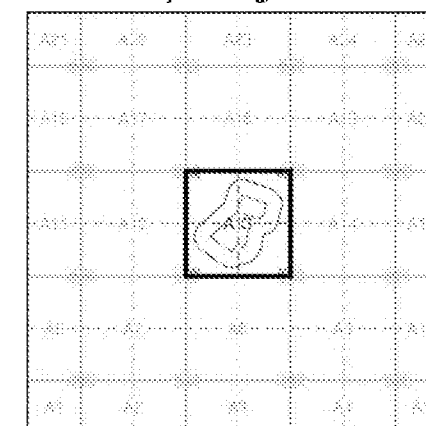
Source map scale - 1:2,500

'Large Scale National Grid Data' superseded SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') in 1992, and continued to be produced until 1999. These maps were the fore-runners of digital mapping and so provide detailed information on houses and roads, but tend to show less topographic features such as vegetation. These maps were produced at both 1:2,500 and 1:1,250 scales.

### Map Name(s) and Date(s)



### Historical Map - Segment A13



### Order Details

Order Number: 195300019\_1\_1  
Customer Ref: A112666  
National Grid Reference: 497670, 103690  
Slice: A  
Site Area (Ha): 5.34  
Search Buffer (m): 100

### Site Details

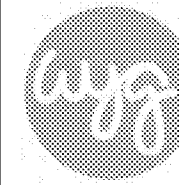
Land at Stakers Farm, North End Road, Yapton, ARUNDEL, BN18 0DU

**Landmark**  
INFORMATION GROUP

Tel: 0844 844 9952  
Fax: 0844 844 9951  
Web: [www.envirocheck.co.uk](http://www.envirocheck.co.uk)





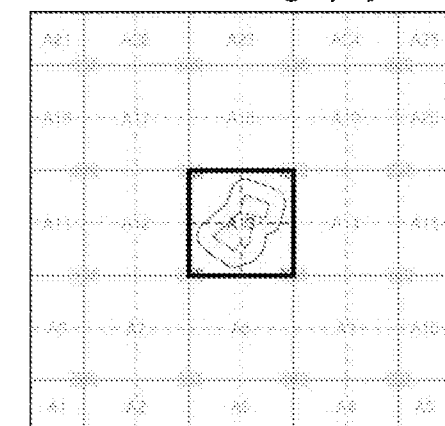


## Historical Aerial Photography

**Published 1999**

This aerial photography was produced by Getmapping, these vertical aerial photographs provide a seamless, full colour survey of the whole of Great Britain

### Historical Aerial Photography - Segment A13



### Order Details

Order Number: 195300019\_1\_1  
Customer Ref: A112666  
National Grid Reference: 497670, 103690  
Slice: A  
Site Area (Ha): 5.34  
Search Buffer (m): 100

### Site Details

Land at Stakers Farm, North End Road, Yapton, ARUNDEL, BN18 0DU

**Landmark**  
INFORMATION GROUP

Tel: 0844 844 9952  
Fax: 0844 844 9951  
Web: [www.envirocheck.co.uk](http://www.envirocheck.co.uk)





© Crown Copyright. All Rights Reserved. License Number 100122462



## Groundwater Vulnerability

### General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

### Agency and Hydrological

#### Geological Classes

**Major Aquifer  
(Highly Permeable)**

**Minor Aquifer  
(Variably Permeable)**

**Non Aquifer  
(Negligibly Permeable)**

**Water or Sea**

**Drift Deposit**

#### Soil Classes

High (H) 1, 2, 3, U

Intermediate (I) 1, 2

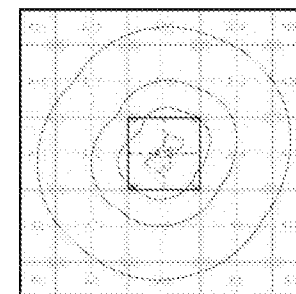
Low

High (H) 1, 2, 3, U

Intermediate (I) 1, 2

Low

### Site Sensitivity Context Map - Slice A



### Order Details

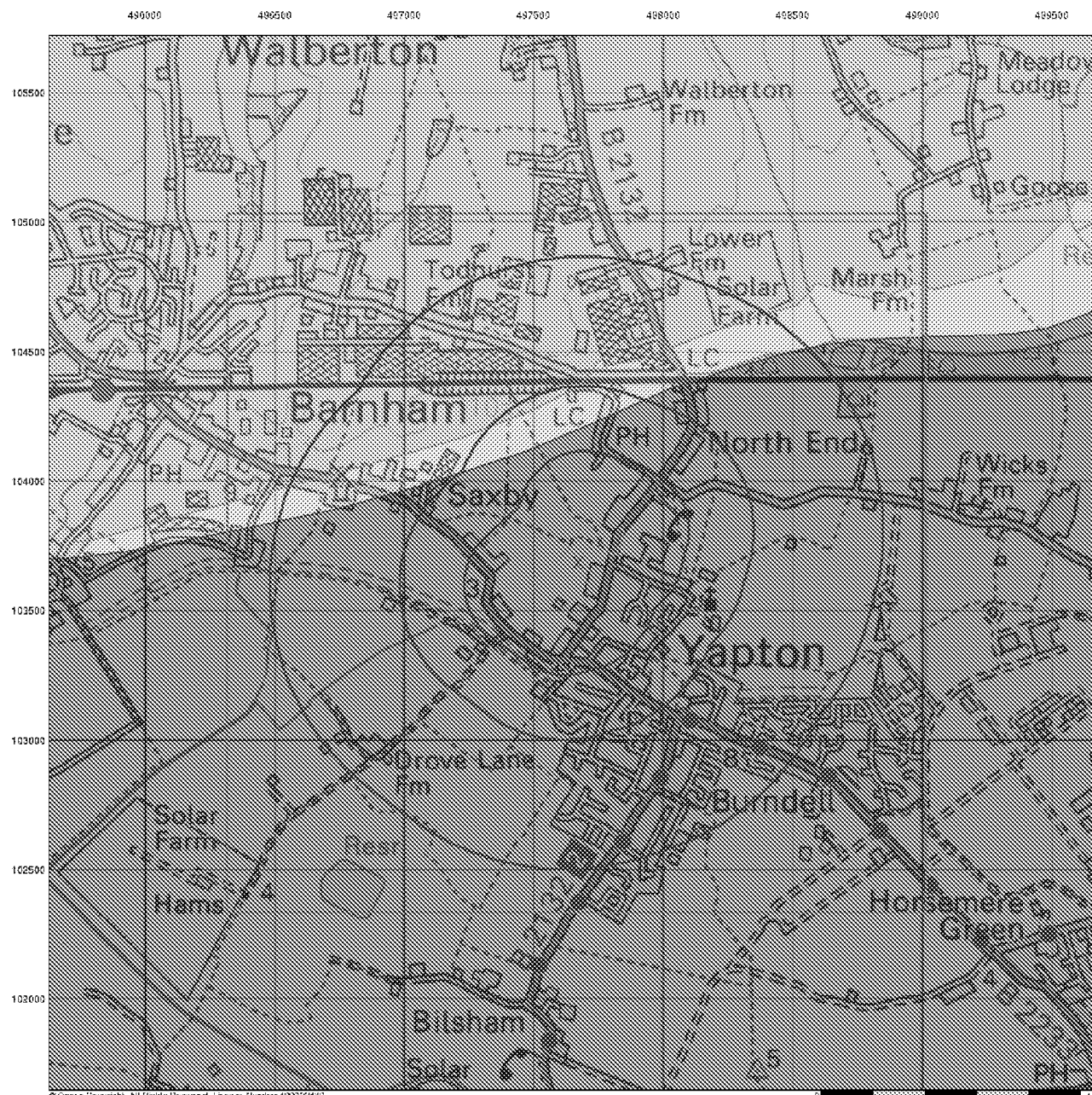
Order Number: 195300019\_1\_1  
 Customer Ref: A112666  
 National Grid Reference: 497670, 103690  
 Slice: A  
 Site Area (Ha): 5.34  
 Search Buffer (m): 1000

### Site Details

Land at Stakers Farm, North End Road, Yapton, ARUNDEL, BN18 0DU

**Landmark**  
 Environmental Services

Tel: 01444 544 0052  
 Fax: 01444 544 5551  
 Web: www.environment.co.uk



© Crown Copyright. All Rights Reserved. License Number 100122422



## Bedrock Aquifer Designation

### General

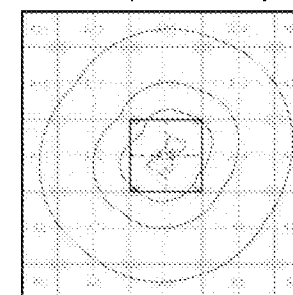
- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

### Agency and Hydrological

#### Geological Classes

- Principal Aquifer
- Secondary A Aquifer
- Secondary B Aquifer
- Secondary Undifferentiated
- Unproductive Strata
- Unknown
- Unknown (Lakes and Landslip)

### Site Sensitivity Context Map - Slice A

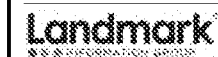


### Order Details

Order Number: 195300019\_1\_1  
 Customer Ref: A112666  
 National Grid Reference: 497670, 103690  
 Slice: A  
 Site Area (Ha): 5.34  
 Search Buffer (m): 1000

### Site Details

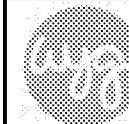
Land at Stakers Farm, North End Road, Yapton, ARUNDEL, BN18 0DU



Tel: 01444 544 0052  
 Fax: 01444 544 5551  
 Web: www.environment.co.uk



© Crown Copyright. All Rights Reserved. License Number 100122452



## Superficial Aquifer Designation

### General

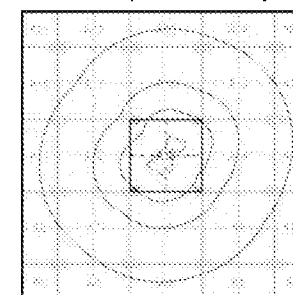
- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

### Agency and Hydrological

#### Geological Classes

- Principal Aquifer
- Secondary A Aquifer
- Secondary B Aquifer
- Secondary Undifferentiated
- Unproductive Strata
- Unknown
- Unknown (Lakes and Landslip)

### Site Sensitivity Context Map - Slice A

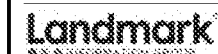


### Order Details

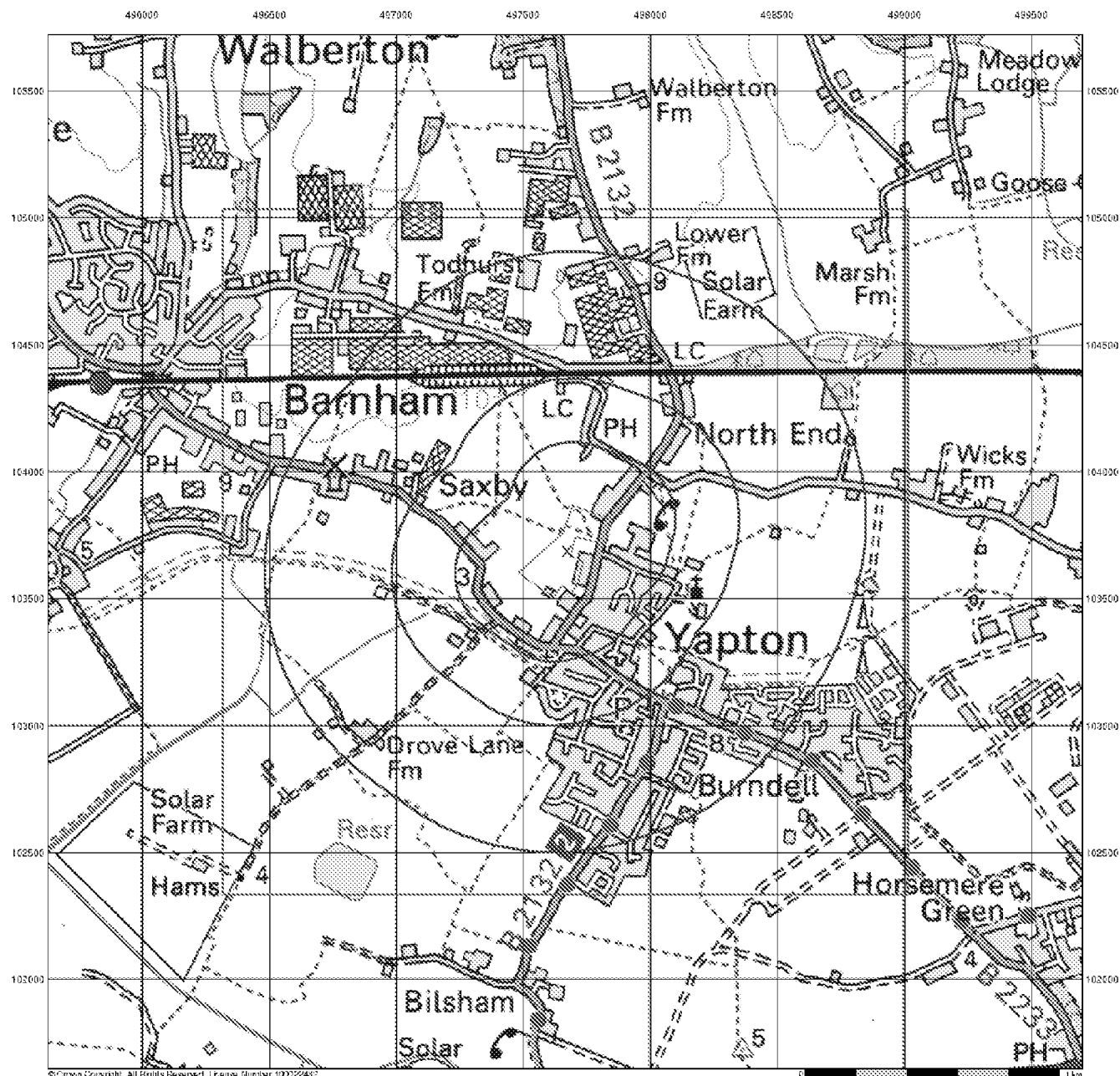
Order Number: 195300019\_1\_1  
 Customer Ref: A112666  
 National Grid Reference: 497670, 103690  
 Slice: A  
 Site Area (Ha): 5.34  
 Search Buffer (m): 1000

### Site Details

Land at Stakers Farm, North End Road, Yapton, ARUNDEL, BN18 0DU



Tel: 01444 544 0052  
 Fax: 01444 544 5551  
 Web: www.environment.co.uk



© Crown Copyright. All Rights Reserved. License Number 100122452



## Source Protection Zones

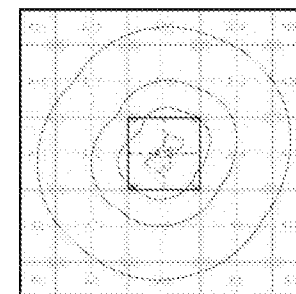
### General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

### Agency and Hydrological

- Inner zone (Zone 1)
- Inner zone - subsurface activity only (Zone 1c)
- Outer zone (Zone 2)
- Outer zone - subsurface activity only (Zone 2c)
- Total catchment (Zone 3)
- Total catchment - subsurface activity only (Zone 3c)
- Special interest (Zone 4)

### Site Sensitivity Context Map - Slice A



### Order Details

Order Number: 195300019\_1\_1  
 Customer Ref: A112666  
 National Grid Reference: 497670, 103690  
 Slice: A  
 Site Area (Ha): 5.34  
 Search Buffer (m): 1000

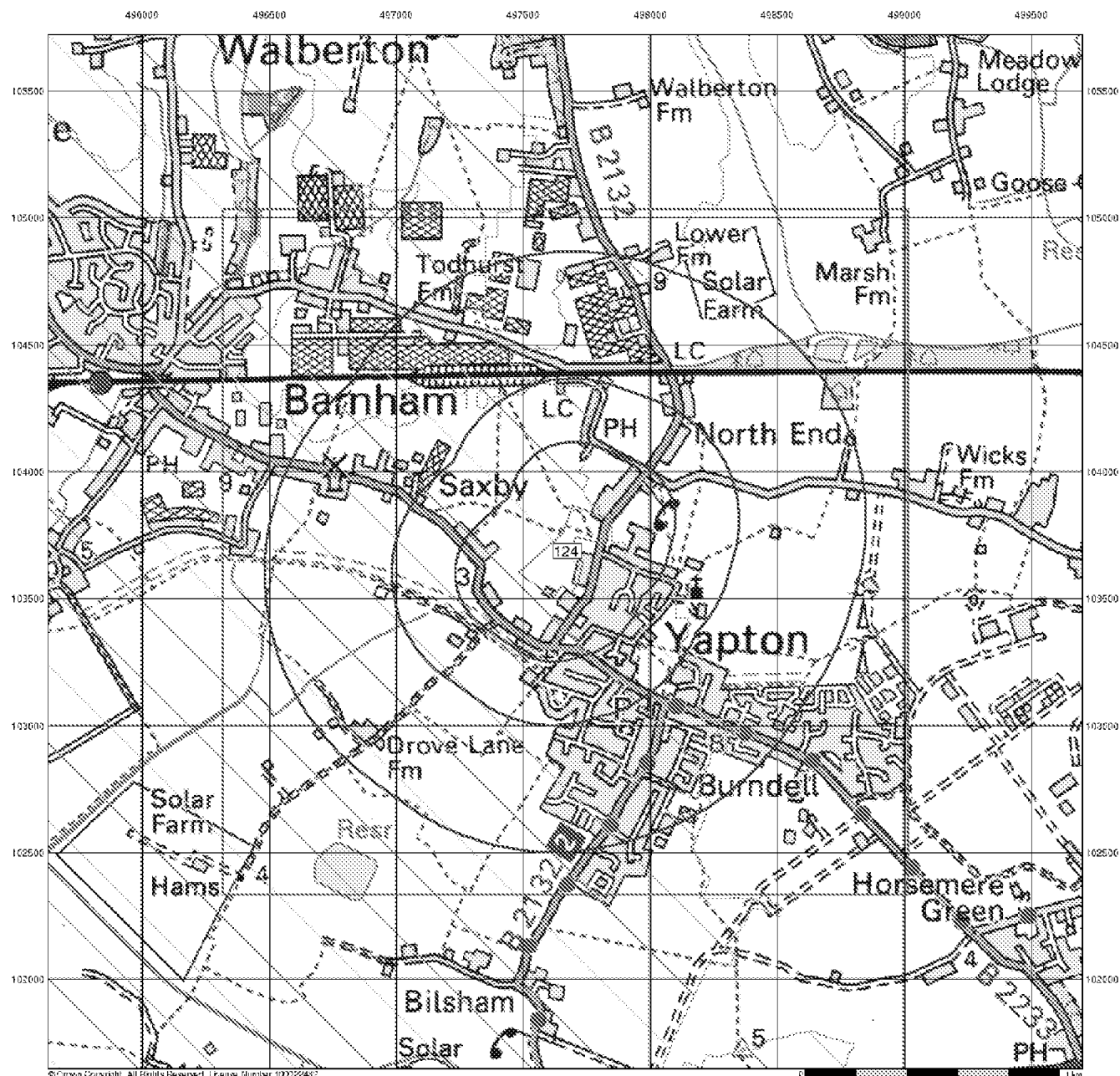
### Site Details

Land at Stakers Farm, North End Road, Yapton, ARUNDEL, BN18 0DU

**Landmark**  
 Environmental Services

Tel: 01444 544 0050  
 Fax: 01444 544 5551  
 Web: www.environmental.co.uk





© Crown Copyright. All Rights Reserved. License Number 100122452



## Sensitive Land Uses

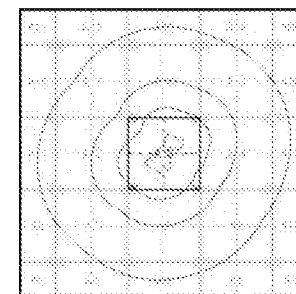
### General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

### Sensitive Land Uses

- Ancient Woodlands
- Area of Adopted Green Belt
- Area of Unadopted Green Belt
- Area of Outstanding Natural Beauty
- Environmentally Sensitive Area
- Forest Park
- Local Nature Reserve
- Marine Nature Reserve
- National Nature Reserve
- National Park
- Nitrate Sensitive Area
- Nitrate Vulnerable Zone
- Ramsar Site
- Site of Special Scientific Interest
- Special Area of Conservation
- Special Protection Area
- World Heritage Sites

### Site Sensitivity Context Map - Slice A

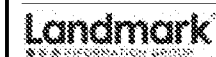


### Order Details

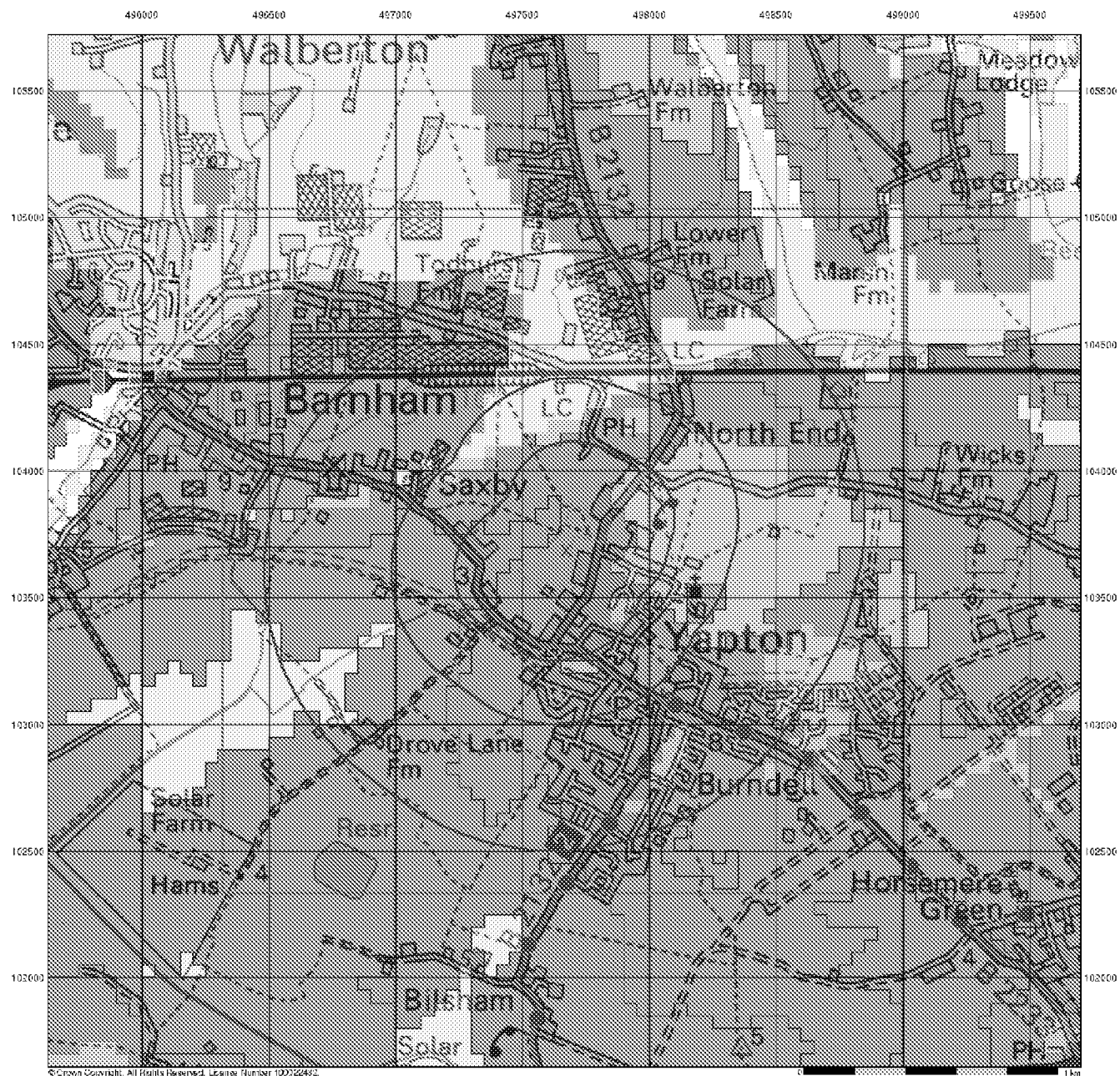
Order Number: 195300019\_1\_1  
 Customer Ref: A112666  
 National Grid Reference: 497670, 103690  
 Slice: A  
 Site Area (Ha): 5.34  
 Search Buffer (m): 1000

### Site Details

Land at Stakers Farm, North End Road, Yapton, ARUNDEL, BN18 0DU



Tel: 01444 544 0050  
 Fax: 01444 544 5551  
 Web: www.environmental.co.uk



© Crown Copyright. All Rights Reserved. License Number 100122452



## BGS Flood GFS Data

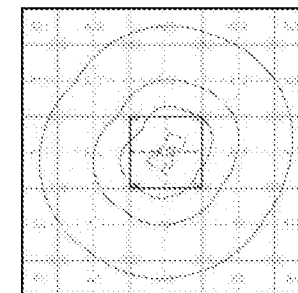
### General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Site

### Agency and Hydrological (Flood)

- Limited Potential for Groundwater Flooding to Occur
- Potential for Groundwater Flooding of Property Situated Below Ground Level
- Potential for Groundwater Flooding to Occur at Surface

### Site Sensitivity Context Map - Slice A

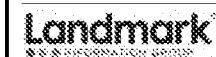


### Order Details

Order Number: 195300019\_1\_1  
 Customer Ref: A112666  
 National Grid Reference: 497670, 103690  
 Slice: A  
 Site Area (Ha): 5.34  
 Search Buffer (m): 1000

### Site Details

Land at Stakers Farm, North End Road, Yapton, ARUNDEL, BN18 0DU



Tel: 01444 544 0052  
 Fax: 01444 544 5551  
 Web: www.environment.co.uk



# Envirocheck<sup>®</sup> Report:

## Datasheet

### Order Details:

Order Number:

195300019\_1\_1

Customer Reference:

A112666

National Grid Reference:

497670, 103690

Slice:

A

Site Area (Ha):

5.34

Search Buffer (m):

1000

### Site Details:

Land at Stakers Farm, North End Road

Yapton

ARUNDEL

BN18 0DU

### Client Details:

Dr S Roberts

WYG Environment Planning Transport Ltd

Level 5, Longcross Court

47 Newport Road

Cardiff

CF24 0AD



| Report Section        | Page Number |
|-----------------------|-------------|
| Summary               | -           |
| Agency & Hydrological | 1           |
| Waste                 | 15          |
| Hazardous Substances  | -           |
| Geological            | 18          |
| Industrial Land Use   | 20          |
| Sensitive Land Use    | 28          |
| Data Currency         | 29          |
| Data Suppliers        | 34          |
| Useful Contacts       | 35          |

## Introduction

The Environment Act 1995 has made site sensitivity a key issue, as the legislation pays as much attention to the pathways by which contamination could spread, and to the vulnerable targets of contamination, as it does the potential sources of contamination. For this reason, Landmark's Site Sensitivity maps and Datasheet(s) place great emphasis on statutory data provided by the Environment Agency/Natural Resources Wales and the Scottish Environment Protection Agency; it also incorporates data from Natural England (and the Scottish and Welsh equivalents) and Local Authorities; and highlights hydrogeological features required by environmental and geotechnical consultants. It does not include any information concerning past uses of land. The datasheet is produced by querying the Landmark database to a distance defined by the client from a site boundary provided by the client. In this datasheet the National Grid References (NGRs) are rounded to the nearest 10m in accordance with Landmark's agreements with a number of Data Suppliers.

## Copyright Notice

© Landmark Information Group Limited 2019. The Copyright on the information and data and its format as contained in this Envirocheck® Report ("Report") is the property of Landmark Information Group Limited ("Landmark") and several other Data Providers, including (but not limited to) Ordnance Survey, British Geological Survey, the Environment Agency/Natural Resources Wales and Natural England, and must not be reproduced in whole or in part by photocopying or any other method. The Report is supplied under Landmark's Terms and Conditions accepted by the Customer.

A copy of Landmark's Terms and Conditions can be found with the Index Map for this report. Additional copies of the Report may be obtained from Landmark, subject to Landmark's charges in force from time to time. The Copyright, design rights and any other intellectual rights shall remain the exclusive property of Landmark and /or other Data providers, whose Copyright material has been included in this Report.

© Environment Agency & United Kingdom Research and Innovation 2019. © Natural Resources Wales & United Kingdom Research and Innovation 2019.

## Natural England Copyright Notice

Site of Special Scientific Interest, National Nature Reserve, Ramsar, Special Protection Area, Special Conservation Area, Marine Nature Reserve data (derived from Ordnance Survey 1:10000 raster) is provided by, and used with the permission of, Natural England who retain the copyright and Intellectual Property Rights for the data.

## Scottish Natural Heritage Copyright

Contains SNH information licensed under the Open Government Licence v3.0.

## Ove Arup Copyright Notice

The Mining Instability data was obtained on licence from Ove Arup & Partners Limited (for further information, contact [mining.review@arup.com](mailto:mining.review@arup.com)). No reproduction or further use of such Data is to be made without the prior written consent of Ove Arup & Partners Limited. The supplied Mining Instability data is derived from publicly available records and other third party sources and neither Ove Arup & Partners nor Landmark warrant the accuracy or completeness of such information or data.

## Peter Brett Associates Copyright Notice

The cavity data presented has been extracted from the PBA enhanced version of the original DEFRA national cavity databases. PBA/DEFRA retain the copyright & intellectual property rights in the data. Whilst all reasonable efforts are made to check that the information contained in the cavity databases is accurate we do not warrant that the data is complete or error free. The information is based upon our own researches and those collated from a number of external sources and is continually being augmented and updated by PBA. In no event shall PBA/DEFRA or Landmark be liable for any loss or damage including, without limitation, indirect or consequential loss or damage arising from the use of this data.

## Radon Potential dataset Copyright Notice

Information supplied from a joint dataset compiled by The British Geological Survey and Public Health England.

## Natural Resources Wales Copyright Notice

Contains Natural Resources Wales information © Natural Resources Wales and Database Right. All rights Reserved. Contains Ordnance Survey Data. Ordnance Survey Licence number 100019741. Crown Copyright and Database Right. Contains Natural Resources Wales information © Natural Resources Wales and Database Right. All rights Reserved. Some features of this information are based on digital spatial data licensed from the Centre for Ecology & Hydrology © NERC (CEH). Defra, Met Office and DARD Rivers Agency © Crown copyright. © Cranfield University. © James Hutton Institute. Contains OS data © Crown copyright and database right 2019. Land & Property Services © Crown copyright and database right.

## Report Version v53.0



## Summary

| Data Type                                                     | Page Number | On Site | 0 to 250m | 251 to 500m | 501 to 1000m (*up to 2000m) |
|---------------------------------------------------------------|-------------|---------|-----------|-------------|-----------------------------|
| <b>Agency &amp; Hydrological</b>                              |             |         |           |             |                             |
| BGS Groundwater Flooding Susceptibility                       | pg 1        | Yes     | Yes       | Yes         | n/a                         |
| Contaminated Land Register Entries and Notices                |             |         |           |             |                             |
| Discharge Consents                                            | pg 1        |         |           | 1           | 6                           |
| Prosecutions Relating to Controlled Waters                    |             |         | n/a       | n/a         | n/a                         |
| Enforcement and Prohibition Notices                           |             |         |           |             |                             |
| Integrated Pollution Controls                                 |             |         |           |             |                             |
| Integrated Pollution Prevention And Control                   |             |         |           |             |                             |
| Local Authority Integrated Pollution Prevention And Control   |             |         |           |             |                             |
| Local Authority Pollution Prevention and Controls             |             |         |           |             |                             |
| Local Authority Pollution Prevention and Control Enforcements |             |         |           |             |                             |
| Nearest Surface Water Feature                                 | pg 3        |         | Yes       |             |                             |
| Pollution Incidents to Controlled Waters                      | pg 3        |         |           |             | 1                           |
| Prosecutions Relating to Authorised Processes                 |             |         |           |             |                             |
| Registered Radioactive Substances                             |             |         |           |             |                             |
| River Quality                                                 |             |         |           |             |                             |
| River Quality Biology Sampling Points                         |             |         |           |             |                             |
| River Quality Chemistry Sampling Points                       |             |         |           |             |                             |
| Substantiated Pollution Incident Register                     |             |         |           |             |                             |
| Water Abstractions                                            | pg 3        |         | 1         |             | 7 (*18)                     |
| Water Industry Act Referrals                                  |             |         |           |             |                             |
| Groundwater Vulnerability                                     | pg 9        | Yes     | n/a       | n/a         | n/a                         |
| Drift Deposits                                                |             |         | n/a       | n/a         | n/a                         |
| Bedrock Aquifer Designations                                  | pg 10       | Yes     | n/a       | n/a         | n/a                         |
| Superficial Aquifer Designations                              | pg 10       | Yes     | n/a       | n/a         | n/a                         |
| Source Protection Zones                                       |             |         |           |             |                             |
| Extreme Flooding from Rivers or Sea without Defences          | pg 10       |         | Yes       | n/a         | n/a                         |
| Flooding from Rivers or Sea without Defences                  | pg 10       |         | Yes       | n/a         | n/a                         |
| Areas Benefiting from Flood Defences                          |             |         |           | n/a         | n/a                         |
| Flood Water Storage Areas                                     |             |         |           | n/a         | n/a                         |
| Flood Defences                                                |             |         |           | n/a         | n/a                         |
| OS Water Network Lines                                        | pg 10       |         | 1         | 1           | 40                          |



## Summary

| Data Type                                                           | Page Number | On Site | 0 to 250m | 251 to 500m | 501 to 1000m (*up to 2000m) |
|---------------------------------------------------------------------|-------------|---------|-----------|-------------|-----------------------------|
| <b>Waste</b>                                                        |             |         |           |             |                             |
| BGS Recorded Landfill Sites                                         |             |         |           |             |                             |
| Historical Landfill Sites                                           | pg 15       |         | 1         |             | 1                           |
| Integrated Pollution Control Registered Waste Sites                 |             |         |           |             |                             |
| Licensed Waste Management Facilities (Landfill Boundaries)          |             |         |           |             |                             |
| Licensed Waste Management Facilities (Locations)                    | pg 15       |         |           |             | 1                           |
| Local Authority Landfill Coverage                                   | pg 15       | 2       | n/a       | n/a         | n/a                         |
| Local Authority Recorded Landfill Sites                             | pg 15       |         |           |             | 1                           |
| Potentially Infilled Land (Non-Water)                               | pg 15       |         |           | 1           | 2                           |
| Potentially Infilled Land (Water)                                   | pg 16       |         | 1         |             | 13                          |
| Registered Landfill Sites                                           | pg 17       |         |           |             | 1                           |
| Registered Waste Transfer Sites                                     |             |         |           |             |                             |
| Registered Waste Treatment or Disposal Sites                        | pg 17       |         |           |             | 1                           |
| <b>Hazardous Substances</b>                                         |             |         |           |             |                             |
| Control of Major Accident Hazards Sites (COMAH)                     |             |         |           |             |                             |
| Explosive Sites                                                     |             |         |           |             |                             |
| Notification of Installations Handling Hazardous Substances (NIHHS) |             |         |           |             |                             |
| Planning Hazardous Substance Consents                               |             |         |           |             |                             |
| Planning Hazardous Substance Enforcements                           |             |         |           |             |                             |



## Summary

| Data Type                                                         | Page Number | On Site | 0 to 250m | 251 to 500m | 501 to 1000m (*up to 2000m) |
|-------------------------------------------------------------------|-------------|---------|-----------|-------------|-----------------------------|
| <b>Geological</b>                                                 |             |         |           |             |                             |
| BGS 1:625,000 Solid Geology                                       | pg 18       | Yes     | n/a       | n/a         | n/a                         |
| BGS Estimated Soil Chemistry                                      | pg 18       | Yes     | Yes       | Yes         | Yes                         |
| BGS Recorded Mineral Sites                                        | pg 18       |         |           | 1           | 2                           |
| BGS Urban Soil Chemistry                                          |             |         |           |             |                             |
| BGS Urban Soil Chemistry Averages                                 |             |         |           |             |                             |
| CBSCB Compensation District                                       |             |         | n/a       | n/a         | n/a                         |
| Coal Mining Affected Areas                                        |             |         | n/a       | n/a         | n/a                         |
| Mining Instability                                                |             |         | n/a       | n/a         | n/a                         |
| Man-Made Mining Cavities                                          |             |         |           |             |                             |
| Natural Cavities                                                  |             |         |           |             |                             |
| Non Coal Mining Areas of Great Britain                            |             |         |           | n/a         | n/a                         |
| Potential for Collapsible Ground Stability Hazards                | pg 19       | Yes     |           | n/a         | n/a                         |
| Potential for Compressible Ground Stability Hazards               |             |         |           | n/a         | n/a                         |
| Potential for Ground Dissolution Stability Hazards                | pg 19       | Yes     |           | n/a         | n/a                         |
| Potential for Landslide Ground Stability Hazards                  | pg 19       | Yes     |           | n/a         | n/a                         |
| Potential for Running Sand Ground Stability Hazards               | pg 19       | Yes     |           | n/a         | n/a                         |
| Potential for Shrinking or Swelling Clay Ground Stability Hazards | pg 19       | Yes     |           | n/a         | n/a                         |
| Radon Potential - Radon Affected Areas                            |             |         | n/a       | n/a         | n/a                         |
| Radon Potential - Radon Protection Measures                       |             |         | n/a       | n/a         | n/a                         |
| <b>Industrial Land Use</b>                                        |             |         |           |             |                             |
| Contemporary Trade Directory Entries                              | pg 20       |         | 20        | 4           | 25                          |
| Fuel Station Entries                                              | pg 24       |         | 1         |             | 1                           |
| Points of Interest - Commercial Services                          | pg 24       |         | 3         | 3           | 5                           |
| Points of Interest - Education and Health                         |             |         |           |             |                             |
| Points of Interest - Manufacturing and Production                 | pg 25       |         |           |             | 15                          |
| Points of Interest - Public Infrastructure                        | pg 26       |         |           |             | 1                           |
| Points of Interest - Recreational and Environmental               | pg 27       |         |           |             | 3                           |
| Gas Pipelines                                                     |             |         |           |             |                             |
| Underground Electrical Cables                                     |             |         |           |             |                             |



## Summary

| Data Type                            | Page Number | On Site | 0 to 250m | 251 to 500m | 501 to 1000m<br>(*up to 2000m) |
|--------------------------------------|-------------|---------|-----------|-------------|--------------------------------|
| <b>Sensitive Land Use</b>            |             |         |           |             |                                |
| Ancient Woodland                     |             |         |           |             |                                |
| Areas of Adopted Green Belt          |             |         |           |             |                                |
| Areas of Unadopted Green Belt        |             |         |           |             |                                |
| Areas of Outstanding Natural Beauty  |             |         |           |             |                                |
| Environmentally Sensitive Areas      |             |         |           |             |                                |
| Forest Parks                         |             |         |           |             |                                |
| Local Nature Reserves                |             |         |           |             |                                |
| Marine Nature Reserves               |             |         |           |             |                                |
| National Nature Reserves             |             |         |           |             |                                |
| National Parks                       |             |         |           |             |                                |
| Nitrate Sensitive Areas              |             |         |           |             |                                |
| Nitrate Vulnerable Zones             | pg 28       | 1       |           |             |                                |
| Ramsar Sites                         |             |         |           |             |                                |
| Sites of Special Scientific Interest |             |         |           |             |                                |
| Special Areas of Conservation        |             |         |           |             |                                |
| Special Protection Areas             |             |         |           |             |                                |
| World Heritage Sites                 |             |         |           |             |                                |





| Map ID | Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR           |
|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------|---------|---------------|
|        | <b>BGS Groundwater Flooding Susceptibility</b><br>Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | A13NW (N)                              | 0                            | 1       | 497650 103750 |
|        | <b>BGS Groundwater Flooding Susceptibility</b><br>Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | A13NE (S)                              | 0                            | 1       | 497671 103686 |
|        | <b>BGS Groundwater Flooding Susceptibility</b><br>Flooding Type: Limited Potential for Groundwater Flooding to Occur                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | A13SE (E)                              | 39                           | 1       | 497850 103650 |
|        | <b>BGS Groundwater Flooding Susceptibility</b><br>Flooding Type: Limited Potential for Groundwater Flooding to Occur                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | A13SE (SE)                             | 145                          | 1       | 497850 103500 |
|        | <b>BGS Groundwater Flooding Susceptibility</b><br>Flooding Type: Limited Potential for Groundwater Flooding to Occur                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | A18SW (N)                              | 237                          | 1       | 497650 104100 |
|        | <b>BGS Groundwater Flooding Susceptibility</b><br>Flooding Type: Limited Potential for Groundwater Flooding to Occur                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | A8NE (S)                               | 255                          | 1       | 497671 103250 |
|        | <b>BGS Groundwater Flooding Susceptibility</b><br>Flooding Type: Potential for Groundwater Flooding to Occur at Surface                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | A18SW (N)                              | 298                          | 1       | 497500 104100 |
|        | <b>BGS Groundwater Flooding Susceptibility</b><br>Flooding Type: Limited Potential for Groundwater Flooding to Occur                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | A18SE (NE)                             | 337                          | 1       | 497900 104150 |
|        | <b>BGS Groundwater Flooding Susceptibility</b><br>Flooding Type: Limited Potential for Groundwater Flooding to Occur                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | A18SW (NW)                             | 346                          | 1       | 497400 104050 |
|        | <b>BGS Groundwater Flooding Susceptibility</b><br>Flooding Type: Limited Potential for Groundwater Flooding to Occur                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | A13NW (NW)                             | 369                          | 1       | 497350 104000 |
|        | <b>BGS Groundwater Flooding Susceptibility</b><br>Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | A14SW (E)                              | 369                          | 1       | 498150 103550 |
|        | <b>BGS Groundwater Flooding Susceptibility</b><br>Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | A17SE (NW)                             | 445                          | 1       | 497300 104100 |
| 1      | <b>Discharge Consents</b><br>Operator: Mitcham Tyre Mart<br>Property Type: DOMESTIC PROPERTY (SINGLE) (INCL FARM HOUSE)<br>Location: Lake Barn, Maypole Lane, Yapton Lake Barn, Maypole Lane, Yapton, West Sussex, BN18 0dr<br>Authority: Environment Agency, Southern Region<br>Catchment Area: Adur Estuary & Freshwater Tributaries<br>Reference: P11155<br>Permit Version: 1<br>Effective Date: 8th July 2003<br>Issued Date: 8th July 2003<br>Revocation Date: Not Supplied<br>Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company<br>Discharge Environment: Land/Soakaway<br>Receiving Water: Soakaway<br><b>Status:</b> New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)<br>Positional Accuracy: Located by supplier to within 10m | A18SE (N)                              | 493                          | 2       | 497700 104360 |
| 2      | <b>Discharge Consents</b><br>Operator: Mrs A.M.Cooper<br>Property Type: DOMESTIC PROPERTY (SINGLE) (INCL FARM HOUSE)<br>Location: Lake Dell, Maypole Lane, Yapton , Arundel West Sussex<br>Authority: Environment Agency, Southern Region<br>Catchment Area: Not Given<br>Reference: P00609<br>Permit Version: 1<br>Effective Date: 11th September 1986<br>Issued Date: 11th September 1986<br>Revocation Date: 31st March 1997<br>Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company<br>Discharge Environment: Land/Soakaway<br>Receiving Water: Into Land<br><b>Status:</b> Lapsed (under Environment Act 1995, Schedule 23)<br>Positional Accuracy: Located by supplier to within 100m                                                                                                   | A18NE (N)                              | 575                          | 2       | 497740 104440 |



## Agency & Hydrological

| Map ID | Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR              |
|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------|---------|------------------|
| 3      | <b>Discharge Consents</b><br>Operator: Mr M Tristram & Mr D Tristram<br>Property Type: DOMESTIC PROPERTY (SINGLE) (INCL FARM HOUSE)<br>Location: Binsted Nursery Lake Lane Site Lake Lane, Barnham, ., West Sussex, Po22 0al<br>Authority: Environment Agency, Southern Region<br>Catchment Area: Aldingbourne/Barnham Rife<br>Reference: Npswqd003181<br>Permit Version: 1<br>Effective Date: 18th June 2008<br>Issued Date: 18th June 2008<br>Revocation Date: Not Supplied<br>Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company<br>Discharge: Freshwater Stream/River<br>Environment:<br>Receiving Water: Tributary Of Ryebank Rife<br><b>Status:</b> <b>New Consent (Water Resources Act 1991, Section 88 &amp; Schedule 10 as amended by Environment Act 1995)</b><br>Positional Accuracy: Located by supplier to within 10m | A18NW (N)                              | 787                          | 2       | 497344<br>104572 |
| 4      | <b>Discharge Consents</b><br>Operator: Mr Richard Hocking<br>Property Type: Mixed Farming<br>Location: Drove Lane Farm, Yapton, Arundel, West Sussex, Bn18 0eb<br>Authority: Environment Agency, Southern Region<br>Catchment Area: Not Supplied<br>Reference: App/So/107su<br>Permit Version: 1<br>Effective Date: 1st April 1999<br>Issued Date: 1st April 1999<br>Revocation Date: Not Supplied<br>Discharge Type: Trade Discharge - Process Water<br>Discharge: Into Land<br>Environment:<br>Receiving Water: Into Land<br><b>Status:</b> <b>New Consent (Water Resources Act 1991, Section 88 &amp; Schedule 10 as amended by Environment Act 1995)</b><br>Positional Accuracy: Located by supplier to within 10m                                                                                                                                         | A7SW (SW)                              | 861                          | 2       | 496940<br>102930 |
| 5      | <b>Discharge Consents</b><br>Operator: Enterprising Developments Ltd<br>Property Type: DOMESTIC PROPERTY (MULTIPLE) (INCL FARM HOUSES)<br>Location: New Estate At Belmont Estate, YAPTON<br>Authority: Environment Agency, Southern Region<br>Catchment Area: Not Given<br>Reference: S02741<br>Permit Version: 1<br>Effective Date: 1st July 1991<br>Issued Date: 1st July 1991<br>Revocation Date: 31st March 1997<br>Discharge Type: Discharge Of Other Matter-Surface Water<br>Discharge: Freshwater Stream/River<br>Environment:<br>Receiving Water: Freshwater River<br><b>Status:</b> <b>Lapsed (under Environment Act 1995, Schedule 23)</b><br>Positional Accuracy: Located by supplier to within 100m                                                                                                                                                | A9SW (SE)                              | 881                          | 2       | 498110<br>102750 |
| 6      | <b>Discharge Consents</b><br>Operator: James Turner<br>Property Type: Undefined Or Other<br>Location: Star Plants, Lakes Lane, Barnham, West Sussex<br>Authority: Environment Agency, Southern Region<br>Catchment Area: Not Supplied<br>Reference: App/So/120su<br>Permit Version: 1<br>Effective Date: 1st April 1999<br>Issued Date: 1st April 1999<br>Revocation Date: 30th March 2006<br>Discharge Type: Trade Discharge - Process Water<br>Discharge: Into Land<br>Environment:<br>Receiving Water: Into Land<br><b>Status:</b> <b>Revoked Groundwater Regulations Authorisation</b><br>Positional Accuracy: Located by supplier to within 10m                                                                                                                                                                                                           | A23SW (N)                              | 900                          | 2       | 497580<br>104760 |



| Map ID | Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR           |
|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------|---------|---------------|
| 7      | <b>Discharge Consents</b><br>Operator: Ambleside Developments Ltd.<br>Property Type: CONSTRUCTION OF BUILDINGS<br>Location: Residential Development, Off Cherry Lane, Yapton West Sussex<br>Authority: Environment Agency, Southern Region<br>Catchment Area: Not Given<br>Reference: S02208<br>Permit Version: 1<br>Effective Date: 21st August 1973<br>Issued Date: 21st August 1973<br>Revocation Date: 31st March 1997<br>Discharge Type: Discharge Of Other Matter-Surface Water<br>Discharge: Freshwater Stream/River<br>Environment: Freshwater River<br>Receiving Water: Freshwater River<br><b>Status: Lapsed (under Environment Act 1995, Schedule 23)</b><br>Positional Accuracy: Located by supplier to within 100m | A9SW (SE)                              | 916                          | 2       | 498090 102700 |
|        | <b>Nearest Surface Water Feature</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | A13NW (N)                              | 78                           | -       | 497609 103872 |
| 8      | <b>Pollution Incidents to Controlled Waters</b><br>Property Type: Water Company Sewage: Treated Water Distribution System<br>Location: Location Description Not Available<br>Authority: Environment Agency, Southern Region<br>Pollutant: Surcharged Sewage<br>Note: Sewage Flooding Garden;Running Along Road;Entering W/C<br>Incident Date: 7th January 1998<br>Incident Reference: 2362<br>Catchment Area: Not Given<br>Receiving Water: Not Given<br>Cause of Incident: Water Company STW<br>Incident Severity: Category 3 - Minor Incident<br>Positional Accuracy: Located by supplier to within 100m                                                                                                                      | A18NE (N)                              | 543                          | 2       | 497800 104400 |
| 9      | <b>Water Abstractions</b><br>Operator: Mr A Clay Esq<br>Licence Number: 10/41/411007<br>Permit Version: 100<br>Location: The Streddles, North End Road, Yapton<br>Authority: Environment Agency, Southern Region<br>Abstraction: Agriculture: Horticultural Watering<br>Abstraction Type: Water may be abstracted from a single point<br>Source: Groundwater<br>Daily Rate (m3): Not Supplied<br>Yearly Rate (m3): Not Supplied<br>Details: See Licence Map<br>Authorised Start: 01 April<br>Authorised End: 31 March<br>Permit Start Date: 18th July 1979<br>Permit End Date: Not Supplied<br>Positional Accuracy: Located by supplier to within 100m                                                                          | A13NE (NE)                             | 17                           | 2       | 497840 103830 |
| 10     | <b>Water Abstractions</b><br>Operator: Adviserate T/A Southdown Flowers<br>Licence Number: 412002<br>Permit Version: Not Supplied<br>Location: Adviserate Limited<br>Authority: Environment Agency, Southern Region<br>Abstraction: Spray Irrigation<br>Abstraction Type: Not Supplied<br>Source: Surface<br>Daily Rate (m3): 68<br>Yearly Rate (m3): 18181<br>Details: Todhurst Rife (Trib Arun)<br>Authorised Start: Not Supplied<br>Authorised End: Not Supplied<br>Permit Start Date: Not Supplied<br>Permit End Date: Not Supplied<br>Positional Accuracy: Located by supplier to within 100m                                                                                                                              | A18NE (NE)                             | 607                          | 2       | 498000 104400 |



| Map ID | Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR           |
|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------|---------|---------------|
| 11     | <b>Water Abstractions</b><br>Operator: Fresh Acres Nurseries Ltd<br>Licence Number: 10/41/412002<br>Permit Version: 100<br>Location: Todhurst Rife At Yapton Lane, Walberton<br>Authority: Environment Agency, Southern Region<br>Abstraction: General Agriculture: Spray Irrigation - Direct<br>Abstraction Type: Water may be abstracted from a river or stream reach, or a row of wellpoints<br>Source: Surface<br>Daily Rate (m3): 68<br>Yearly Rate (m3): 18181.6<br>Details: See Licence Map<br>Authorised Start: 01 April<br>Authorised End: 31 March<br>Permit Start Date: 29th June 1998<br>Permit End Date: Not Supplied<br>Positional Accuracy: Located by supplier to within 100m                                                                                            | A18NE (N)                              | 714                          | 2       | 497730 104580 |
| 12     | <b>Water Abstractions</b><br>Operator: Star Nurseries Ltd<br>Licence Number: 27/176<br>Permit Version: 101<br>Location: Todhurst Rife At Star Nurseries, Barnham<br>Authority: Environment Agency, Southern Region<br>Abstraction: Horticulture and Nurseries: Spray Irrigation - Spray Irrigation Definition Order<br>Abstraction Type: Water may be abstracted from a single point<br>Source: Surface<br>Daily Rate (m3): Not Supplied<br>Yearly Rate (m3): Not Supplied<br>Details: Outlined On Map<br>Authorised Start: 01 January<br>Authorised End: 31 December<br>Permit Start Date: 13th October 2016<br>Permit End Date: Not Supplied<br>Positional Accuracy: Located by supplier to within 100m                                                                                | A23SE (N)                              | 833                          | 2       | 497700 104700 |
| 12     | <b>Water Abstractions</b><br>Operator: Star Nurseries Ltd<br>Licence Number: 27/176<br>Permit Version: 100<br>Location: Todhurst Rife At Star Nurseries, Barnham<br>Authority: Environment Agency, Southern Region<br>Abstraction: Horticulture and Nurseries: Spray Irrigation - Spray Irrigation Definition Order<br>Abstraction Type: Water may be abstracted from a single point<br>Source: Surface<br>Daily Rate (m3): Not Supplied<br>Yearly Rate (m3): Not Supplied<br>Details: Outlined On Map<br>Authorised Start: 01 January<br>Authorised End: 31 December<br>Permit Start Date: 16th June 2009<br>Permit End Date: Not Supplied<br>Positional Accuracy: Located by supplier to within 100m                                                                                   | A23SE (N)                              | 833                          | 2       | 497700 104700 |
| 13     | <b>Water Abstractions</b><br>Operator: Eric Wall Holdings Ltd<br>Licence Number: 10/41/542208<br>Permit Version: 100<br>Location: Point B, Lake Lane, Barnham<br>Authority: Environment Agency, Southern Region<br>Abstraction: Horticulture And Nurseries: Spray Irrigation - Direct<br>Abstraction Type: Water may be abstracted from a single point<br>Source: Groundwater<br>Daily Rate (m3): Not Supplied<br>Yearly Rate (m3): Not Supplied<br>Details: The Water Abstracted Shall Only Be Used On Land And Buildings On The Occupation Of The Licence Holder At Lake Lane, Barnham<br>Authorised Start: 01 January<br>Authorised End: 31 December<br>Permit Start Date: 10th June 2009<br>Permit End Date: Not Supplied<br>Positional Accuracy: Located by supplier to within 100m | A17NE (NW)                             | 921                          | 2       | 497110 104580 |



| Map ID | Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR           |
|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------|---------|---------------|
| 14     | <b>Water Abstractions</b><br>Operator: Keith Langmead Ltd<br>Licence Number: 10/41/412007<br>Permit Version: 101<br>Location: Wicks Farm, Ford<br>Authority: Environment Agency, Southern Region<br>Abstraction: General Agriculture: Spray Irrigation - Direct<br>Abstraction Type: Water may be abstracted from a single point<br>Source: Groundwater<br>Daily Rate (m3): Not Supplied<br>Yearly Rate (m3): Not Supplied<br>Details: See Licence Map<br>Authorised Start: 01 June<br>Authorised End: 30 September<br>Permit Start Date: 31st March 2016<br>Permit End Date: Not Supplied<br>Positional Accuracy: Located by supplier to within 10m                                                                                                                 | A15NW (E)                              | 950                          | 2       | 498790 103930 |
| 14     | <b>Water Abstractions</b><br>Operator: Mr A C Langmead Esq<br>Licence Number: 10/41/412007<br>Permit Version: 100<br>Location: Wicks Farm, Ford<br>Authority: Environment Agency, Southern Region<br>Abstraction: General Agriculture: Spray Irrigation - Direct<br>Abstraction Type: Water may be abstracted from a single point<br>Source: Groundwater<br>Daily Rate (m3): Not Supplied<br>Yearly Rate (m3): Not Supplied<br>Details: See Licence Map<br>Authorised Start: 01 June<br>Authorised End: 30 September<br>Permit Start Date: 30th May 1989<br>Permit End Date: Not Supplied<br>Positional Accuracy: Located by supplier to within 100m                                                                                                                 | A15NW (E)                              | 950                          | 2       | 498790 103930 |
|        | <b>Water Abstractions</b><br>Operator: Mr R Lonsdale<br>Licence Number: 10/41/542008<br>Permit Version: 101<br>Location: Point A At Tile Barn Farm, Barnham<br>Authority: Environment Agency, Southern Region<br>Abstraction: General Agriculture: Spray Irrigation - Direct<br>Abstraction Type: Water may be abstracted from a single point<br>Source: Groundwater<br>Daily Rate (m3): Not Supplied<br>Yearly Rate (m3): Not Supplied<br>Details: Water Abstracted Shall Be Used On Land And Buildings In The Occupation Of The Licence Holder At Tile Barn Farm<br>Authorised Start: 01 April<br>Authorised End: 30 September<br>Permit Start Date: 17th January 2008<br>Permit End Date: Not Supplied<br>Positional Accuracy: Located by supplier to within 10m  | A11NE (W)                              | 1025                         | 2       | 496460 103690 |
|        | <b>Water Abstractions</b><br>Operator: Mr R Lonsdale<br>Licence Number: 10/41/542008<br>Permit Version: 100<br>Location: Point A At Tile Barn Farm, Barnham<br>Authority: Environment Agency, Southern Region<br>Abstraction: General Agriculture: Spray Irrigation - Direct<br>Abstraction Type: Water may be abstracted from a single point<br>Source: Groundwater<br>Daily Rate (m3): Not Supplied<br>Yearly Rate (m3): Not Supplied<br>Details: Water Abstracted Shall Be Used On Land And Buildings In The Occupation Of The Licence Holder At Tile Barn Farm<br>Authorised Start: 01 April<br>Authorised End: 30 September<br>Permit Start Date: 14th January 1974<br>Permit End Date: Not Supplied<br>Positional Accuracy: Located by supplier to within 100m | A11NE (W)                              | 1025                         | 2       | 496460 103690 |



| Map ID | Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR           |
|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------|---------|---------------|
|        | <b>Water Abstractions</b><br>Operator: Walberton Nursery Llp<br>Licence Number: 10/41/412006<br>Permit Version: 101<br>Location: Todhurst Barn, Yapton Lane, Walberton<br>Authority: Environment Agency, Southern Region<br>Abstraction: Agriculture: Horticultural Watering<br>Abstraction Type: Water may be abstracted from a single point<br>Source: Groundwater<br>Daily Rate (m3): Not Supplied<br>Yearly Rate (m3): Not Supplied<br>Details: See Licence Map<br>Authorised Start: 01 April<br>Authorised End: 30 September<br>Permit Start Date: 24th January 2014<br>Permit End Date: Not Supplied<br>Positional Accuracy: Located by supplier to within 10m                                                                                                      | A23SW (N)                              | 1106                         | 2       | 497610 104970 |
|        | <b>Water Abstractions</b><br>Operator: D Tristram T/A Walberton Nurseries<br>Licence Number: 10/41/412006<br>Permit Version: 100<br>Location: Todhurst Barn, Yapton Lane, Walberton<br>Authority: Environment Agency, Southern Region<br>Abstraction: Agriculture: Horticultural Watering<br>Abstraction Type: Water may be abstracted from a single point<br>Source: Groundwater<br>Daily Rate (m3): Not Supplied<br>Yearly Rate (m3): Not Supplied<br>Details: See Licence Map<br>Authorised Start: 01 April<br>Authorised End: 30 September<br>Permit Start Date: 1st April 2008<br>Permit End Date: Not Supplied<br>Positional Accuracy: Located by supplier to within 100m                                                                                           | A23SW (N)                              | 1106                         | 2       | 497610 104970 |
|        | <b>Water Abstractions</b><br>Operator: Eric Wall Holdings Ltd<br>Licence Number: 10/41/542208<br>Permit Version: 100<br>Location: Point A, Lake Lane, Barnham<br>Authority: Environment Agency, Southern Region<br>Abstraction: Horticulture And Nurseries: Spray Irrigation - Direct<br>Abstraction Type: Water may be abstracted from a single point<br>Source: Groundwater<br>Daily Rate (m3): 545<br>Yearly Rate (m3): 100000<br>Details: The Water Abstracted Shall Only Be Used On Land And Buildings On The Occupation Of The Licence Holder At Lake Lane, Barnham<br>Authorised Start: 01 January<br>Authorised End: 31 December<br>Permit Start Date: 10th June 2009<br>Permit End Date: Not Supplied<br>Positional Accuracy: Located by supplier to within 100m | A17NW (NW)                             | 1185                         | 2       | 496740 104570 |
|        | <b>Water Abstractions</b><br>Operator: Keith Langmead Ltd<br>Licence Number: 27/190<br>Permit Version: 102<br>Location: Point A On Binstead Rife, Wicks Farm, Yapton<br>Authority: Environment Agency, Southern Region<br>Abstraction: General Agriculture: Spray Irrigation - Storage<br>Abstraction Type: Water may be abstracted from a single point<br>Source: Surface<br>Daily Rate (m3): Not Supplied<br>Yearly Rate (m3): Not Supplied<br>Details: Shown Outlined In Red On Licence Map<br>Authorised Start: 01 November<br>Authorised End: 31 March<br>Permit Start Date: 4th December 2010<br>Permit End Date: Not Supplied<br>Positional Accuracy: Located by supplier to within 10m                                                                            | A20NW (NE)                             | 1191                         | 2       | 498810 104510 |



| Map ID | Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR           |
|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------|---------|---------------|
|        | <b>Water Abstractions</b><br>Operator: Keith Langmead Ltd<br>Licence Number: 27/190<br>Permit Version: 101<br>Location: Point A On Binstead Rife, Wicks Farm, Yapton<br>Authority: Environment Agency, Southern Region<br>Abstraction: General Agriculture: Spray Irrigation - Storage<br>Abstraction Type: Water may be abstracted from a single point<br>Source: Surface<br>Daily Rate (m3): Not Supplied<br>Yearly Rate (m3): Not Supplied<br>Details: Shown Outlined In Black On Licence Map<br>Authorised Start: 01 November<br>Authorised End: 31 March<br>Permit Start Date: 1st April 2001<br>Permit End Date: Not Supplied<br>Positional Accuracy: Located by supplier to within 10m   | A20NW (NE)                             | 1191                         | 2       | 498810 104510 |
|        | <b>Water Abstractions</b><br>Operator: A.C. Langmead Ltd<br>Licence Number: 27/190<br>Permit Version: 100<br>Location: Point A On Binstead Rife, Wicks Farm, Yapton<br>Authority: Environment Agency, Southern Region<br>Abstraction: General Agriculture: Spray Irrigation - Storage<br>Abstraction Type: Water may be abstracted from a single point<br>Source: Surface<br>Daily Rate (m3): Not Supplied<br>Yearly Rate (m3): Not Supplied<br>Details: Shown Outlined In Black On Licence Map<br>Authorised Start: 01 November<br>Authorised End: 31 March<br>Permit Start Date: 16th August 1996<br>Permit End Date: Not Supplied<br>Positional Accuracy: Located by supplier to within 100m | A20NW (NE)                             | 1191                         | 2       | 498810 104510 |
|        | <b>Water Abstractions</b><br>Operator: Walberton Nursery Lip<br>Licence Number: 27/194a/R01<br>Permit Version: 1<br>Location: Point A At Walberton Nurseries, Walberton<br>Authority: Environment Agency, Southern Region<br>Abstraction: General Agriculture: Spray Irrigation - Direct<br>Abstraction Type: Water may be abstracted from a single point<br>Source: Groundwater<br>Daily Rate (m3): Not Supplied<br>Yearly Rate (m3): Not Supplied<br>Details: No Longer Applicable<br>Authorised Start: 01 April<br>Authorised End: 31 March<br>Permit Start Date: 1st April 2016<br>Permit End Date: Not Supplied<br>Positional Accuracy: Located by supplier to within 10m                  | A23NW (N)                              | 1314                         | 2       | 497640 105180 |
|        | <b>Water Abstractions</b><br>Operator: Walberton Nursery Lip<br>Licence Number: 27/194a<br>Permit Version: 2<br>Location: Point A At Walberton Nurseries, Walberton<br>Authority: Environment Agency, Southern Region<br>Abstraction: General Agriculture: Spray Irrigation - Direct<br>Abstraction Type: Water may be abstracted from a single point<br>Source: Groundwater<br>Daily Rate (m3): Not Supplied<br>Yearly Rate (m3): Not Supplied<br>Details: No Longer Applicable<br>Authorised Start: 01 January<br>Authorised End: 31 December<br>Permit Start Date: 17th April 2014<br>Permit End Date: Not Supplied<br>Positional Accuracy: Located by supplier to within 10m                | A23NW (N)                              | 1314                         | 2       | 497640 105180 |



| Map ID | Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR           |
|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------|---------|---------------|
|        | <b>Water Abstractions</b><br>Operator: D Tristram T/A Walberton Nurseries<br>Licence Number: 27/194a<br>Permit Version: 1<br>Location: Point A At Walberton Nurseries, Walberton<br>Authority: Environment Agency, Southern Region<br>Abstraction: General Agriculture: Spray Irrigation - Direct<br>Abstraction Type: Water may be abstracted from a single point<br>Source: Groundwater<br>Daily Rate (m3): Not Supplied<br>Yearly Rate (m3): Not Supplied<br>Details: No Longer Applicable<br>Authorised Start: 01 January<br>Authorised End: 31 December<br>Permit Start Date: 16th June 2009<br>Permit End Date: Not Supplied<br>Positional Accuracy: Located by supplier to within 10m                                                                               | A23NW (N)                              | 1314                         | 2       | 497640 105180 |
|        | <b>Water Abstractions</b><br>Operator: D Tristram T/A Walberton Nurseries<br>Licence Number: 27/194<br>Permit Version: 100<br>Location: Point A At Walberton Nurseries, Walberton<br>Authority: Environment Agency, Southern Region<br>Abstraction: Horticulture And Nurseries: Spray Irrigation - Direct<br>Abstraction Type: Water may be abstracted from a single point<br>Source: Groundwater<br>Daily Rate (m3): Not Supplied<br>Yearly Rate (m3): Not Supplied<br>Details: Shown Outlined Black On Attached Map<br>Authorised Start: 01 January<br>Authorised End: 31 December<br>Permit Start Date: 2nd April 1998<br>Permit End Date: Not Supplied<br>Positional Accuracy: Located by supplier to within 100m                                                      | A23NW (N)                              | 1314                         | 2       | 497640 105180 |
|        | <b>Water Abstractions</b><br>Operator: Mr A Langmead<br>Licence Number: 10/41/412004<br>Permit Version: 100<br>Location: Wicks Farm, Yapton<br>Authority: Environment Agency, Southern Region<br>Abstraction: General Farming And Domestic<br>Abstraction Type: Water may be abstracted from a single point<br>Source: Groundwater<br>Daily Rate (m3): Not Supplied<br>Yearly Rate (m3): Not Supplied<br>Details: See Licence Map<br>Authorised Start: 01 April<br>Authorised End: 31 March<br>Permit Start Date: 2nd April 1987<br>Permit End Date: Not Supplied<br>Positional Accuracy: Located by supplier to within 100m                                                                                                                                               | A15NE (E)                              | 1486                         | 2       | 499330 103910 |
|        | <b>Water Abstractions</b><br>Operator: Toddington Nurseries Limited<br>Licence Number: 10/41/542209<br>Permit Version: 102<br>Location: At Lake Lane, Barnham<br>Authority: Environment Agency, Southern Region<br>Abstraction: Horticulture And Nurseries: Spray Irrigation - Direct<br>Abstraction Type: Water may be abstracted from a single point<br>Source: Groundwater<br>Daily Rate (m3): Not Supplied<br>Yearly Rate (m3): Not Supplied<br>Details: Water Abstracted Shall Only Be Used On Land And Buildings Marked In Pink On The Plan Accompanying The Licence<br>Authorised Start: 01 January<br>Authorised End: 31 December<br>Permit Start Date: 9th August 2013<br>Permit End Date: Not Supplied<br>Positional Accuracy: Located by supplier to within 10m | A22NW (NW)                             | 1607                         | 2       | 496740 105160 |





## Agency & Hydrological

| Map ID | Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR              |
|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------|---------|------------------|
|        | <b>Water Abstractions</b><br>Operator: Kirin Agribo Toddington Ltd<br>Licence Number: 10/41/542209<br>Permit Version: 101<br>Location: At Lake Lane, Barnham<br>Authority: Environment Agency, Southern Region<br>Abstraction: Horticulture And Nurseries: Spray Irrigation - Direct<br>Abstraction Type: Water may be abstracted from a single point<br>Source: Groundwater<br>Daily Rate (m3): Not Supplied<br>Yearly Rate (m3): Not Supplied<br>Details: Water Abstracted Shall Only Be Used On Land And Buildings Marked In Pink On The Plan Accompanying The Licence<br>Authorised Start: 01 January<br>Authorised End: 31 December<br>Permit Start Date: 10th June 2009<br>Permit End Date: Not Supplied<br>Positional Accuracy: Located by supplier to within 10m      | A22NW (NW)                             | 1607                         | 2       | 496740<br>105160 |
|        | <b>Water Abstractions</b><br>Operator: Southern Glasshouse Produce Ltd<br>Licence Number: 10/41/542209<br>Permit Version: 100<br>Location: At Lake Lane, Barnham<br>Authority: Environment Agency, Southern Region<br>Abstraction: Horticulture And Nurseries: Spray Irrigation - Direct<br>Abstraction Type: Water may be abstracted from a single point<br>Source: Groundwater<br>Daily Rate (m3): Not Supplied<br>Yearly Rate (m3): Not Supplied<br>Details: Water Abstracted Shall Only Be Used On Land And Buildings Marked In Pink On The Plan Accompanying The Licence<br>Authorised Start: 01 January<br>Authorised End: 31 December<br>Permit Start Date: 15th June 1992<br>Permit End Date: Not Supplied<br>Positional Accuracy: Located by supplier to within 100m | A22NW (NW)                             | 1607                         | 2       | 496740<br>105160 |
|        | <b>Water Abstractions</b><br>Operator: Tarmac Ltd<br>Licence Number: 27/198<br>Permit Version: 1<br>Location: Ford Industrial Estate, Arundel<br>Authority: Environment Agency, Southern Region<br>Abstraction: Construction: Process Water<br>Abstraction Type: Water may be abstracted from a single point<br>Source: Groundwater<br>Daily Rate (m3): Not Supplied<br>Yearly Rate (m3): Not Supplied<br>Details: Outlined In Black On Attached Map<br>Authorised Start: 01 January<br>Authorised End: 31 December<br>Permit Start Date: 4th January 2001<br>Permit End Date: Not Supplied<br>Positional Accuracy: Located by supplier to within 10m                                                                                                                         | (E)                                    | 1734                         | 2       | 499530<br>103390 |
|        | <b>Water Abstractions</b><br>Operator: Tarmac Heavy Building Materials Ltd<br>Licence Number: 27/196<br>Permit Version: 1<br>Location: Ford Industrial Estate, Arundel<br>Authority: Environment Agency, Southern Region<br>Abstraction: Construction: Process Water<br>Abstraction Type: Water may be abstracted from a single point<br>Source: Groundwater<br>Daily Rate (m3): Not Supplied<br>Yearly Rate (m3): Not Supplied<br>Details: Outlined On Licence Map<br>Authorised Start: 13 March<br>Authorised End: 31 December<br>Permit Start Date: 13th March 2000<br>Permit End Date: Not Supplied<br>Positional Accuracy: Located by supplier to within 10m                                                                                                             | (E)                                    | 1734                         | 2       | 499530<br>103390 |
|        | <b>Groundwater Vulnerability</b><br>Soil Classification: Soils of Intermediate Leaching Potential (I1) - Soils which can possibly transmit a wide range of pollutants<br>Map Sheet: Sheet 45 West Sussex and Surrey<br>Scale: 1:100,000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | A13NE (S)                              | 0                            | 2       | 497671<br>103686 |
|        | <b>Drift Deposits</b><br>None                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                        |                              |         |                  |



## Agency & Hydrological

| Map ID | Details                                                                                                                                                                                                                                    | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR              |
|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------|---------|------------------|
|        | <b>Bedrock Aquifer Designations</b><br>Aquifer Designation: Principal Aquifer                                                                                                                                                              | A13NE (S)                              | 0                            | 3       | 497671<br>103686 |
|        | <b>Superficial Aquifer Designations</b><br>Aquifer Designation: Secondary Aquifer - A                                                                                                                                                      | A13NE (S)                              | 0                            | 3       | 497671<br>103686 |
|        | <b>Extreme Flooding from Rivers or Sea without Defences</b><br>Type: Extent of Extreme Flooding from Rivers or Sea without Defences<br>Flood Plain Type: Fluvial Models<br>Boundary Accuracy: As Supplied                                  | A13SW (W)                              | 81                           | 2       | 497411<br>103644 |
|        | <b>Flooding from Rivers or Sea without Defences</b><br>Type: Extent of Flooding from Rivers or Sea without Defences<br>Flood Plain Type: Fluvial Models<br>Boundary Accuracy: As Supplied                                                  | A12SE (W)                              | 163                          | 2       | 497322<br>103563 |
|        | <b>Areas Benefiting from Flood Defences</b><br>None                                                                                                                                                                                        |                                        |                              |         |                  |
|        | <b>Flood Water Storage Areas</b><br>None                                                                                                                                                                                                   |                                        |                              |         |                  |
|        | <b>Flood Defences</b><br>None                                                                                                                                                                                                              |                                        |                              |         |                  |
| 15     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 175.3<br>Watercourse Level: Not Supplied<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: West Streams<br>Primacy: 1         | A12SE (W)                              | 161                          | 4       | 497327<br>103555 |
| 16     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 946.0<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: West Streams<br>Primacy: 1    | A12SE (SW)                             | 322                          | 4       | 497186<br>103473 |
| 17     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 345.3<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: Rother and Arun<br>Primacy: 1 | A18NE (N)                              | 545                          | 4       | 497736<br>104411 |
| 18     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 9.6<br>Watercourse Level: Underground<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: Rother and Arun<br>Primacy: 1         | A18NE (N)                              | 545                          | 4       | 497727<br>104411 |
| 19     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 119.7<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: Rother and Arun<br>Primacy: 1 | A18NE (N)                              | 545                          | 4       | 497727<br>104411 |
| 20     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 236.5<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: Not Supplied<br>Primacy: 2    | A8SW (S)                               | 581                          | 4       | 497397<br>102966 |



## Agency & Hydrological

| Map ID | Details                                                                                                                                                                                                                                    | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR              |
|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------|---------|------------------|
| 21     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 379.1<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: Not Supplied<br>Primacy: 2    | A8SW (S)                               | 581                          | 4       | 497397<br>102966 |
| 22     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 85.1<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: West Streams<br>Primacy: 1     | A17SE (NW)                             | 587                          | 4       | 497159<br>104109 |
| 23     | <b>OS Water Network Lines</b><br>Watercourse Form: Reservoir<br>Watercourse Length: 16.5<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: West Streams<br>Primacy: 1        | A17SE (NW)                             | 612                          | 4       | 497140<br>104127 |
| 24     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 30.8<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: West Streams<br>Primacy: 1     | A17SE (NW)                             | 623                          | 4       | 497135<br>104143 |
| 25     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 154.7<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: West Streams<br>Primacy: 1    | A17SE (NW)                             | 643                          | 4       | 497077<br>104101 |
| 26     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 49.8<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: Rother and Arun<br>Primacy: 1  | A8SW (S)                               | 644                          | 4       | 497612<br>102860 |
| 27     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 15.8<br>Watercourse Level: Underground<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: Rother and Arun<br>Primacy: 1        | A19NW (NE)                             | 649                          | 4       | 498081<br>104414 |
| 28     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 77.6<br>Watercourse Level: Not Supplied<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: Rother and Arun<br>Primacy: 1       | A18NE (N)                              | 651                          | 4       | 497734<br>104517 |
| 29     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 334.4<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: Rother and Arun<br>Primacy: 1 | A19NW (NE)                             | 658                          | 4       | 498097<br>104419 |



## Agency & Hydrological

| Map ID | Details                                                                                                                                                                                                                                    | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR              |
|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------|---------|------------------|
| 30     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 117.6<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: Rother and Arun<br>Primacy: 1 | A8SW (S)                               | 685                          | 4       | 497582<br>102820 |
| 31     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 96.2<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: Rother and Arun<br>Primacy: 1  | A8SE (S)                               | 699                          | 4       | 497676<br>102806 |
| 32     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 220.8<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: Rother and Arun<br>Primacy: 1 | A18NE (N)                              | 726                          | 4       | 497719<br>104593 |
| 33     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 70.7<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: Rother and Arun<br>Primacy: 1  | A18NW (N)                              | 730                          | 4       | 497419<br>104544 |
| 34     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 329.6<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: Not Supplied<br>Primacy: 1    | A18NW (N)                              | 737                          | 4       | 497411<br>104548 |
| 35     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 193.1<br>Watercourse Level: Not Supplied<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: Rother and Arun<br>Primacy: 1      | A8SW (S)                               | 769                          | 4       | 497613<br>102734 |
| 36     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 768.7<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: Rother and Arun<br>Primacy: 1 | A8SW (S)                               | 784                          | 4       | 497510<br>102727 |
| 37     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 15.4<br>Watercourse Level: Underground<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: Rother and Arun<br>Primacy: 1        | A18NW (N)                              | 787                          | 4       | 497432<br>104610 |
| 38     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 61.0<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: Rother and Arun<br>Primacy: 1  | A9NE (SE)                              | 790                          | 4       | 498364<br>103104 |



## Agency & Hydrological

| Map ID | Details                                                                                                                                                                                                                                    | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR              |
|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------|---------|------------------|
| 39     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 193.8<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: Rother and Arun<br>Primacy: 1 | A18NW (N)                              | 801                          | 4       | 497435<br>104625 |
| 40     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 136.0<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: West Streams<br>Primacy: 1    | A7SW (SW)                              | 888                          | 4       | 496897<br>102929 |
| 41     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 1.5<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: Rother and Arun<br>Primacy: 1   | A19NE (NE)                             | 890                          | 4       | 498415<br>104495 |
| 42     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 202.9<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: Rother and Arun<br>Primacy: 1 | A19NE (NE)                             | 890                          | 4       | 498415<br>104495 |
| 43     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 111.2<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: Rother and Arun<br>Primacy: 1 | A19NE (NE)                             | 891                          | 4       | 498415<br>104496 |
| 44     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 11.9<br>Watercourse Level: Underground<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: Rother and Arun<br>Primacy: 1        | A23SW (N)                              | 913                          | 4       | 497630<br>104778 |
| 45     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 54.6<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: Rother and Arun<br>Primacy: 1  | A23SW (N)                              | 925                          | 4       | 497627<br>104790 |
| 46     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 369.6<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: Rother and Arun<br>Primacy: 1 | A3NW (S)                               | 940                          | 4       | 497514<br>102569 |
| 47     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 83.1<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: Rother and Arun<br>Primacy: 1  | A20SW (NE)                             | 941                          | 4       | 498679<br>104250 |



## Agency & Hydrological

| Map ID | Details                                                                                                                                                                                                                                    | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR              |
|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------|---------|------------------|
| 48     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 123.9<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: Rother and Arun<br>Primacy: 1 | A9SW (SE)                              | 978                          | 4       | 498235<br>102712 |
| 49     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 139.3<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: Rother and Arun<br>Primacy: 1 | A9SW (SE)                              | 978                          | 4       | 498235<br>102712 |
| 50     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 7.1<br>Watercourse Level: Underground<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: Rother and Arun<br>Primacy: 1         | A23SW (N)                              | 979                          | 4       | 497619<br>104844 |
| 51     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 19.4<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: Rother and Arun<br>Primacy: 1  | A4NW (S)                               | 983                          | 4       | 498046<br>102609 |
| 52     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 6.5<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: Rother and Arun<br>Primacy: 1   | A23SW (N)                              | 986                          | 4       | 497618<br>104851 |
| 53     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 95.6<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: Rother and Arun<br>Primacy: 1  | A19NE (NE)                             | 993                          | 4       | 498614<br>104440 |
| 54     | <b>OS Water Network Lines</b><br>Watercourse Form: Lake<br>Watercourse Length: 86.1<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: Rother and Arun<br>Primacy: 1          | A23SW (N)                              | 993                          | 4       | 497617<br>104857 |
| 55     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 8.8<br>Watercourse Level: Underground<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: West Streams<br>Primacy: 1            | A22SE (N)                              | 996                          | 4       | 497283<br>104775 |
| 56     | <b>OS Water Network Lines</b><br>Watercourse Form: Inland river<br>Watercourse Length: 582.4<br>Watercourse Level: On ground surface<br>Permanent: True<br>Watercourse Name: Not Supplied<br>Catchment Name: West Streams<br>Primacy: 1    | A11SE (W)                              | 997                          | 4       | 496502<br>103409 |



| Map ID | Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR              |
|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------|---------|------------------|
| 57     | <b>Historical Landfill Sites</b><br>Licence Holder: Not Supplied<br>Location: Barnham, Sussex<br>Name: Disused Canal at Barnham<br>Operator Location: Not Supplied<br>Boundary Accuracy: As Supplied<br>Provider Reference: EAHLD20083<br>First Input Date: 31st December 1970<br>Last Input Date: 31st December 1970<br>Specified Waste: Deposited Waste included Inert Waste<br>Type:<br>EA Waste Ref: 0<br>Regis Ref: Not Supplied<br>WRC Ref: 3800/8225<br>BGS Ref: Not Supplied<br>Other Ref: WD27/023                                                                                                                                                                                                                | A13SW (SW)                             | 233                          | 2       | 497378<br>103388 |
| 58     | <b>Historical Landfill Sites</b><br>Licence Holder: A C Langmead<br>Location: Yapton, Sussex<br>Name: Disused Canal at Yapton<br>Operator Location: Not Supplied<br>Boundary Accuracy: As Supplied<br>Provider Reference: EAHLD20084<br>First Input Date: 31st December 1980<br>Last Input Date: 26th March 1981<br>Specified Waste: Deposited Waste included Inert Waste<br>Type:<br>EA Waste Ref: 0<br>Regis Ref: Not Supplied<br>WRC Ref: 3800/8018<br>BGS Ref: Not Supplied<br>Other Ref: WD27/243, WD13/66                                                                                                                                                                                                            | A9NW (SE)                              | 721                          | 2       | 498315<br>103153 |
| 59     | <b>Licensed Waste Management Facilities (Locations)</b><br>Licence Number: 100156<br>Location: Northwood Farm ( Hanger No8), Burndell Road, Yapton, West Sussex, BN18 0HR<br>Operator Name: T J Waste & Recycling Limited<br>Operator Location: Not Supplied<br>Authority: Environment Agency - South East Region, Solent & South Downs Area<br>Site Category: Household, Commercial And Industrial Transfer Stations<br><b>Licence Status: Modified</b><br>Issued: 28th January 2008<br>Last Modified: 27th July 2012<br>Expires: Not Supplied<br>Suspended: Not Supplied<br>Revoked: Not Supplied<br>Surrendered: Not Supplied<br>IPPC Reference: Not Supplied<br>Positional Accuracy: Located by supplier to within 10m | A9SE (SE)                              | 980                          | 2       | 498471<br>102930 |
|        | <b>Local Authority Landfill Coverage</b><br>Name: Arun District Council<br>- Has no landfill data to supply                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                        | 0                            | 5       | 497671<br>103686 |
|        | <b>Local Authority Landfill Coverage</b><br>Name: West Sussex County Council<br>- Has supplied landfill data                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                        | 0                            | 6       | 497671<br>103686 |
| 60     | <b>Local Authority Recorded Landfill Sites</b><br>Location: Old Canal, East Of Downview Road, Yapton<br>Reference: Y/50/79<br>Authority: West Sussex County Council, Environment & Development<br><b>Last Reported Status: Unknown</b><br>Types of Waste: Not Supplied<br>Date of Closure: Not Supplied<br>Positional Accuracy: Located by supplier to within 100m<br>Boundary Quality: Not Applicable                                                                                                                                                                                                                                                                                                                     | A9NE (SE)                              | 771                          | 6       | 498400<br>103200 |
| 61     | <b>Potentially Infilled Land (Non-Water)</b><br>Bearing Ref: SE<br>Use: Unknown Filled Ground (Pit, quarry etc)<br>Date of Mapping: 1992                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | A8NE (SE)                              | 418                          | -       | 497926<br>103179 |
| 62     | <b>Potentially Infilled Land (Non-Water)</b><br>Bearing Ref: SE<br>Use: Unknown Filled Ground (Pit, quarry etc)<br>Date of Mapping: 1992                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | A9NW (SE)                              | 573                          | -       | 498114<br>103137 |



| Map ID | Details                                                                                                                                 | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR           |
|--------|-----------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------|---------|---------------|
| 63     | <b>Potentially Infilled Land (Non-Water)</b><br>Bearing Ref: W<br>Use: Unknown Filled Ground (Pit, quarry etc)<br>Date of Mapping: 1992 | A12NW (W)                              | 859                          | -       | 496699 103958 |
| 64     | <b>Potentially Infilled Land (Water)</b><br>Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc)<br>Date of Mapping: 1962  | A8NW (S)                               | 171                          | -       | 497652 103335 |
| 65     | <b>Potentially Infilled Land (Water)</b><br>Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc)<br>Date of Mapping: 1962  | A12NE (NW)                             | 554                          | -       | 497073 103975 |
| 66     | <b>Potentially Infilled Land (Water)</b><br>Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc)<br>Date of Mapping: 1962  | A18NE (N)                              | 556                          | -       | 497730 104422 |
| 67     | <b>Potentially Infilled Land (Water)</b><br>Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc)<br>Date of Mapping: 1962  | A12NE (NW)                             | 566                          | -       | 497055 103976 |
| 68     | <b>Potentially Infilled Land (Water)</b><br>Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc)<br>Date of Mapping: 1962  | A18NE (N)                              | 584                          | -       | 497746 104449 |
| 69     | <b>Potentially Infilled Land (Water)</b><br>Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc)<br>Date of Mapping: 1951  | A8SW (S)                               | 641                          | -       | 497619 102862 |
| 70     | <b>Potentially Infilled Land (Water)</b><br>Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc)<br>Date of Mapping: 1899  | A8SE (S)                               | 693                          | -       | 497696 102814 |
| 71     | <b>Potentially Infilled Land (Water)</b><br>Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc)<br>Date of Mapping: 1899  | A8SW (S)                               | 729                          | -       | 497664 102775 |
| 72     | <b>Potentially Infilled Land (Water)</b><br>Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc)<br>Date of Mapping: 1962  | A18NE (N)                              | 755                          | -       | 497738 104621 |
| 73     | <b>Potentially Infilled Land (Water)</b><br>Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc)<br>Date of Mapping: 1962  | A17NE (NW)                             | 782                          | -       | 497123 104402 |
| 74     | <b>Potentially Infilled Land (Water)</b><br>Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc)<br>Date of Mapping: 1962  | A18NE (N)                              | 788                          | -       | 497732 104654 |
| 75     | <b>Potentially Infilled Land (Water)</b><br>Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc)<br>Date of Mapping: 1962  | A18NE (N)                              | 820                          | -       | 497729 104686 |
| 76     | <b>Potentially Infilled Land (Water)</b><br>Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc)<br>Date of Mapping: 1962  | A17NE (NW)                             | 851                          | -       | 497029 104398 |
| 77     | <b>Potentially Infilled Land (Water)</b><br>Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc)<br>Date of Mapping: 1962  | A9SW (SE)                              | 892                          | -       | 498098 102731 |





| Map ID | Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR              |
|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------|---------|------------------|
| 78     | <b>Registered Landfill Sites</b><br>Licence Holder: A C Langmead<br>Licence Reference: 5/AP/79<br>Site Location: Disused Chichester/Arundel Canal, North Of Burndell Road, Yapton, Arundel, West Sussex<br>Licence Easting: 498400<br>Licence Northing: 103160<br>Operator Location: Wicks Farm, Yapton, Arundel, West Sussex<br>Authority: Environment Agency - Southern Region, Sussex Area<br>Site Category: Landfill<br>Max Input Rate: Undefined<br>Waste Source: No known restriction on source of waste<br>Restrictions:<br>Status: Licence lapsed/cancelled/defunct/not applicable/surrenderedCancelled<br>Dated: 10th December 1979<br>Preceded By: Not Given<br>Licence:<br>Superseded By: Not Given<br>Licence:<br>Positional Accuracy: Manually positioned to the address or location<br>Boundary Accuracy: Not Applicable<br>Authorised Waste: Construction And Demolition Wastes<br>Excavated Natural Materials \$<br>Prohibited Waste: Contaminated Rubble<br>Contaminated Soil                                                                                                                                                                                                                                                   | A9NE (SE)                              | 790                          | 2       | 498400<br>103160 |
| 79     | <b>Registered Waste Treatment or Disposal Sites</b><br>Licence Holder: P Hill Jones<br>Licence Reference: WSX/L1/0052/1<br>Site Location: Jones & Co, Burndell Road, Yapton, Arundel, West Sussex, Bn18 0hp<br>Operator Location: 148 Barnham Road, BOGNOR REGIS, West Sussex, PO22 0EH<br>Authority: Environment Agency - Southern Region, Sussex Area<br>Site Category: Scrapyard<br>Max Input Rate: Very Small (Less than 10,000 tonnes per year)<br>Waste Source: No known restriction on source of waste<br>Restrictions:<br>Licence Status: Site exempt from licenceExempt<br>Dated: 31st March 1994<br>Preceded By: Not Given<br>Licence:<br>Superseded By: Not Given<br>Licence:<br>Positional Accuracy: Manually positioned to the road within the address or location<br>Boundary Quality: Not Supplied<br>Authorised Waste: Elec/Electronic Compts/Fitt/Fixt/Apps<br>Empty Used Containers > 25 L<br>Lead/Acid Batteries<br>Max.Waste Permitted By Licence<br>Scrap Metal<br>Prohibited Waste: Asbestos<br>Metallic Powders<br>Pcb'S And Analogues<br>Percussive/Explosive/Similar Waste<br>Spec.Waste (Epa'90:S62/1996 Regs)N.O.S<br>Sub'S Control. Radioactive Subs Act'60<br>Waste N.O.S.<br>Waste React.Violently W/ Water Or Air | A9SW (SE)                              | 804                          | 2       | 498300<br>103000 |



| Map ID | Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR           |
|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------|---------|---------------|
|        | <b>BGS 1:625,000 Solid Geology</b><br>Description: White Chalk Subgroup                                                                                                                                                                                                                                                                                                                                                                                                                                        | A13NE (S)                              | 0                            | 1       | 497671 103686 |
|        | <b>BGS Estimated Soil Chemistry</b><br>Source: British Geological Survey, National Geoscience Information Service<br>Soil Sample Type: Sediment<br>Arsenic: <15 mg/kg<br>Concentration:<br>Cadmium: <1.8 mg/kg<br>Concentration:<br>Chromium: 60 - 90 mg/kg<br>Concentration:<br>Lead Concentration: <100 mg/kg<br>Nickel: 15 - 30 mg/kg<br>Concentration:                                                                                                                                                     | A13NE (S)                              | 0                            | 1       | 497671 103686 |
|        | <b>BGS Estimated Soil Chemistry</b><br>Source: British Geological Survey, National Geoscience Information Service<br>Soil Sample Type: Sediment<br>Arsenic: <15 mg/kg<br>Concentration:<br>Cadmium: <1.8 mg/kg<br>Concentration:<br>Chromium: 60 - 90 mg/kg<br>Concentration:<br>Lead Concentration: 100 - 200 mg/kg<br>Nickel: 15 - 30 mg/kg<br>Concentration:                                                                                                                                                | A13SW (SW)                             | 71                           | 1       | 497500 103500 |
|        | <b>BGS Estimated Soil Chemistry</b><br>Source: British Geological Survey, National Geoscience Information Service<br>Soil Sample Type: Sediment<br>Arsenic: 15 - 25 mg/kg<br>Concentration:<br>Cadmium: <1.8 mg/kg<br>Concentration:<br>Chromium: 60 - 90 mg/kg<br>Concentration:<br>Lead Concentration: <100 mg/kg<br>Nickel: 15 - 30 mg/kg<br>Concentration:                                                                                                                                                 | A18SW (NW)                             | 315                          | 1       | 497488 104122 |
|        | <b>BGS Estimated Soil Chemistry</b><br>Source: British Geological Survey, National Geoscience Information Service<br>Soil Sample Type: Sediment<br>Arsenic: 15 - 25 mg/kg<br>Concentration:<br>Cadmium: <1.8 mg/kg<br>Concentration:<br>Chromium: 60 - 90 mg/kg<br>Concentration:<br>Lead Concentration: <100 mg/kg<br>Nickel: 15 - 30 mg/kg<br>Concentration:                                                                                                                                                 | A18NE (N)                              | 539                          | 1       | 497750 104403 |
| 80     | <b>BGS Recorded Mineral Sites</b><br>Site Name: Burndell Brick Yard<br>Location: Yapton, Arundel, West Sussex<br>Source: British Geological Survey, National Geoscience Information Service<br>Reference: 157582<br>Type: Opencast<br><b>Status: Ceased</b><br>Operator: Unknown Operator<br>Operator Location: Not Supplied<br>Periodic Type: Quaternary<br>Geology: River Terrace Deposits (Undifferentiated)<br>Commodity: Common Clay and Shale<br>Positional Accuracy: Located by supplier to within 10m  | A8NE (S)                               | 473                          | 1       | 497877 103090 |
| 81     | <b>BGS Recorded Mineral Sites</b><br>Site Name: Burndell Brick Field<br>Location: Yapton, Arundel, West Sussex<br>Source: British Geological Survey, National Geoscience Information Service<br>Reference: 157583<br>Type: Opencast<br><b>Status: Ceased</b><br>Operator: Unknown Operator<br>Operator Location: Not Supplied<br>Periodic Type: Quaternary<br>Geology: River Terrace Deposits (Undifferentiated)<br>Commodity: Common Clay and Shale<br>Positional Accuracy: Located by supplier to within 10m | A9NW (SE)                              | 648                          | 1       | 498190 103111 |



| Map ID | Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR           |
|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------|---------|---------------|
| 82     | <b>BGS Recorded Mineral Sites</b><br>Site Name: Barnham Brick Field<br>Location: Barnham, Bognor Regis, West Sussex<br>Source: British Geological Survey, National Geoscience Information Service<br>Reference: 157584<br>Type: Opencast<br><b>Status: Ceased</b><br>Operator: Unknown Operator<br>Operator Location: Not Supplied<br>Periodic Type: Quaternary<br>Geology: River Terrace Deposits (Undifferentiated)<br>Commodity: Common Clay and Shale<br>Positional Accuracy: Located by supplier to within 10m | A11NE (W)                              | 938                          | 1       | 496631 103995 |
|        | <b>BGS Measured Urban Soil Chemistry</b><br>No data available                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                        |                              |         |               |
|        | <b>BGS Urban Soil Chemistry Averages</b><br>No data available                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                        |                              |         |               |
|        | <b>Coal Mining Affected Areas</b><br>In an area that might not be affected by coal mining                                                                                                                                                                                                                                                                                                                                                                                                                           |                                        |                              |         |               |
|        | <b>Non Coal Mining Areas of Great Britain</b><br>No Hazard                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                        |                              |         |               |
|        | <b>Potential for Collapsible Ground Stability Hazards</b><br>Hazard Potential: Low<br>Source: British Geological Survey, National Geoscience Information Service                                                                                                                                                                                                                                                                                                                                                    | A13NE (S)                              | 0                            | 1       | 497671 103686 |
|        | <b>Potential for Compressible Ground Stability Hazards</b><br>Hazard Potential: No Hazard<br>Source: British Geological Survey, National Geoscience Information Service                                                                                                                                                                                                                                                                                                                                             | A13NE (S)                              | 0                            | 1       | 497671 103686 |
|        | <b>Potential for Ground Dissolution Stability Hazards</b><br>Hazard Potential: Very Low<br>Source: British Geological Survey, National Geoscience Information Service                                                                                                                                                                                                                                                                                                                                               | A13NE (S)                              | 0                            | 1       | 497671 103686 |
|        | <b>Potential for Landslide Ground Stability Hazards</b><br>Hazard Potential: Very Low<br>Source: British Geological Survey, National Geoscience Information Service                                                                                                                                                                                                                                                                                                                                                 | A13NE (S)                              | 0                            | 1       | 497671 103686 |
|        | <b>Potential for Running Sand Ground Stability Hazards</b><br>Hazard Potential: Low<br>Source: British Geological Survey, National Geoscience Information Service                                                                                                                                                                                                                                                                                                                                                   | A13NE (S)                              | 0                            | 1       | 497671 103686 |
|        | <b>Potential for Shrinking or Swelling Clay Ground Stability Hazards</b><br>Hazard Potential: Low<br>Source: British Geological Survey, National Geoscience Information Service                                                                                                                                                                                                                                                                                                                                     | A13NE (S)                              | 0                            | 1       | 497671 103686 |
|        | <b>Radon Potential - Radon Affected Areas</b><br>Affected Area: The property is in a Lower probability radon area (less than 1% of homes are estimated to be at or above the Action Level).<br>Source: British Geological Survey, National Geoscience Information Service                                                                                                                                                                                                                                           | A13NE (S)                              | 0                            | 1       | 497671 103686 |
|        | <b>Radon Potential - Radon Protection Measures</b><br>Protection Measure: No radon protective measures are necessary in the construction of new dwellings or extensions<br>Source: British Geological Survey, National Geoscience Information Service                                                                                                                                                                                                                                                               | A13NE (S)                              | 0                            | 1       | 497671 103686 |



## Industrial Land Use

| Map ID | Details                                                                                                                                                                                                                                                                                                                                 | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR           |
|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------|---------|---------------|
| 83     | <b>Contemporary Trade Directory Entries</b><br>Name: Arun Meat & Livestock Co Ltd<br>Location: The Steddlers, North End Road, Yapton, Arundel, West Sussex, BN18 0DT<br>Classification: Meat - Wholesale<br><b>Status:</b> Inactive<br>Positional Accuracy: Automatically positioned to the address                                     | A13NE (NE)                             | 25                           | -       | 497829 103843 |
| 84     | <b>Contemporary Trade Directory Entries</b><br>Name: Equipet<br>Location: North End Rd, Yapton, Arundel, West Sussex, BN18 0DU<br>Classification: Pet Foods & Animal Feeds<br><b>Status:</b> Inactive<br>Positional Accuracy: Manually positioned to the road within the address or location                                            | A13SE (E)                              | 51                           | -       | 497817 103664 |
| 85     | <b>Contemporary Trade Directory Entries</b><br>Name: Barnham Car Centre<br>Location: Unit 25, Orchard Business Park, North End Road, Yapton, Arundel, West Sussex, BN18 0GA<br>Classification: Car Dealers - Used<br><b>Status:</b> Inactive<br>Positional Accuracy: Automatically positioned to the address                            | A13NE (E)                              | 101                          | -       | 497932 103737 |
| 85     | <b>Contemporary Trade Directory Entries</b><br>Name: Classic Perfections<br>Location: Unit 25, Orchard Business Park, North End Road, Yapton, Arundel, BN18 0GA<br>Classification: Classic Car Specialists<br><b>Status:</b> Active<br>Positional Accuracy: Automatically positioned to the address                                     | A13NE (E)                              | 101                          | -       | 497932 103737 |
| 85     | <b>Contemporary Trade Directory Entries</b><br>Name: C & W Seals<br>Location: Unit 15-16, Orchard Business Park, North End Road, Yapton, Arundel, West Sussex, BN18 0GA<br>Classification: Seal & Joint Manufacturers<br><b>Status:</b> Inactive<br>Positional Accuracy: Automatically positioned to the address                        | A13NE (E)                              | 118                          | -       | 497961 103778 |
| 85     | <b>Contemporary Trade Directory Entries</b><br>Name: Arun Ltd<br>Location: Unit 18, Orchard Business Park, North End Road, Yapton, Arundel, West Sussex, BN18 0GA<br>Classification: Waste Disposal Services<br><b>Status:</b> Inactive<br>Positional Accuracy: Automatically positioned to the address                                 | A13NE (E)                              | 118                          | -       | 497961 103778 |
| 85     | <b>Contemporary Trade Directory Entries</b><br>Name: V Dubz R Us<br>Location: Unit 10, Orchard Business Park, North End Road, Yapton, Arundel, West Sussex, BN18 0GA<br>Classification: Car Body Repairs<br><b>Status:</b> Inactive<br>Positional Accuracy: Automatically positioned to the address                                     | A13NE (E)                              | 118                          | -       | 497961 103778 |
| 85     | <b>Contemporary Trade Directory Entries</b><br>Name: B P S Garden Machinery Ltd<br>Location: Unit 16-17, Orchard Business Park, North End Road, Yapton, Arundel, BN18 0GA<br>Classification: Lawnmowers & Garden Machinery - Sales & Service<br><b>Status:</b> Inactive<br>Positional Accuracy: Automatically positioned to the address | A13NE (E)                              | 121                          | -       | 497962 103772 |
| 85     | <b>Contemporary Trade Directory Entries</b><br>Name: Pptek<br>Location: Unit 22, Orchard Business Park, North End Road, Yapton, Arundel, West Sussex, BN18 0GA<br>Classification: Commercial Cleaning Services<br><b>Status:</b> Inactive<br>Positional Accuracy: Automatically positioned to the address                               | A13NE (E)                              | 131                          | -       | 497961 103732 |
| 85     | <b>Contemporary Trade Directory Entries</b><br>Name: Orchard Classics<br>Location: Unit 21, Orchard Business Park, North End Road, Yapton, Arundel, BN18 0GA<br>Classification: Classic Car Specialists<br><b>Status:</b> Active<br>Positional Accuracy: Automatically positioned to the address                                        | A13NE (E)                              | 134                          | -       | 497967 103742 |



## Industrial Land Use

| Map ID | Details                                                                                                                                                                                                                                                                                                                                                        | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR           |
|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------|---------|---------------|
| 85     | <b>Contemporary Trade Directory Entries</b><br>Name: Mailtec Ltd<br>Location: Unit 15, Orchard Business Park, North End Road, Yapton, Arundel, BN18 0GA<br>Classification: Printers<br><b>Status: Active</b><br>Positional Accuracy: Automatically positioned to the address                                                                                   | A13NE (E)                              | 135                          | -       | 497975 103767 |
| 85     | <b>Contemporary Trade Directory Entries</b><br>Name: B P S<br>Location: Unit 15, Orchard Business Park, North End Road, Yapton, Arundel, BN18 0GA<br>Classification: Lawnmowers & Garden Machinery - Sales & Service<br><b>Status: Active</b><br>Positional Accuracy: Automatically positioned to the address                                                  | A13NE (E)                              | 135                          | -       | 497975 103767 |
| 85     | <b>Contemporary Trade Directory Entries</b><br>Name: V & C Auto Sales<br>Location: Unit 11, Orchard Business Park, North End Rd, Yapton, Arundel, West Sussex, BN18 0DS<br>Classification: Car Dealers - Used<br><b>Status: Inactive</b><br>Positional Accuracy: Automatically positioned to the address                                                       | A13NE (E)                              | 141                          | -       | 497978 103755 |
| 85     | <b>Contemporary Trade Directory Entries</b><br>Name: B P S Garden Machinery Ltd<br>Location: Unit 16-17 Orchard Business Park, North End Road, Yapton, Arundel, West Sussex, BN18 0GA<br>Classification: Lawnmowers & Garden Machinery - Sales & Service<br><b>Status: Active</b><br>Positional Accuracy: Manually positioned within the geographical locality | A13NE (E)                              | 142                          | -       | 497974 103738 |
| 85     | <b>Contemporary Trade Directory Entries</b><br>Name: Revolution Machine Werks<br>Location: Unit 10, Orchard Business Park, North End Road, Yapton, Arundel, BN18 0GA<br>Classification: Engineering Machine Services<br><b>Status: Active</b><br>Positional Accuracy: Automatically positioned to the address                                                  | A13NE (E)                              | 147                          | -       | 497986 103760 |
| 85     | <b>Contemporary Trade Directory Entries</b><br>Name: Littlehampton Scaffolding<br>Location: Orchard Business Park, North End Road, Yapton, Arundel, West Sussex, BN18 0GA<br>Classification: Scaffolding & Work Platforms<br><b>Status: Active</b><br>Positional Accuracy: Manually positioned within the geographical locality                                | A13NE (E)                              | 154                          | -       | 497990 103748 |
| 85     | <b>Contemporary Trade Directory Entries</b><br>Name: Express Aftercare Services<br>Location: Unit 5, Orchard Business Park, North End Road, Yapton, Arundel, West Sussex, BN18 0GA<br>Classification: Electrical Goods Sales, Manufacturers & Wholesalers<br><b>Status: Inactive</b><br>Positional Accuracy: Automatically positioned to the address           | A13NE (E)                              | 157                          | -       | 497980 103703 |
| 85     | <b>Contemporary Trade Directory Entries</b><br>Name: E M S Animal Feeds<br>Location: Unit 11, Orchard Business Park, North End Road, Yapton, Arundel, BN18 0GA<br>Classification: Pet Foods & Animal Feeds<br><b>Status: Active</b><br>Positional Accuracy: Automatically positioned to the address                                                            | A13NE (E)                              | 160                          | -       | 497999 103757 |
| 86     | <b>Contemporary Trade Directory Entries</b><br>Name: G S Auto Recovery<br>Location: Main Road, Yapton, Arundel, West Sussex, BN18 0EA<br>Classification: Mechanical Engineers<br><b>Status: Inactive</b><br>Positional Accuracy: Automatically positioned in the proximity of the address                                                                      | A8NW (S)                               | 210                          | -       | 497581 103297 |
| 86     | <b>Contemporary Trade Directory Entries</b><br>Name: Reptune Motors<br>Location: Main Road, Yapton, Arundel, West Sussex, BN18 0EA<br>Classification: Garage Services<br><b>Status: Inactive</b><br>Positional Accuracy: Automatically positioned in the proximity of the address                                                                              | A8NW (S)                               | 210                          | -       | 497581 103297 |



## Industrial Land Use

| Map ID | Details                                                                                                                                                                                                                                                                                                                    | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR           |
|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------|---------|---------------|
| 87     | <b>Contemporary Trade Directory Entries</b><br>Name: Bella Autos<br>Location: Glebelands Farm, Yapton Road, Barnham, PO22 0BJ<br>Classification: Mot Testing Centres<br><b>Status:</b> Active<br>Positional Accuracy: Automatically positioned to the address                                                              | A12NE (W)                              | 314                          | -       | 497250 103812 |
| 88     | <b>Contemporary Trade Directory Entries</b><br>Name: Arun Pest Control Service<br>Location: 23, Briar Close, Church Road, Yapton, Arundel, West Sussex, BN18 0ES<br>Classification: Pest & Vermin Control<br><b>Status:</b> Inactive<br>Positional Accuracy: Automatically positioned to the address                       | A8NE (SE)                              | 338                          | -       | 497930 103285 |
| 89     | <b>Contemporary Trade Directory Entries</b><br>Name: Fire Protection Services<br>Location: 31, Briar Close, Church Road, Yapton, Arundel, BN18 0ES<br>Classification: Firefighting Equipment<br><b>Status:</b> Active<br>Positional Accuracy: Automatically positioned to the address                                      | A8NE (SE)                              | 373                          | -       | 497925 103234 |
| 90     | <b>Contemporary Trade Directory Entries</b><br>Name: Sfp<br>Location: 9, Canal Road, Yapton, Arundel, West Sussex, BN18 0HA<br>Classification: Engineering Services<br><b>Status:</b> Inactive<br>Positional Accuracy: Automatically positioned to the address                                                             | A8NE (S)                               | 500                          | -       | 497801 103037 |
| 91     | <b>Contemporary Trade Directory Entries</b><br>Name: Barnly Engineering<br>Location: Kings Close, Yapton, Arundel, West Sussex, BN18 0EX<br>Classification: Precision Engineers<br><b>Status:</b> Inactive<br>Positional Accuracy: Automatically positioned to the address                                                 | A8NE (SE)                              | 506                          | -       | 497990 103116 |
| 92     | <b>Contemporary Trade Directory Entries</b><br>Name: Diamond<br>Location: 24, Canal Road, Yapton, Arundel, West Sussex, BN18 0HD<br>Classification: Commercial Cleaning Services<br><b>Status:</b> Inactive<br>Positional Accuracy: Automatically positioned to the address                                                | A8SE (S)                               | 534                          | -       | 497746 102985 |
| 92     | <b>Contemporary Trade Directory Entries</b><br>Name: Diamond Carpet & Upholstery Cleaning Services<br>Location: 24, Canal Road, Yapton, Arundel, West Sussex, BN18 0HD<br>Classification: Carpet, Curtain & Upholstery Cleaners<br><b>Status:</b> Inactive<br>Positional Accuracy: Automatically positioned to the address | A8SE (S)                               | 534                          | -       | 497746 102985 |
| 93     | <b>Contemporary Trade Directory Entries</b><br>Name: A J F Hydraulic Services<br>Location: West Bank, North End Rd, Yapton, Arundel, West Sussex, BN18 0DW<br>Classification: Hydraulic Engineers<br><b>Status:</b> Inactive<br>Positional Accuracy: Automatically positioned to the address                               | A19SW (NE)                             | 534                          | -       | 498096 104282 |
| 93     | <b>Contemporary Trade Directory Entries</b><br>Name: Action Eyewear<br>Location: 22, West Bank, North End Road, Yapton, Arundel, West Sussex, BN18 0DW<br>Classification: Cosmetic Manufacturers<br><b>Status:</b> Inactive<br>Positional Accuracy: Automatically positioned to the address                                | A19SW (NE)                             | 534                          | -       | 498096 104282 |
| 94     | <b>Contemporary Trade Directory Entries</b><br>Name: Obsessive Cleaning Divas<br>Location: 6, Cobham Close, Yapton, Arundel, West Sussex, BN18 0LF<br>Classification: Cleaning Services - Domestic<br><b>Status:</b> Inactive<br>Positional Accuracy: Automatically positioned to the address                              | A8SE (S)                               | 620                          | -       | 497718 102892 |
| 94     | <b>Contemporary Trade Directory Entries</b><br>Name: O C D 2015 Ltd<br>Location: 6, Cobham Close, Yapton, Arundel, West Sussex, BN18 0LF<br>Classification: Commercial Cleaning Services<br><b>Status:</b> Inactive<br>Positional Accuracy: Automatically positioned to the address                                        | A8SE (S)                               | 620                          | -       | 497718 102892 |
| 95     | <b>Contemporary Trade Directory Entries</b><br>Name: P & H Plumbing & Heating<br>Location: 10, Park Road, Yapton, Arundel, West Sussex, BN18 0JE<br>Classification: Boilers - Servicing, Replacements & Repairs<br><b>Status:</b> Inactive<br>Positional Accuracy: Automatically positioned to the address                 | A9SW (SE)                              | 707                          | -       | 498146 102983 |



## Industrial Land Use

| Map ID | Details                                                                                                                                                                                                                                                                                                                       | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR           |
|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------|---------|---------------|
| 96     | <b>Contemporary Trade Directory Entries</b><br>Name: A B Autos<br>Location: Fresh Acres Nurseries, Yapton Lane, Walberton, Arundel, BN18 0AS<br>Classification: Garage Services<br><b>Status:</b> Inactive<br>Positional Accuracy: Automatically positioned to the address                                                    | A18NE (N)                              | 711                          | -       | 497918 104542 |
| 96     | <b>Contemporary Trade Directory Entries</b><br>Name: Morris Green Engineering Ltd<br>Location: Fresh Acres Nurseries, Yapton Lane, Walberton, Arundel, BN18 0AS<br>Classification: Lawnmowers & Garden Machinery - Sales & Service<br><b>Status:</b> Inactive<br>Positional Accuracy: Automatically positioned to the address | A18NE (N)                              | 711                          | -       | 497918 104542 |
| 97     | <b>Contemporary Trade Directory Entries</b><br>Name: C K Mobile Mechanics<br>Location: 40, The Millers, Yapton, Arundel, BN18 0LE<br>Classification: Garage Services<br><b>Status:</b> Active<br>Positional Accuracy: Automatically positioned to the address                                                                 | A8SE (S)                               | 728                          | -       | 497721 102782 |
| 98     | <b>Contemporary Trade Directory Entries</b><br>Name: Access Scaffolding<br>Location: 3, Ryebank Walk, Burndell Road, Yapton, Arundel, West Sussex, BN18 0FJ<br>Classification: Scaffolding & Work Platforms<br><b>Status:</b> Active<br>Positional Accuracy: Automatically positioned to the address                          | A9NW (SE)                              | 753                          | -       | 498257 103028 |
| 99     | <b>Contemporary Trade Directory Entries</b><br>Name: Styles In Stone<br>Location: Barnham Windmill, Yapton Road, Barnham, Bognor Regis, West Sussex, PO22 0BD<br>Classification: Fireplaces & Mantelpieces<br><b>Status:</b> Inactive<br>Positional Accuracy: Automatically positioned to the address                         | A12NW (W)                              | 780                          | -       | 496791 103963 |
| 100    | <b>Contemporary Trade Directory Entries</b><br>Name: Needin Feedin<br>Location: Unit 15, Parsonage Farm, Yapton Road, Barnham, PO22 0BD<br>Classification: Pet Foods & Animal Feeds<br><b>Status:</b> Inactive<br>Positional Accuracy: Automatically positioned to the address                                                | A12NW (W)                              | 808                          | -       | 496722 103875 |
| 100    | <b>Contemporary Trade Directory Entries</b><br>Name: El Molino<br>Location: Unit 7/11, Parsonage Farm, Yapton Road, Barnham, Bognor Regis, West Sussex, PO22 0BD<br>Classification: Pottery Manufacturers & Suppliers<br><b>Status:</b> Inactive<br>Positional Accuracy: Manually positioned to the address or location       | A12NW (W)                              | 810                          | -       | 496730 103904 |
| 100    | <b>Contemporary Trade Directory Entries</b><br>Name: The Iron Away Shop<br>Location: Parsonage Farm, Yapton Road, Barnham, Bognor Regis, West Sussex, PO22 0BD<br>Classification: Ironing & Home Laundry Services<br><b>Status:</b> Inactive<br>Positional Accuracy: Manually positioned to the address or location           | A12NW (W)                              | 811                          | -       | 496730 103904 |
| 100    | <b>Contemporary Trade Directory Entries</b><br>Name: T J'S Ironing<br>Location: Unit 32, Parsonage Farm, Yapton Road, Barnham, Bognor Regis, PO22 0BD<br>Classification: Ironing & Home Laundry Services<br><b>Status:</b> Active<br>Positional Accuracy: Automatically positioned to the address                             | A12NW (W)                              | 836                          | -       | 496713 103929 |
| 100    | <b>Contemporary Trade Directory Entries</b><br>Name: Kay'S<br>Location: Unit 32, Parsonage Farm, Yapton Road, Barnham, Bognor Regis, West Sussex, PO22 0BD<br>Classification: Domestic Appliances - Servicing, Repairs & Parts<br><b>Status:</b> Inactive<br>Positional Accuracy: Automatically positioned to the address     | A12NW (W)                              | 838                          | -       | 496718 103945 |
| 101    | <b>Contemporary Trade Directory Entries</b><br>Name: Yapton Metal Co<br>Location: Wayside, Burndell Road, Yapton, Arundel, West Sussex, BN18 0HP<br>Classification: Scrap Metal Merchants<br><b>Status:</b> Inactive<br>Positional Accuracy: Automatically positioned to the address                                          | A9SW (SE)                              | 830                          | -       | 498331 102996 |



## Industrial Land Use

| Map ID | Details                                                                                                                                                                                                                                                                                                                       | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR           |
|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------|---------|---------------|
| 101    | <b>Contemporary Trade Directory Entries</b><br>Name: Burndell<br>Location: Wayside, Burndell Road, Yapton, Arundel, West Sussex, BN18 0HP<br>Classification: Salvage Dealers<br><b>Status: Inactive</b><br>Positional Accuracy: Automatically positioned to the address                                                       | A9SW (SE)                              | 830                          | -       | 498331 102996 |
| 102    | <b>Contemporary Trade Directory Entries</b><br>Name: Maison Belles<br>Location: 8, Fairholme Drive, Yapton, Arundel, West Sussex, BN18 0JH<br>Classification: Cleaning Services - Domestic<br><b>Status: Inactive</b><br>Positional Accuracy: Automatically positioned to the address                                         | A9SW (SE)                              | 866                          | -       | 498161 102798 |
| 102    | <b>Contemporary Trade Directory Entries</b><br>Name: K S W Vehicle Inspections<br>Location: 21, Fairholme Drive, Yapton, Arundel, West Sussex, BN18 0JH<br>Classification: Vehicle Inspection Services<br><b>Status: Inactive</b><br>Positional Accuracy: Automatically positioned to the address                             | A9SW (SE)                              | 889                          | -       | 498199 102795 |
| 103    | <b>Contemporary Trade Directory Entries</b><br>Name: Chocolate Show Boat Company<br>Location: Sussex Business Village, Lake La, Barnham, Bognor Regis, West Sussex, PO22 0AL<br>Classification: Confectionery Manufacturers<br><b>Status: Inactive</b><br>Positional Accuracy: Manually positioned to the address or location | A17NE (NW)                             | 886                          | -       | 497214 104612 |
| 104    | <b>Contemporary Trade Directory Entries</b><br>Name: Ayrllect Associates<br>Location: 23, Cherry Avenue, Yapton, Arundel, West Sussex, BN18 0LB<br>Classification: Electrical Engineers<br><b>Status: Inactive</b><br>Positional Accuracy: Automatically positioned to the address                                            | A3NE (S)                               | 928                          | -       | 497998 102649 |
| 105    | <b>Contemporary Trade Directory Entries</b><br>Name: Scott Motors<br>Location: Yapton Lane, Walberton, Arundel, West Sussex, BN18 0AS<br>Classification: Car Dealers - Used<br><b>Status: Inactive</b><br>Positional Accuracy: Automatically positioned to the address                                                        | A23SE (N)                              | 935                          | -       | 497720 104802 |
| 106    | <b>Fuel Station Entries</b><br>Name: Central Garage<br>Location: Main Road, Yapton, Arundel, West Sussex, BN18 0EA<br>Brand: Obsolete<br>Premises Type: Not Applicable<br><b>Status: Obsolete</b><br>Positional Accuracy: Automatically positioned to the address                                                             | A8NW (S)                               | 210                          | -       | 497581 103297 |
| 107    | <b>Fuel Station Entries</b><br>Name: Noble Autos<br>Location: Burndell Road, Yapton, Arundel, West Sussex, BN18 0HP<br>Brand: Proteus<br>Premises Type: Not Applicable<br><b>Status: Obsolete</b><br>Positional Accuracy: Manually positioned to the road within the address or location                                      | A9NW (SE)                              | 789                          | -       | 498299 103022 |
| 108    | <b>Points of Interest - Commercial Services</b><br>Name: Classic Perfections<br>Location: Unit 25 Orchard Business Park, North End Road, Yapton, Arundel, BN18 0GA<br>Category: Repair and Servicing<br>Class Code: Vehicle Repair, Testing and Servicing<br>Positional Accuracy: Positioned to address or location           | A13NE (E)                              | 102                          | 7       | 497932 103736 |
| 108    | <b>Points of Interest - Commercial Services</b><br>Name: V Dubz R Us Ltd<br>Location: Unit 10 Orchard Business Park, North End Road, Yapton, Arundel, BN18 0GA<br>Category: Repair and Servicing<br>Class Code: Vehicle Repair, Testing and Servicing<br>Positional Accuracy: Positioned to address or location               | A13NE (E)                              | 118                          | 7       | 497961 103778 |
| 108    | <b>Points of Interest - Commercial Services</b><br>Name: Orchard Classics<br>Location: Unit 21 Orchard Business Park, North End Road, Yapton, Arundel, BN18 0GA<br>Category: Repair and Servicing<br>Class Code: Vehicle Repair, Testing and Servicing<br>Positional Accuracy: Positioned to address or location              | A13NE (E)                              | 134                          | 7       | 497967 103742 |





## Industrial Land Use

| Map ID | Details                                                                                                                                                                                                                                                                                                       | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR           |
|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------|---------|---------------|
| 109    | <b>Points of Interest - Commercial Services</b><br>Name: Bella Autos<br>Location: Unit 3 Glebelands Farm, Yapton Road, Barnham, Bognor Regis, PO22 0BJ<br>Category: Repair and Servicing<br>Class Code: Vehicle Repair, Testing and Servicing<br>Positional Accuracy: Positioned to address or location       | A12NE (W)                              | 314                          | 7       | 497250 103812 |
| 110    | <b>Points of Interest - Commercial Services</b><br>Name: Arun Pest Control Service<br>Location: 23 Briar Close, Church Road, Yapton, Arundel, BN18 0ES<br>Category: Contract Services<br>Class Code: Pest and Vermin Control<br>Positional Accuracy: Positioned to address or location                        | A8NE (SE)                              | 338                          | 7       | 497930 103285 |
| 110    | <b>Points of Interest - Commercial Services</b><br>Name: Arun Pest Control Service<br>Location: 23 Briar Close, Church Road, Yapton, Arundel, BN18 0ES<br>Category: Contract Services<br>Class Code: Pest and Vermin Control<br>Positional Accuracy: Positioned to address or location                        | A8NE (SE)                              | 338                          | 7       | 497930 103285 |
| 111    | <b>Points of Interest - Commercial Services</b><br>Name: Noble Autos<br>Location: Georgedale, Burndell Road, Yapton, Arundel, BN18 0HP<br>Category: Repair and Servicing<br>Class Code: Vehicle Repair, Testing and Servicing<br>Positional Accuracy: Positioned to address or location                       | A9NW (SE)                              | 645                          | 7       | 498145 103066 |
| 112    | <b>Points of Interest - Commercial Services</b><br>Name: A B Auto's Arundel Ltd<br>Location: Yapton Lane Fresh Acres Nurseries, Walberton, Arundel, BN18 0AS<br>Category: Repair and Servicing<br>Class Code: Vehicle Repair, Testing and Servicing<br>Positional Accuracy: Positioned to address or location | A18NE (N)                              | 711                          | 7       | 497918 104542 |
| 112    | <b>Points of Interest - Commercial Services</b><br>Name: A B Autos<br>Location: Unit 6 Fresh Acres Nurseries, Yapton Lane, Walberton, Arundel, BN18 0AS<br>Category: Repair and Servicing<br>Class Code: Vehicle Repair, Testing and Servicing<br>Positional Accuracy: Positioned to address or location      | A18NE (N)                              | 711                          | 7       | 497918 104542 |
| 113    | <b>Points of Interest - Commercial Services</b><br>Name: C K Mobile Mechanics<br>Location: 40 The Millers, Yapton, Arundel, BN18 0LE<br>Category: Repair and Servicing<br>Class Code: Vehicle Repair, Testing and Servicing<br>Positional Accuracy: Positioned to address or location                         | A8SE (S)                               | 729                          | 7       | 497720 102781 |
| 114    | <b>Points of Interest - Commercial Services</b><br>Name: Yapton Metal Co<br>Location: Wayside, Burndell Road, Yapton, Arundel, BN18 0HP<br>Category: Recycling Services<br>Class Code: Scrap Metal Merchants<br>Positional Accuracy: Positioned to address or location                                        | A9SW (SE)                              | 829                          | 7       | 498330 102996 |
| 115    | <b>Points of Interest - Manufacturing and Production</b><br>Name: Works<br>Location: Not Supplied<br>Category: Industrial Features<br>Class Code: Unspecified Works Or Factories<br>Positional Accuracy: Positioned to an adjacent address or location                                                        | A8NE (SE)                              | 501                          | 7       | 497974 103112 |
| 115    | <b>Points of Interest - Manufacturing and Production</b><br>Name: Works<br>Location: BN18<br>Category: Industrial Features<br>Class Code: Unspecified Works Or Factories<br>Positional Accuracy: Positioned to an adjacent address or location                                                                | A8NE (SE)                              | 501                          | 7       | 497974 103111 |
| 116    | <b>Points of Interest - Manufacturing and Production</b><br>Name: Tank<br>Location: BN18<br>Category: Industrial Features<br>Class Code: Tanks (Generic)<br>Positional Accuracy: Positioned to an adjacent address or location                                                                                | A18NE (N)                              | 756                          | 7       | 497891 104597 |
| 117    | <b>Points of Interest - Manufacturing and Production</b><br>Name: Tank<br>Location: PO22<br>Category: Industrial Features<br>Class Code: Tanks (Generic)<br>Positional Accuracy: Positioned to an adjacent address or location                                                                                | A17SW (W)                              | 810                          | 7       | 496793 104026 |



## Industrial Land Use

| Map ID | Details                                                                                                                                                                                                                                                                      | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR           |
|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------|---------|---------------|
| 118    | <b>Points of Interest - Manufacturing and Production</b><br>Name: Drove Lane Farm<br>Location: Drove Lane, Main Road, Yapton, Arundel, BN18 0EB<br>Category: Farming<br>Class Code: Arable Farming<br>Positional Accuracy: Positioned to address or location                 | A7SW (SW)                              | 857                          | 7       | 496945 102932 |
| 118    | <b>Points of Interest - Manufacturing and Production</b><br>Name: Drove Lane Farm<br>Location: Drove Lane Farm Drove Lane, Main Road, Yapton, Arundel, BN18 0EB<br>Category: Farming<br>Class Code: Arable Farming<br>Positional Accuracy: Positioned to address or location | A7SW (SW)                              | 857                          | 7       | 496944 102932 |
| 119    | <b>Points of Interest - Manufacturing and Production</b><br>Name: Tank<br>Location: PO22<br>Category: Industrial Features<br>Class Code: Tanks (Generic)<br>Positional Accuracy: Positioned to an adjacent address or location                                               | A17NE (NW)                             | 923                          | 7       | 497117 104588 |
| 120    | <b>Points of Interest - Manufacturing and Production</b><br>Name: Tank<br>Location: BN18<br>Category: Industrial Features<br>Class Code: Tanks (Generic)<br>Positional Accuracy: Positioned to an adjacent address or location                                               | A23SE (N)                              | 926                          | 7       | 497718 104793 |
| 121    | <b>Points of Interest - Manufacturing and Production</b><br>Name: Tank<br>Location: PO22<br>Category: Industrial Features<br>Class Code: Tanks (Generic)<br>Positional Accuracy: Positioned to address or location                                                           | A17NE (NW)                             | 937                          | 7       | 497009 104507 |
| 121    | <b>Points of Interest - Manufacturing and Production</b><br>Name: Tank<br>Location: PO22<br>Category: Industrial Features<br>Class Code: Tanks (Generic)<br>Positional Accuracy: Positioned to an adjacent address or location                                               | A17NE (NW)                             | 937                          | 7       | 497010 104507 |
| 121    | <b>Points of Interest - Manufacturing and Production</b><br>Name: Tank<br>Location: PO22<br>Category: Industrial Features<br>Class Code: Tanks (Generic)<br>Positional Accuracy: Positioned to address or location                                                           | A17NE (NW)                             | 947                          | 7       | 496997 104508 |
| 121    | <b>Points of Interest - Manufacturing and Production</b><br>Name: Tank<br>Location: PO22<br>Category: Industrial Features<br>Class Code: Tanks (Generic)<br>Positional Accuracy: Positioned to address or location                                                           | A17NE (NW)                             | 949                          | 7       | 496997 104511 |
| 121    | <b>Points of Interest - Manufacturing and Production</b><br>Name: Tank<br>Location: PO22<br>Category: Industrial Features<br>Class Code: Tanks (Generic)<br>Positional Accuracy: Positioned to address or location                                                           | A17NW (NW)                             | 954                          | 7       | 496986 104507 |
| 121    | <b>Points of Interest - Manufacturing and Production</b><br>Name: Tanks<br>Location: PO22<br>Category: Industrial Features<br>Class Code: Tanks (Generic)<br>Positional Accuracy: Positioned to an adjacent address or location                                              | A17NE (NW)                             | 955                          | 7       | 496990 104512 |
| 121    | <b>Points of Interest - Manufacturing and Production</b><br>Name: Tank<br>Location: PO22<br>Category: Industrial Features<br>Class Code: Tanks (Generic)<br>Positional Accuracy: Positioned to address or location                                                           | A17NW (NW)                             | 957                          | 7       | 496986 104511 |
| 122    | <b>Points of Interest - Public Infrastructure</b><br>Name: Sewage Pumping Station<br>Location: BN18<br>Category: Infrastructure and Facilities<br>Class Code: Waste Storage, Processing and Disposal<br>Positional Accuracy: Positioned to an adjacent address or location   | A19NW (NE)                             | 678                          | 7       | 498143 104420 |



## Industrial Land Use

| Map ID | Details                                                                                                                                                                                                                            | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR           |
|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------|---------|---------------|
| 123    | <b>Points of Interest - Recreational and Environmental</b><br>Name: Play Area<br>Location: Not Supplied<br>Category: Recreational<br>Class Code: Playgrounds<br>Positional Accuracy: Positioned to an adjacent address or location | A9NW (SE)                              | 503                          | 7       | 498088 103215 |
| 123    | <b>Points of Interest - Recreational and Environmental</b><br>Name: Play Area<br>Location: Main Road, BN18<br>Category: Recreational<br>Class Code: Playgrounds<br>Positional Accuracy: Positioned to address or location          | A9NW (SE)                              | 512                          | 7       | 498052 103161 |
| 123    | <b>Points of Interest - Recreational and Environmental</b><br>Name: Play Area<br>Location: Downview Way, BN18<br>Category: Recreational<br>Class Code: Playgrounds<br>Positional Accuracy: Positioned to address or location       | A9NW (SE)                              | 547                          | 7       | 498089 103150 |



## Sensitive Land Use

| Map ID | Details                                                                                                                                 | Quadrant Reference (Compass Direction) | Estimated Distance From Site | Contact | NGR              |
|--------|-----------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------|---------|------------------|
| 124    | <b>Nitrate Vulnerable Zones</b><br>Name: Aldingbourne Rife Nvz<br>Description: Surface Water<br>Source: Environment Agency, Head Office | A13NE (S)                              | 0                            | 3       | 497671<br>103686 |



| Agency & Hydrological                                                                                                                                                                                                                         | Version                                      | Update Cycle                                   |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------|------------------------------------------------|
| <b>Contaminated Land Register Entries and Notices</b><br>Arun District Council - Environmental Health Department<br>Chichester District Council - Environmental Health Department                                                             | July 2013<br>July 2013                       | Annual Rolling Update<br>Annual Rolling Update |
| <b>Discharge Consents</b><br>Environment Agency - Southern Region                                                                                                                                                                             | January 2019                                 | Quarterly                                      |
| <b>Enforcement and Prohibition Notices</b><br>Environment Agency - Southern Region                                                                                                                                                            | March 2013                                   | Annual Rolling Update                          |
| <b>Integrated Pollution Controls</b><br>Environment Agency - Southern Region                                                                                                                                                                  | October 2008                                 | Variable                                       |
| <b>Integrated Pollution Prevention And Control</b><br>Environment Agency - South East Region - Solent & South Downs Area<br>Environment Agency - Southern Region                                                                              | January 2019<br>January 2019                 | Quarterly<br>Quarterly                         |
| <b>Local Authority Integrated Pollution Prevention And Control</b><br>Arun District Council - Environmental Health Department<br>Chichester District Council - Environmental Health Department                                                | December 2014<br>October 2014                | Variable<br>Variable                           |
| <b>Local Authority Pollution Prevention and Controls</b><br>Arun District Council - Environmental Health Department<br>Chichester District Council - Environmental Health Department                                                          | December 2014<br>October 2014                | Annual Rolling Update<br>Annual Rolling Update |
| <b>Local Authority Pollution Prevention and Control Enforcements</b><br>Arun District Council - Environmental Health Department<br>Chichester District Council - Environmental Health Department                                              | December 2014<br>October 2014                | Variable<br>Variable                           |
| <b>Nearest Surface Water Feature</b><br>Ordnance Survey                                                                                                                                                                                       | September 2017                               |                                                |
| <b>Pollution Incidents to Controlled Waters</b><br>Environment Agency - Southern Region                                                                                                                                                       | December 1999                                | Not Applicable                                 |
| <b>Prosecutions Relating to Authorised Processes</b><br>Environment Agency - Southern Region                                                                                                                                                  | March 2013                                   | Annual Rolling Update                          |
| <b>Prosecutions Relating to Controlled Waters</b><br>Environment Agency - Southern Region                                                                                                                                                     | March 2013                                   | Annual Rolling Update                          |
| <b>Registered Radioactive Substances</b><br>Environment Agency - Southern Region                                                                                                                                                              | June 2016                                    |                                                |
| <b>River Quality</b><br>Environment Agency - Head Office                                                                                                                                                                                      | November 2001                                | Not Applicable                                 |
| <b>River Quality Biology Sampling Points</b><br>Environment Agency - Head Office                                                                                                                                                              | July 2012                                    | Annually                                       |
| <b>River Quality Chemistry Sampling Points</b><br>Environment Agency - Head Office                                                                                                                                                            | July 2012                                    | Annually                                       |
| <b>Substantiated Pollution Incident Register</b><br>Environment Agency - South East Region - Solent & South Downs Area<br>Environment Agency - Southern Region - Solent and South Downs<br>Environment Agency - Southern Region - Sussex Area | January 2019<br>January 2019<br>January 2019 | Quarterly<br>Quarterly<br>Quarterly            |
| <b>Water Abstractions</b><br>Environment Agency - Southern Region                                                                                                                                                                             | January 2019                                 | Quarterly                                      |
| <b>Water Industry Act Referrals</b><br>Environment Agency - Southern Region                                                                                                                                                                   | October 2017                                 | Quarterly                                      |
| <b>Groundwater Vulnerability</b><br>Environment Agency - Head Office                                                                                                                                                                          | April 2015                                   | Not Applicable                                 |
| <b>Drift Deposits</b><br>Environment Agency - Head Office                                                                                                                                                                                     | January 1999                                 | Not Applicable                                 |
| <b>Bedrock Aquifer Designations</b><br>Environment Agency - Head Office                                                                                                                                                                       | January 2018                                 | Annually                                       |



| Agency & Hydrological                                                                                                 | Version      | Update Cycle |
|-----------------------------------------------------------------------------------------------------------------------|--------------|--------------|
| <b>Superficial Aquifer Designations</b><br>Environment Agency - Head Office                                           | January 2018 | Annually     |
| <b>Source Protection Zones</b><br>Environment Agency - Head Office                                                    | January 2019 | Quarterly    |
| <b>Extreme Flooding from Rivers or Sea without Defences</b><br>Environment Agency - Head Office                       | August 2018  | Quarterly    |
| <b>Flooding from Rivers or Sea without Defences</b><br>Environment Agency - Head Office                               | August 2018  | Quarterly    |
| <b>Areas Benefiting from Flood Defences</b><br>Environment Agency - Head Office                                       | August 2018  | Quarterly    |
| <b>Flood Water Storage Areas</b><br>Environment Agency - Head Office                                                  | August 2018  | Quarterly    |
| <b>Flood Defences</b><br>Environment Agency - Head Office                                                             | August 2018  | Quarterly    |
| <b>OS Water Network Lines</b><br>Ordnance Survey                                                                      | October 2018 | Quarterly    |
| <b>Surface Water 1 in 30 year Flood Extent</b><br>Environment Agency - Head Office                                    | October 2013 | Annually     |
| <b>Surface Water 1 in 100 year Flood Extent</b><br>Environment Agency - Head Office                                   | October 2013 | Annually     |
| <b>Surface Water 1 in 1000 year Flood Extent</b><br>Environment Agency - Head Office                                  | October 2013 | Annually     |
| <b>Surface Water Suitability</b><br>Environment Agency - Head Office                                                  | October 2013 | Annually     |
| <b>BGS Groundwater Flooding Susceptibility</b><br>British Geological Survey - National Geoscience Information Service | May 2013     | Annually     |



| Waste                                                                                                                                                                                                                                                          | Version                                        | Update Cycle                                       |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|----------------------------------------------------|
| <b>BGS Recorded Landfill Sites</b><br>British Geological Survey - National Geoscience Information Service                                                                                                                                                      | June 1996                                      | Not Applicable                                     |
| <b>Historical Landfill Sites</b><br>Environment Agency - Head Office                                                                                                                                                                                           | July 2018                                      | Quarterly                                          |
| <b>Integrated Pollution Control Registered Waste Sites</b><br>Environment Agency - Southern Region                                                                                                                                                             | October 2008                                   | Not Applicable                                     |
| <b>Licensed Waste Management Facilities (Landfill Boundaries)</b><br>Environment Agency - South East Region - Solent & South Downs Area<br>Environment Agency - Southern Region - Solent and South Downs<br>Environment Agency - Southern Region - Sussex Area | July 2018<br>July 2018<br>July 2018            | Quarterly<br>Quarterly<br>Quarterly                |
| <b>Licensed Waste Management Facilities (Locations)</b><br>Environment Agency - South East Region - Solent & South Downs Area<br>Environment Agency - Southern Region - Solent and South Downs<br>Environment Agency - Southern Region - Sussex Area           | January 2019<br>January 2019<br>January 2019   | Quarterly<br>Quarterly<br>Quarterly                |
| <b>Local Authority Landfill Coverage</b><br>Arun District Council - Technical Support Unit<br>Chichester District Council - Environmental Health Department<br>West Sussex County Council - Environment & Development                                          | May 2000<br>May 2000<br>May 2000               | Not Applicable<br>Not Applicable<br>Not Applicable |
| <b>Local Authority Recorded Landfill Sites</b><br>Arun District Council - Technical Support Unit<br>Chichester District Council - Environmental Health Department<br>West Sussex County Council - Environment & Development                                    | May 2000<br>May 2000<br>May 2000               | Not Applicable<br>Not Applicable<br>Not Applicable |
| <b>Potentially Infilled Land (Non-Water)</b><br>Landmark Information Group Limited                                                                                                                                                                             | December 1999                                  | Not Applicable                                     |
| <b>Potentially Infilled Land (Water)</b><br>Landmark Information Group Limited                                                                                                                                                                                 | December 1999                                  | Not Applicable                                     |
| <b>Registered Landfill Sites</b><br>Environment Agency - Southern Region - Solent and South Downs<br>Environment Agency - Southern Region - Sussex Area                                                                                                        | March 2003<br>March 2003                       | Not Applicable<br>Not Applicable                   |
| <b>Registered Waste Transfer Sites</b><br>Environment Agency - Southern Region - Solent and South Downs<br>Environment Agency - Southern Region - Sussex Area                                                                                                  | March 2003<br>March 2003                       | Not Applicable<br>Not Applicable                   |
| <b>Registered Waste Treatment or Disposal Sites</b><br>Environment Agency - Southern Region - Solent and South Downs<br>Environment Agency - Southern Region - Sussex Area                                                                                     | March 2003<br>March 2003                       | Not Applicable<br>Not Applicable                   |
| Hazardous Substances                                                                                                                                                                                                                                           | Version                                        | Update Cycle                                       |
| <b>Control of Major Accident Hazards Sites (COMAH)</b><br>Health and Safety Executive                                                                                                                                                                          | April 2018                                     | Bi-Annually                                        |
| <b>Explosive Sites</b><br>Health and Safety Executive                                                                                                                                                                                                          | March 2017                                     | Variable                                           |
| <b>Notification of Installations Handling Hazardous Substances (NIHHS)</b><br>Health and Safety Executive                                                                                                                                                      | November 2000                                  | Not Applicable                                     |
| <b>Planning Hazardous Substance Enforcements</b><br>Arun District Council - Technical Support Unit<br>Chichester District Council - Planning Department<br>West Sussex County Council - Environment & Development                                              | February 2016<br>February 2016<br>October 2006 | Variable<br>Variable<br>Annual Rolling Update      |
| <b>Planning Hazardous Substance Consents</b><br>Arun District Council - Technical Support Unit<br>Chichester District Council - Planning Department<br>West Sussex County Council - Environment & Development                                                  | February 2016<br>February 2016<br>October 2006 | Variable<br>Variable<br>Annual Rolling Update      |



| Geological                                                                                                                                      | Version       | Update Cycle          |
|-------------------------------------------------------------------------------------------------------------------------------------------------|---------------|-----------------------|
| <b>BGS 1:625,000 Solid Geology</b><br>British Geological Survey - National Geoscience Information Service                                       | January 2009  | Not Applicable        |
| <b>BGS Estimated Soil Chemistry</b><br>British Geological Survey - National Geoscience Information Service                                      | October 2015  | Annually              |
| <b>BGS Recorded Mineral Sites</b><br>British Geological Survey - National Geoscience Information Service                                        | November 2018 | Bi-Annually           |
| <b>CBSCB Compensation District</b><br>Cheshire Brine Subsidence Compensation Board (CBSCB)                                                      | August 2011   | Not Applicable        |
| <b>Coal Mining Affected Areas</b><br>The Coal Authority - Property Searches                                                                     | March 2014    | Annual Rolling Update |
| <b>Mining Instability</b><br>Ove Arup & Partners                                                                                                | October 2000  | Not Applicable        |
| <b>Non Coal Mining Areas of Great Britain</b><br>British Geological Survey - National Geoscience Information Service                            | May 2015      | Not Applicable        |
| <b>Potential for Collapsible Ground Stability Hazards</b><br>British Geological Survey - National Geoscience Information Service                | January 2019  | Annually              |
| <b>Potential for Compressible Ground Stability Hazards</b><br>British Geological Survey - National Geoscience Information Service               | January 2019  | Annually              |
| <b>Potential for Ground Dissolution Stability Hazards</b><br>British Geological Survey - National Geoscience Information Service                | January 2019  | Annually              |
| <b>Potential for Landslide Ground Stability Hazards</b><br>British Geological Survey - National Geoscience Information Service                  | January 2019  | Annually              |
| <b>Potential for Running Sand Ground Stability Hazards</b><br>British Geological Survey - National Geoscience Information Service               | January 2019  | Annually              |
| <b>Potential for Shrinking or Swelling Clay Ground Stability Hazards</b><br>British Geological Survey - National Geoscience Information Service | January 2019  | Annually              |
| <b>Radon Potential - Radon Affected Areas</b><br>British Geological Survey - National Geoscience Information Service                            | July 2011     | Annually              |
| <b>Radon Potential - Radon Protection Measures</b><br>British Geological Survey - National Geoscience Information Service                       | July 2011     | Annually              |
| Industrial Land Use                                                                                                                             | Version       | Update Cycle          |
| <b>Contemporary Trade Directory Entries</b><br>Thomson Directories                                                                              | January 2019  | Quarterly             |
| <b>Fuel Station Entries</b><br>Catalist Ltd - Experian                                                                                          | November 2018 | Quarterly             |
| <b>Gas Pipelines</b><br>National Grid                                                                                                           | July 2014     |                       |
| <b>Points of Interest - Commercial Services</b><br>PointX                                                                                       | November 2018 | Quarterly             |
| <b>Points of Interest - Education and Health</b><br>PointX                                                                                      | November 2018 | Quarterly             |
| <b>Points of Interest - Manufacturing and Production</b><br>PointX                                                                              | November 2018 | Quarterly             |
| <b>Points of Interest - Public Infrastructure</b><br>PointX                                                                                     | November 2018 | Quarterly             |
| <b>Points of Interest - Recreational and Environmental</b><br>PointX                                                                            | November 2018 | Quarterly             |
| <b>Underground Electrical Cables</b><br>National Grid                                                                                           | December 2015 |                       |





| Sensitive Land Use                                                                                                                                | Version                       | Update Cycle   |
|---------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|----------------|
| <b>Ancient Woodland</b><br>Natural England                                                                                                        | August 2018                   | Bi-Annually    |
| <b>Areas of Outstanding Natural Beauty</b><br>Natural England                                                                                     | August 2018                   | Bi-Annually    |
| <b>Environmentally Sensitive Areas</b><br>Natural England                                                                                         | January 2017                  |                |
| <b>Forest Parks</b><br>Forestry Commission                                                                                                        | April 1997                    | Not Applicable |
| <b>Local Nature Reserves</b><br>Natural England                                                                                                   | August 2018                   | Bi-Annually    |
| <b>Marine Nature Reserves</b><br>Natural England                                                                                                  | January 2018                  | Bi-Annually    |
| <b>National Nature Reserves</b><br>Natural England                                                                                                | August 2018                   | Bi-Annually    |
| <b>National Parks</b><br>Natural England                                                                                                          | April 2017                    | Bi-Annually    |
| <b>Nitrate Vulnerable Zones</b><br>Environment Agency - Head Office<br>Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA) | December 2017<br>October 2015 | Bi-Annually    |
| <b>Ramsar Sites</b><br>Natural England                                                                                                            | August 2018                   | Bi-Annually    |
| <b>Sites of Special Scientific Interest</b><br>Natural England                                                                                    | October 2018                  | Bi-Annually    |
| <b>Special Areas of Conservation</b><br>Natural England                                                                                           | August 2018                   | Bi-Annually    |
| <b>Special Protection Areas</b><br>Natural England                                                                                                | August 2018                   | Bi-Annually    |



## Data Suppliers

A selection of organisations who provide data within this report

| Data Supplier                          | Data Supplier Logo |
|----------------------------------------|--------------------|
| Ordnance Survey                        |                    |
| Environment Agency                     |                    |
| Scottish Environment Protection Agency |                    |
| The Coal Authority                     |                    |
| British Geological Survey              |                    |
| Centre for Ecology and Hydrology       |                    |
| Natural Resources Wales                |                    |
| Scottish Natural Heritage              |                    |
| Natural England                        |                    |
| Public Health England                  |                    |
| Ove Arup                               |                    |
| Peter Brett Associates                 |                    |



## Useful Contacts

| Contact | Name and Address                                                                                                                                                  | Contact Details |
|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| 1       | <b>British Geological Survey - Enquiry Service</b><br>British Geological Survey, Environmental Science Centre, Keyworth,<br>Nottingham, Nottinghamshire, NG12 5GG |                 |
| 2       | <b>Environment Agency - National Customer Contact Centre (NCCC)</b><br>PO Box 544, Templeborough, Rotherham, S60 1BY                                              |                 |
| 3       | <b>Environment Agency - Head Office</b><br>Rio House, Waterside Drive, Aztec West, Almondsbury, Bristol, Avon,<br>BS32 4UD                                        |                 |
| 4       | <b>Ordnance Survey</b><br>Adanac Drive, Southampton, Hampshire, SO16 0AS                                                                                          |                 |
| 5       | <b>Arun District Council - Technical Support Unit</b><br>Civic Centre, Maltravers Road, Littlehampton, Sussex, BN17 5LF                                           |                 |
| 6       | <b>West Sussex County Council - Environment &amp; Development</b><br>County Hall, Tower hall, Chichester, West Sussex, PO19 1RH                                   |                 |
| 7       | <b>PointX</b><br>7 Abbey Court, Eagle Way, Sowton, Exeter, Devon, EX2 7HY                                                                                         |                 |
| 8       | <b>Natural England</b><br>County Hall, Spetchley Road, Worcester, WR5 2NP                                                                                         |                 |
| -       | <b>Public Health England - Radon Survey, Centre for Radiation, Chemical and Environmental Hazards</b><br>Chilton, Didcot, Oxfordshire, OX11 0RQ                   |                 |
| -       | <b>Landmark Information Group Limited</b><br>Imperium, Imperial Way, Reading, Berkshire, RG2 0TD                                                                  |                 |

Please note that the Environment Agency / Natural Resources Wales / SEPA have a charging policy in p

# Historical Mapping Legends

## Ordnance Survey County Series 1:10,560

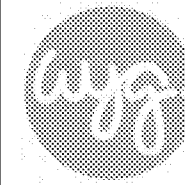
|  |                                               |  |                             |  |               |
|--|-----------------------------------------------|--|-----------------------------|--|---------------|
|  | Gravel Pit                                    |  | Sand Pit                    |  | Other Pits    |
|  | Quarry                                        |  | Shingle                     |  | Orchard       |
|  | Osiers                                        |  | Reeds                       |  | Marsh         |
|  | Mixed Wood                                    |  | Deciduous                   |  | Brushwood     |
|  | Fir                                           |  | Furze                       |  | Rough Pasture |
|  | Arrow denotes flow of water                   |  | Trigonometrical Station     |  |               |
|  | Site of Antiquities                           |  | Bench Mark                  |  |               |
|  | Pump, Guide Post, Signal Post                 |  | Well, Spring, Boundary Post |  |               |
|  | 285 Surface Level                             |  |                             |  |               |
|  | Sketched Contour                              |  | Instrumental Contour        |  |               |
|  | Main Roads                                    |  | Minor Roads                 |  |               |
|  | Sunken Road                                   |  | Raised Road                 |  |               |
|  | Road over Railway                             |  | Railway over River          |  |               |
|  | Railway over Road                             |  | Level Crossing              |  |               |
|  | Road over River or Canal                      |  | Road over Stream            |  |               |
|  | County Boundary (Geographical)                |  |                             |  |               |
|  | County & Civil Parish Boundary                |  |                             |  |               |
|  | Administrative County & Civil Parish Boundary |  |                             |  |               |
|  | County Borough Boundary (England)             |  |                             |  |               |
|  | County Burgh Boundary (Scotland)              |  |                             |  |               |
|  | Rural District Boundary                       |  |                             |  |               |
|  | Civil Parish Boundary                         |  |                             |  |               |

## Ordnance Survey Plan 1:10,000

|  |                                                                       |  |                                                         |
|--|-----------------------------------------------------------------------|--|---------------------------------------------------------|
|  | Chalk Pit, Clay Pit or Quarry                                         |  | Gravel Pit                                              |
|  | Sand Pit                                                              |  | Disused Pit or Quarry                                   |
|  | Refuse or Slag Heap                                                   |  | Lake, Loch or Pond                                      |
|  | Dunes                                                                 |  | Boulders                                                |
|  | Coniferous Trees                                                      |  | Non-Coniferous Trees                                    |
|  | Orchard                                                               |  | Scrub                                                   |
|  | Bracken                                                               |  | Heath                                                   |
|  | Marsh                                                                 |  | Reeds                                                   |
|  | Building                                                              |  | Glasshouse                                              |
|  | Sloping Masonry                                                       |  | Pylon                                                   |
|  | Cutting                                                               |  | Embankment                                              |
|  | Road Under                                                            |  | Road Over                                               |
|  | Level Crossing                                                        |  | Foot Bridge                                             |
|  | Standard Gauge Multiple Track                                         |  | Standard Gauge Single Track                             |
|  | Siding, Tramway or Mineral Line                                       |  | Narrow Gauge                                            |
|  | Geographical County                                                   |  | Administrative County, County Borough or County of City |
|  | Municipal Borough, Urban or Rural District, Burgh or District Council |  | Borough, Burgh or County Constituency                   |
|  | Civil Parish                                                          |  |                                                         |
|  | Boundary Post or Stone                                                |  | Police Station                                          |
|  | Church                                                                |  | Post Office                                             |
|  | Club House                                                            |  | Public Convenience                                      |
|  | Fire Engine Station                                                   |  | Public House                                            |
|  | Foot Bridge                                                           |  | Signal Box                                              |
|  | Fountain                                                              |  | Spring                                                  |
|  | Guide Post                                                            |  | Telephone Call Box                                      |
|  | Mile Post                                                             |  | Telephone Call Post                                     |
|  | Mile Stone                                                            |  | Well                                                    |

## 1:10,000 Raster Mapping

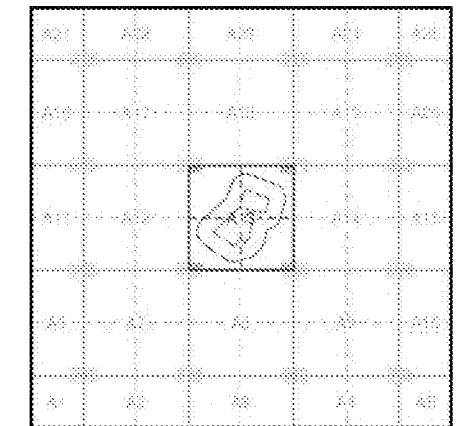
|  |                                                          |  |                                            |
|--|----------------------------------------------------------|--|--------------------------------------------|
|  | Gravel Pit                                               |  | Refuse tip or slag heap                    |
|  | Rock                                                     |  | Rock (scattered)                           |
|  | Boulders                                                 |  | Boulders (scattered)                       |
|  | Shingle                                                  |  | Mud                                        |
|  | Sand                                                     |  | Sand Pit                                   |
|  | Slopes                                                   |  | Top of cliff                               |
|  | General detail                                           |  | Underground detail                         |
|  | Overhead detail                                          |  | Narrow gauge railway                       |
|  | Multi-track railway                                      |  | Single track railway                       |
|  | County boundary (England only)                           |  | Civil, parish or community boundary        |
|  | District, Unitary, Metropolitan, London Borough boundary |  | Constituency boundary                      |
|  | Area of wooded vegetation                                |  | Non-coniferous trees                       |
|  | Non-coniferous trees (scattered)                         |  | Coniferous trees                           |
|  | Coniferous trees (scattered)                             |  | Positioned tree                            |
|  | Orchard                                                  |  | Coppice or Osiers                          |
|  | Rough Grassland                                          |  | Heath                                      |
|  | Scrub                                                    |  | Marsh, Salt Marsh or Reeds                 |
|  | Water feature                                            |  | Flow arrows                                |
|  | Mean high water (springs)                                |  | Mean low water (springs)                   |
|  | Telephone line (where shown)                             |  | Electricity transmission line (with poles) |
|  | Bench mark (where shown)                                 |  | Triangulation station                      |
|  | Point feature (e.g. Guide Post or Mile Stone)            |  | Pylon, flare stack or lighting tower       |
|  | Site of (antiquity)                                      |  | Glasshouse                                 |
|  | General Building                                         |  | Important Building                         |



## Historical Mapping & Photography included:

| Mapping Type                  | Scale    | Date        | Pg |
|-------------------------------|----------|-------------|----|
| Sussex                        | 1:10,560 | 1880        | 2  |
| Sussex                        | 1:10,560 | 1899        | 3  |
| Sussex                        | 1:10,560 | 1913 - 1914 | 4  |
| Sussex                        | 1:10,560 | 1913 - 1914 | 5  |
| Sussex                        | 1:10,560 | 1913 - 1914 | 6  |
| Sussex                        | 1:10,560 | 1914        | 7  |
| Historical Aerial Photography | 1:10,560 | 1947        | 8  |
| Sussex                        | 1:10,560 | 1951        | 9  |
| Ordnance Survey Plan          | 1:10,000 | 1961 - 1962 | 10 |
| Ordnance Survey Plan          | 1:10,000 | 1967        | 11 |
| Ordnance Survey Plan          | 1:10,000 | 1979        | 12 |
| Ordnance Survey Plan          | 1:10,000 | 1980        | 13 |
| Ordnance Survey Plan          | 1:10,000 | 1992        | 14 |
| 10K Raster Mapping            | 1:10,000 | 2000        | 15 |
| 10K Raster Mapping            | 1:10,000 | 2006        | 16 |
| VectorMap Local               | 1:10,000 | 2019        | 17 |

## Historical Map - Slice A



## Order Details

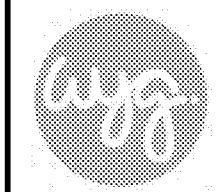
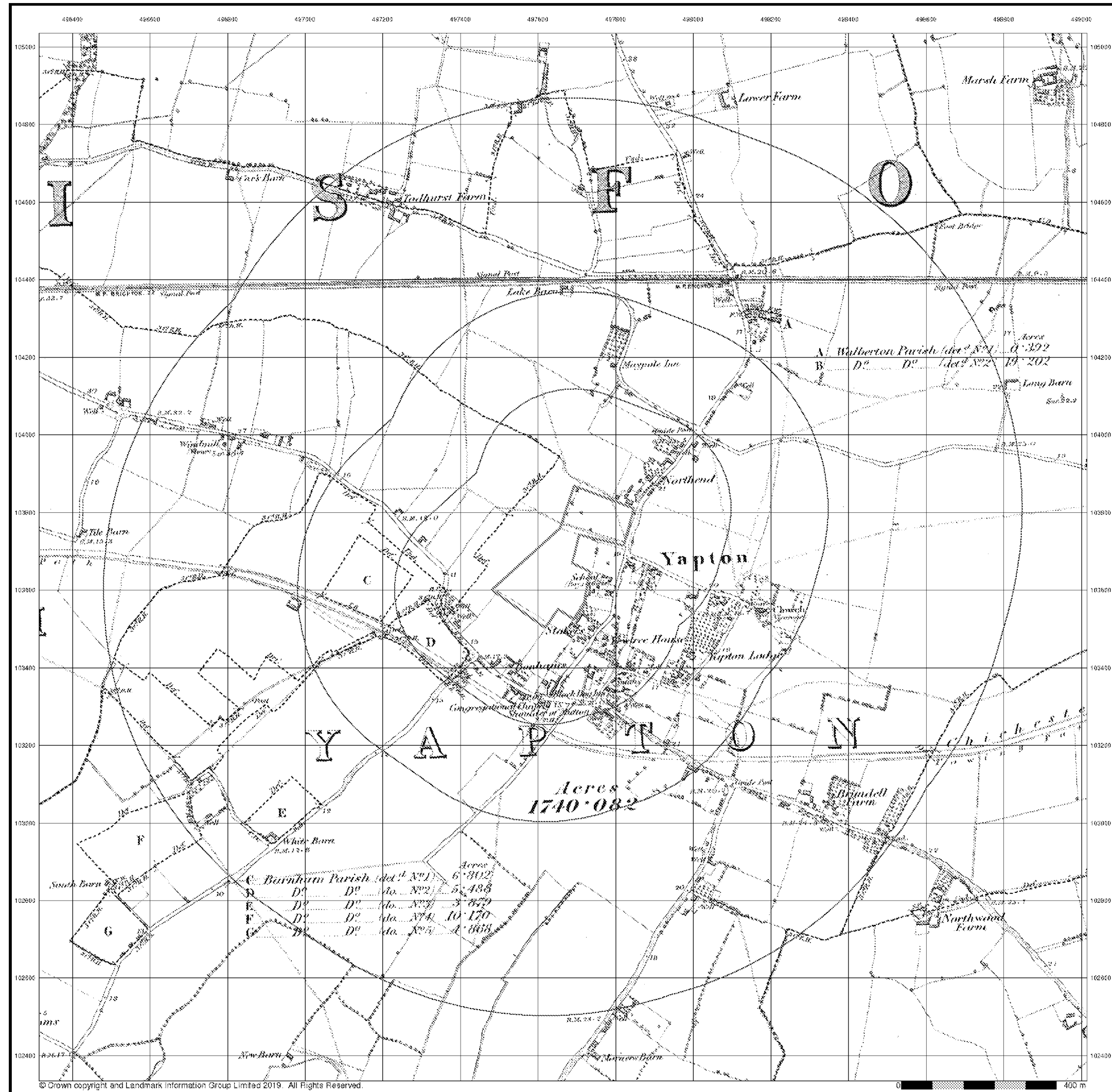
Order Number: 195300019\_1\_1  
 Customer Ref: A112666  
 National Grid Reference: 497670, 103690  
 Slice: A  
 Site Area (Ha): 5.34  
 Search Buffer (m): 1000

## Site Details

Land at Stakers Farm, North End Road, Yapton, ARUNDEL, BN18 0DU

**Landmark**  
 INFORMATION GROUP

Tel: 0844 844 9952  
 Fax: 0844 844 9951  
 Web: www.envirocheck.co.uk



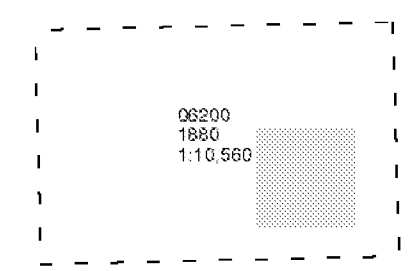
Sussex

Published 1880

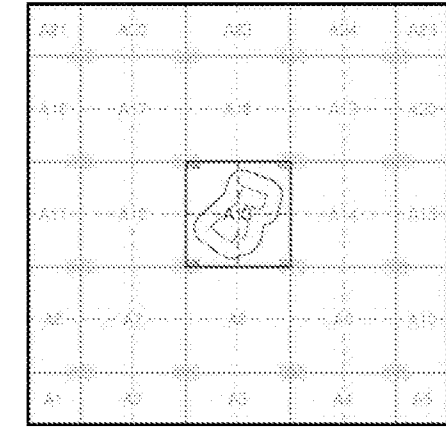
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

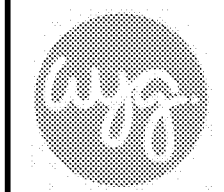
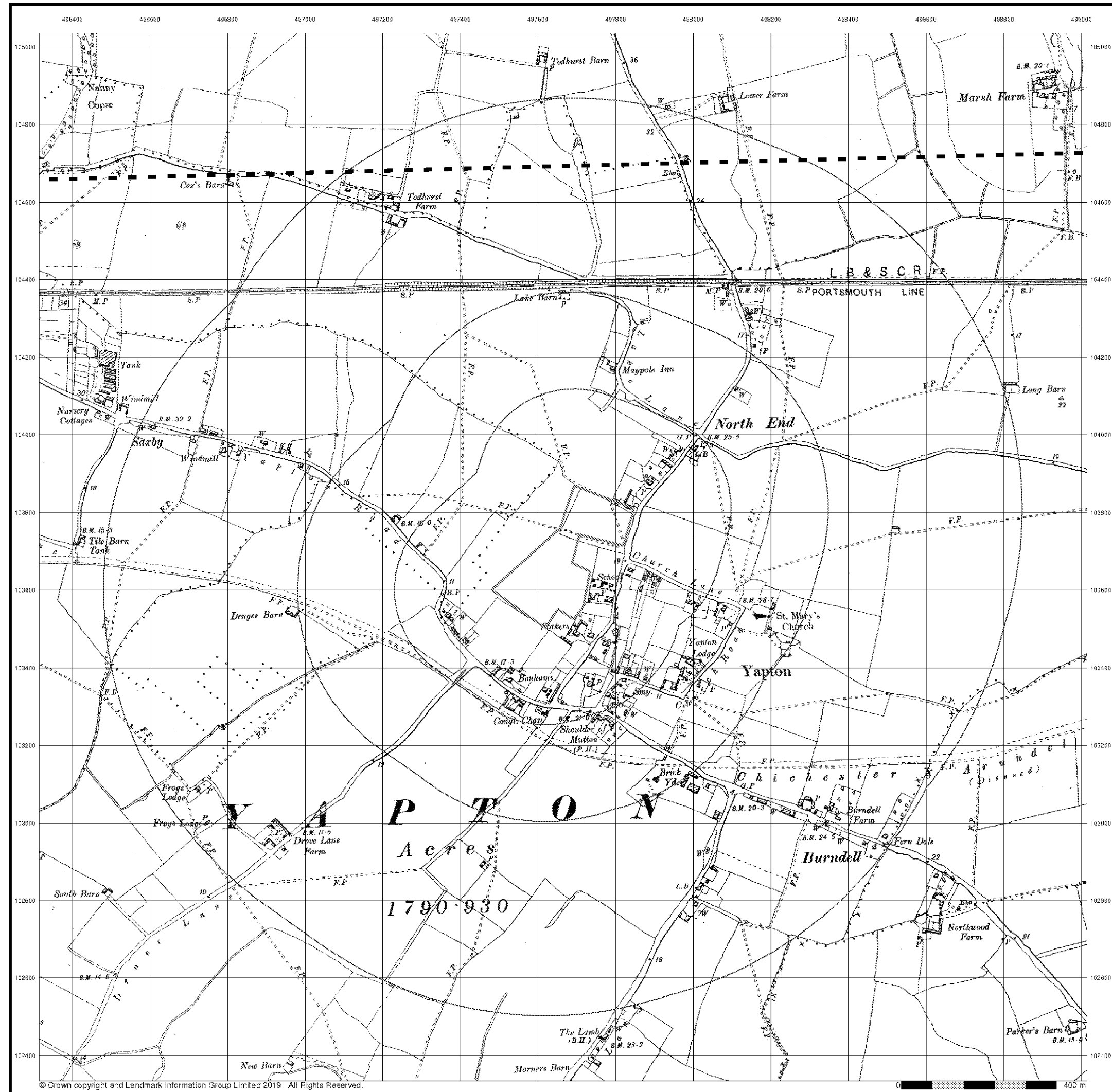
Order Number: 195300019\_1\_1  
Customer Ref: A112666  
National Grid Reference: 497670, 103690  
Slice: A  
Site Area (Ha): 5.34  
Search Buffer (m): 1000

Site Details

Land at Stakers Farm, North End Road, Yapton, ARUNDEL, BN18 0DU



Tel: 0844 844 9952  
Fax: 0844 844 9951  
Web: www.envirocheck.co.uk



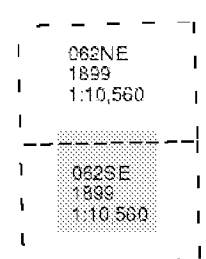
Sussex

Published 1899

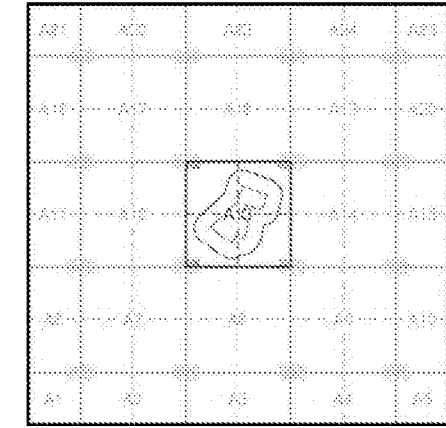
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

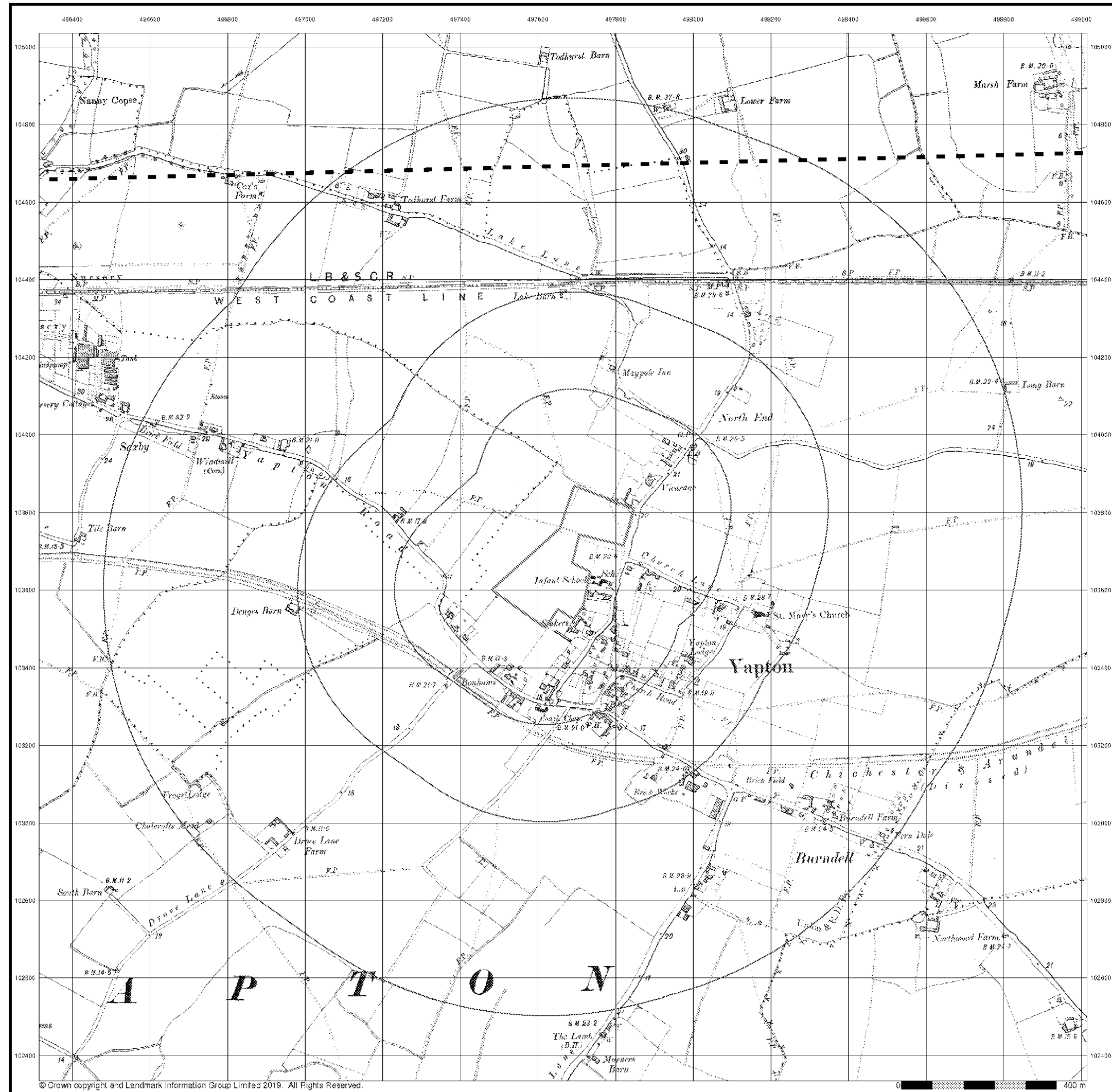
Order Number: 195300019\_1\_1  
Customer Ref: A112666  
National Grid Reference: 497670, 103690  
Slice: A  
Site Area (Ha): 5.34  
Search Buffer (m): 1000

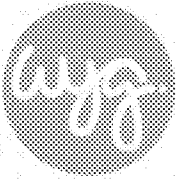
Site Details

Land at Stakers Farm, North End Road, Yapton, ARUNDEL, BN18 0DU



Tel: 0844 844 9952  
Fax: 0844 844 9951  
Web: www.enviroscheck.co.uk





### Sussex

## Published 1913 - 1914

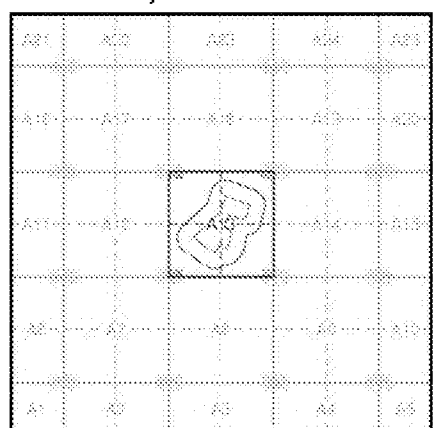
### Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

#### Map Name(s) and Date(s)

|       |      |          |
|-------|------|----------|
| 062NE | 1914 | 1:10,560 |
| 062SE | 1913 | 1:10,560 |

#### Historical Map - Slice A



#### Order Details

|                          |                |
|--------------------------|----------------|
| Order Number:            | 195300019_1_1  |
| Customer Ref:            | A112666        |
| National Grid Reference: | 497670, 103690 |
| Slice:                   | A              |
| Site Area (Ha):          | 5.34           |
| Search Buffer (m):       | 1000           |

#### Site Details

Land at Stakers Farm, North End Road, Yapton, ARUNDEL, BN18 0DU

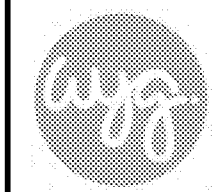
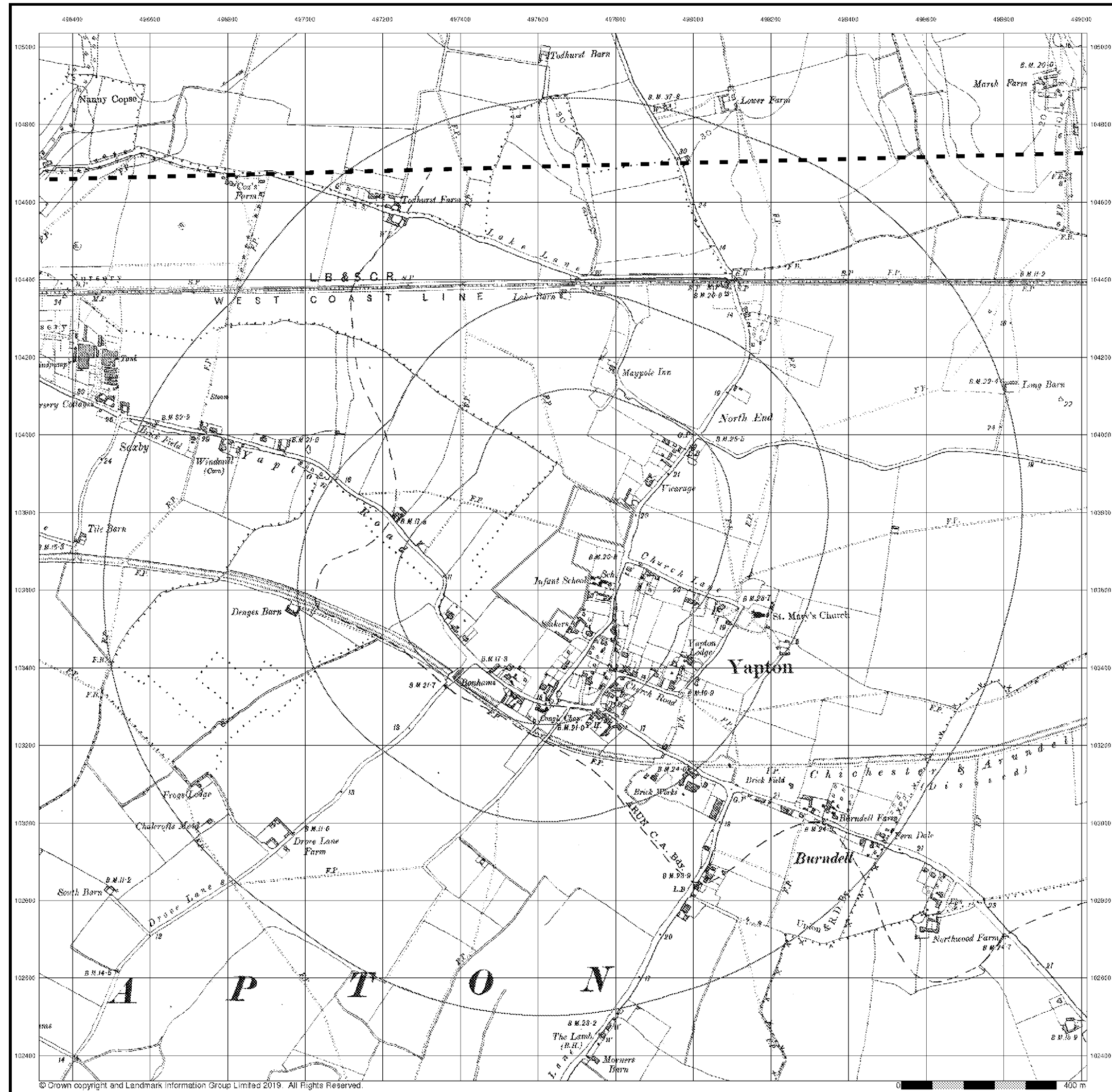


Tel: 0844 844 9952  
Fax: 0844 844 9951  
Web: [www.envirocheck.co.uk](http://www.envirocheck.co.uk)

ARUN DISTRICT COUNCIL Y/71/20/ES

A Landmark Information Group Service v50.0 25-Feb-2019 Page 4 of 17





Sussex

Published 1913 - 1914

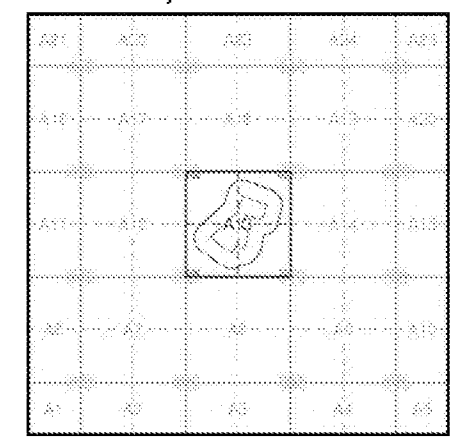
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)

|          |
|----------|
| 062NE    |
| 1914     |
| 1:10,560 |
| 062SE    |
| 1913     |
| 1:10,560 |

Historical Map - Slice A



Order Details

Order Number: 195300019\_1\_1  
Customer Ref: A112666  
National Grid Reference: 497670, 103690  
Slice: A  
Site Area (Ha): 5.34  
Search Buffer (m): 1000

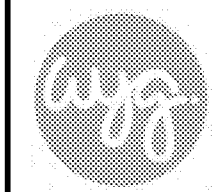
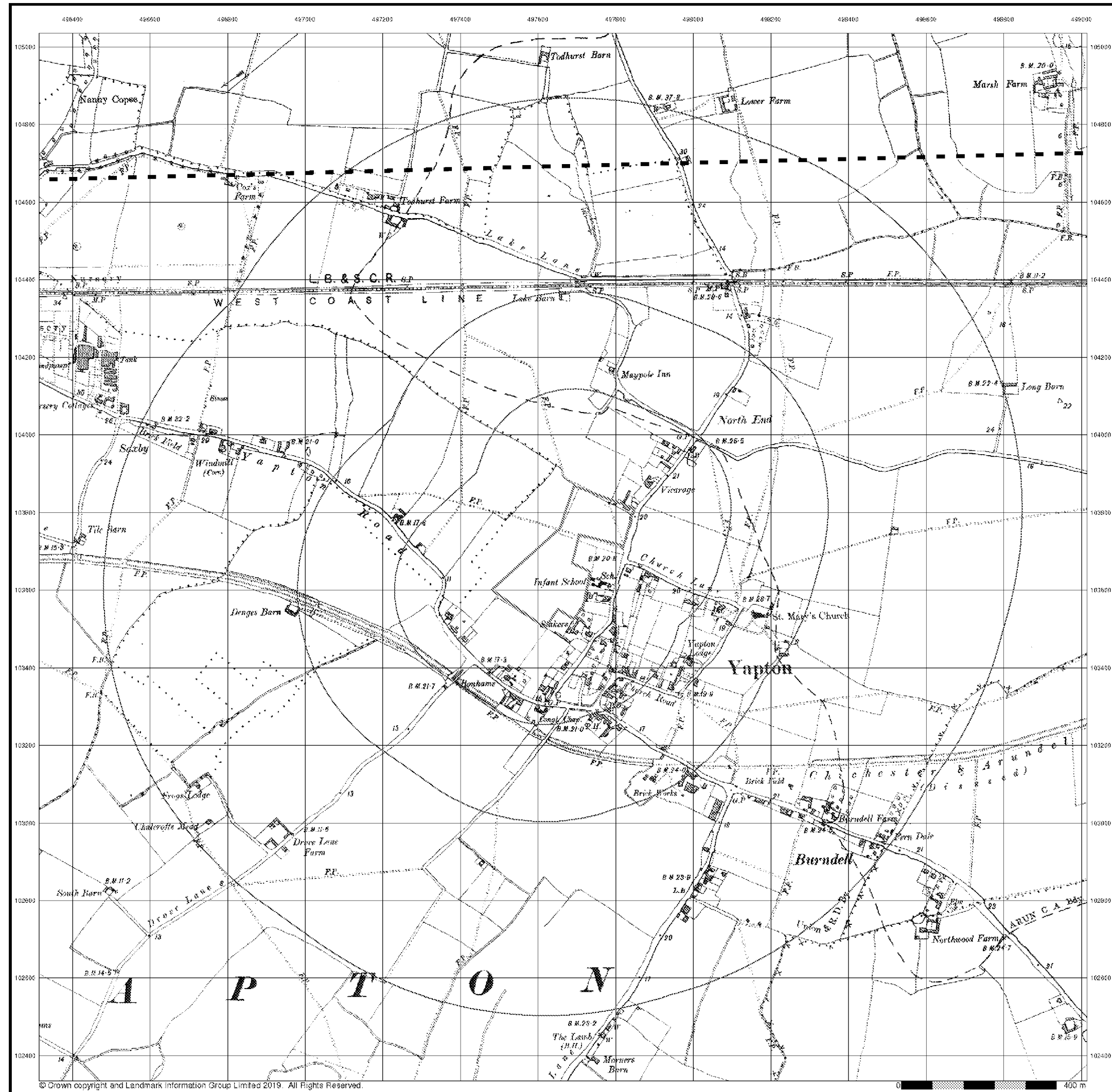
Site Details

Land at Stakers Farm, North End Road, Yapton, ARUNDEL, BN18 0DU



Tel: 0844 844 9952  
Fax: 0844 844 9951  
Web: www.envirocheck.co.uk





Sussex

Published 1913 - 1914

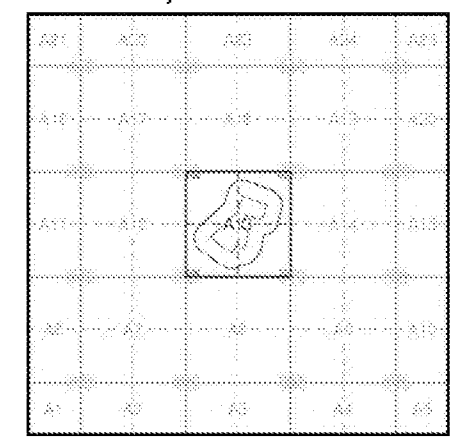
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)

|          |
|----------|
| 062NE    |
| 1914     |
| 1:10,560 |
| 062SE    |
| 1913     |
| 1:10,560 |

Historical Map - Slice A



Order Details

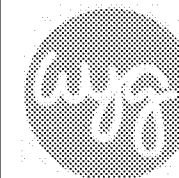
Order Number: 195300019\_1\_1  
Customer Ref: A112666  
National Grid Reference: 497670, 103690  
Slice: A  
Site Area (Ha): 5.34  
Search Buffer (m): 1000

Site Details

Land at Stakers Farm, North End Road, Yapton, ARUNDEL, BN18 0DU



Tel: 0844 844 9952  
Fax: 0844 844 9951  
Web: www.envirocheck.co.uk



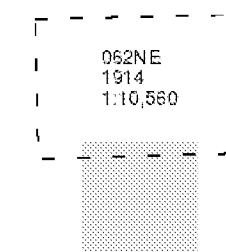
Sussex

Published 1914

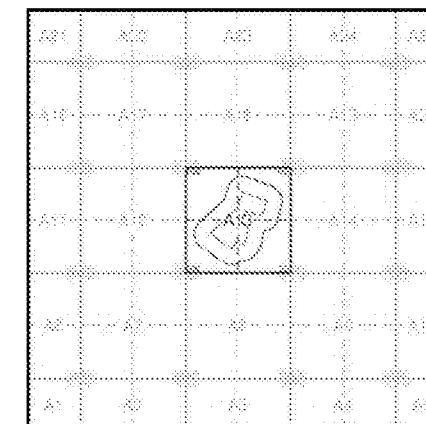
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

#### Map Name(s) and Date(s)



#### Historical Map - Slice A



#### Order Details

Order Number: 195300019\_1\_1  
Customer Ref: A112666  
National Grid Reference: 497670, 103690  
Slice: A  
Site Area (Ha): 5.34  
Search Buffer (m): 1000

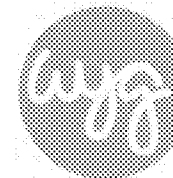
#### Site Details

Land at Stakers Farm, North End Road, Yapton, ARUNDEL, BN18 0DU

**Landmark**  
INFORMATION GROUP

Tel: 0844 844 9952  
Fax: 0844 844 9951  
Web: [www.envirocheck.co.uk](http://www.envirocheck.co.uk)





## Historical Aerial Photography

**Published 1947**

**Source map scale - 1:10,560**

The Historical Aerial Photos were produced by the Ordnance Survey at a scale of 1:1,250 and 1:10,560 from Air Force photography. They were produced between 1944 and 1951 as an interim measure, pending preparation of conventional mapping, due to post war resource shortages. New security measures in the 1950's meant that every photograph was re-checked for potentially unsafe information with security sites replaced by fake fields or clouds. The original editions were withdrawn and only later made available after a period of fifty years although due to the accuracy of the editing, without viewing both revisions it is not easy to spot the edits. Where available Landmark have included both revisions.

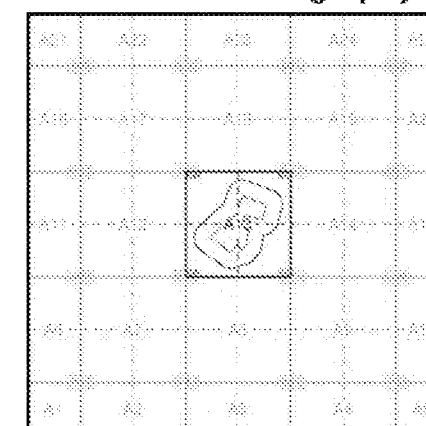
© Landmark Information Group and/or Data Suppliers 2010.

### Map Name(s) and Date(s)

SU90NE  
1947  
1:10,560

SU90SE  
1947  
1:10,560

### Historical Aerial Photography - Slice A



### Order Details

Order Number: 195300019\_1\_1  
Customer Ref: A112666  
National Grid Reference: 497670, 103690  
Slice: A  
Site Area (Ha): 5.34  
Search Buffer (m): 1000

### Site Details

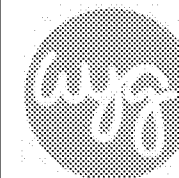
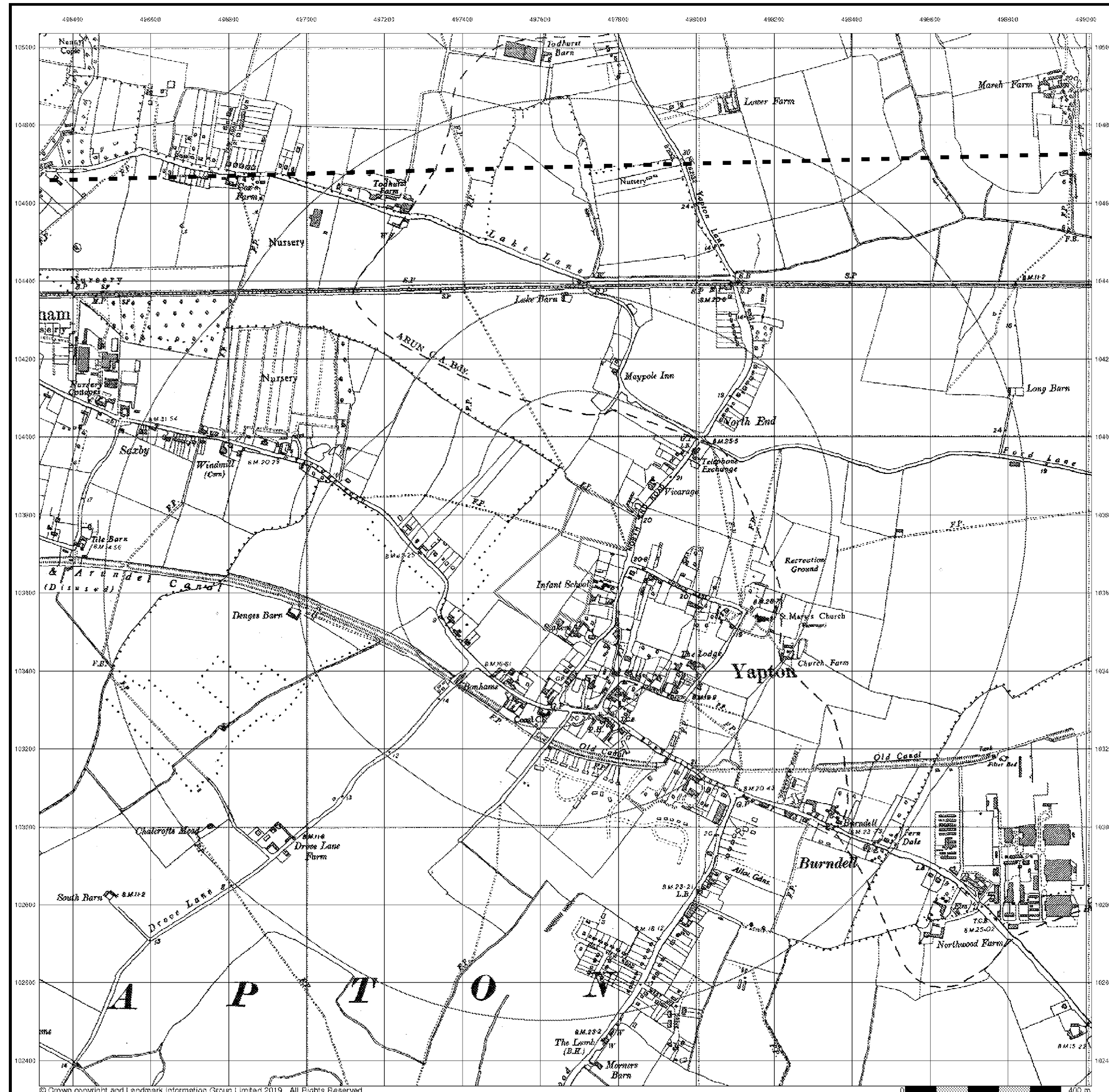
Land at Stakers Farm, North End Road, Yapton, ARUNDEL,  
BN18 0DU

**Landmark**  
INFORMATION GROUP

Tel: 0844 844 9952  
Fax: 0844 844 9951  
Web: [www.envirocheck.co.uk](http://www.envirocheck.co.uk)







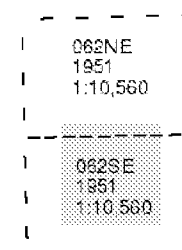
Sussex

Published 1951

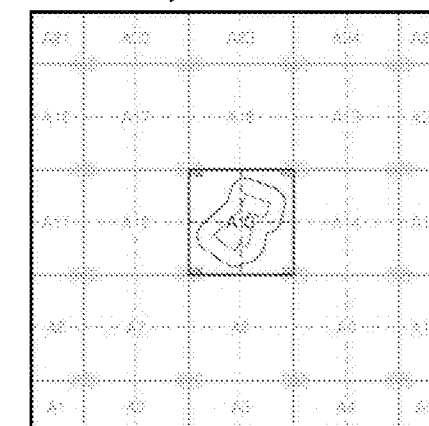
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

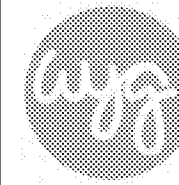
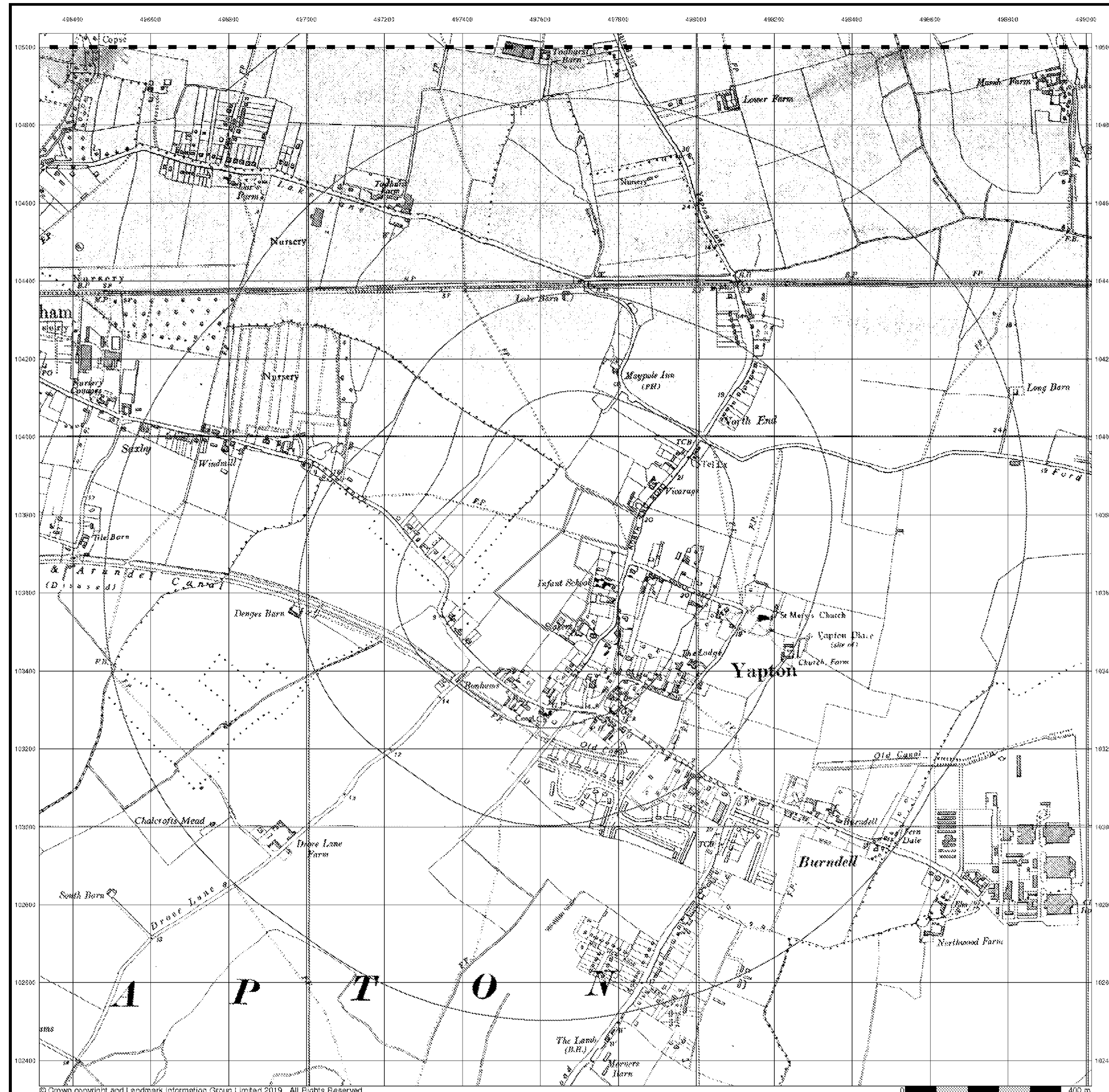
Order Number: 195300019\_1\_1  
Customer Ref: A112666  
National Grid Reference: 497670, 103690  
Slice: A  
Site Area (Ha): 5.34  
Search Buffer (m): 1000

Site Details

Land at Stakers Farm, North End Road, Yapton, ARUNDEL, BN18 0DU

Landmark  
INFORMATION GROUP

Tel: 0844 844 9952  
Fax: 0844 844 9951  
Web: www.envirocheck.co.uk



## Ordnance Survey Plan

Published 1961 - 1962

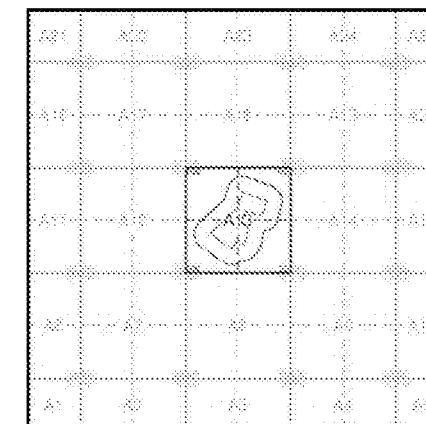
Source map scale - 1:10,000

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

### Map Name(s) and Date(s)

|          |
|----------|
| SUBONE   |
| 1961     |
| 1:10,560 |
| SUBOSE   |
| 1962     |
| 1:10,560 |

### Historical Map - Slice A



### Order Details

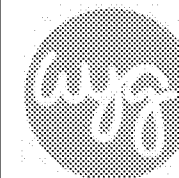
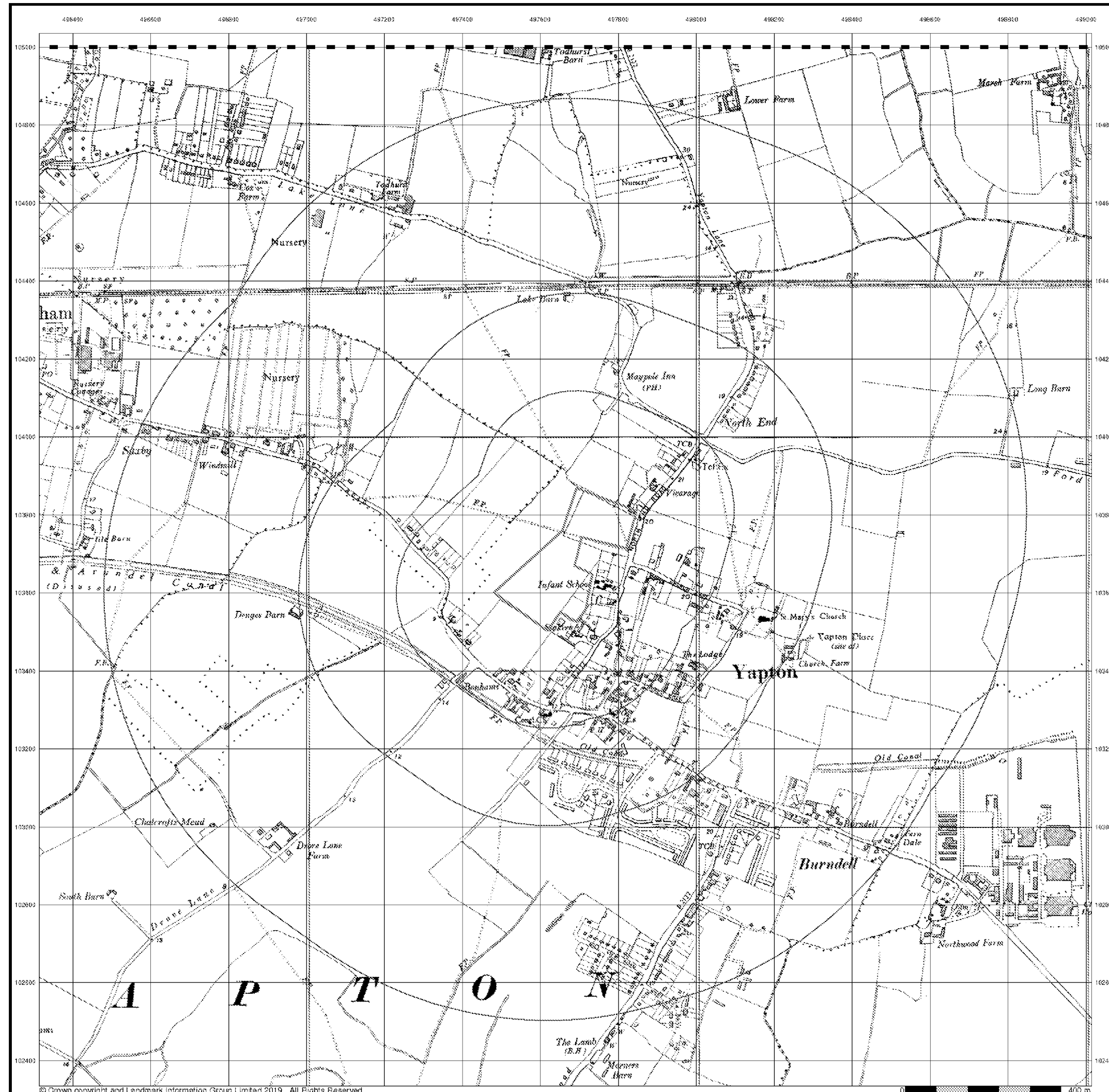
Order Number: 195300019\_1\_1  
Customer Ref: A112666  
National Grid Reference: 497670, 103690  
Slice: A  
Site Area (Ha): 5.34  
Search Buffer (m): 1000

### Site Details

Land at Stakers Farm, North End Road, Yapton, ARUNDEL, BN18 0DU

**Landmark**  
INFORMATION GROUP

Tel: 0844 844 9952  
Fax: 0844 844 9951  
Web: [www.envirocheck.co.uk](http://www.envirocheck.co.uk)



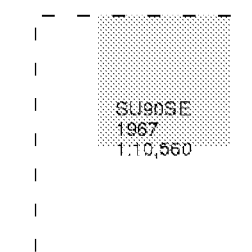
## Ordnance Survey Plan

Published 1967

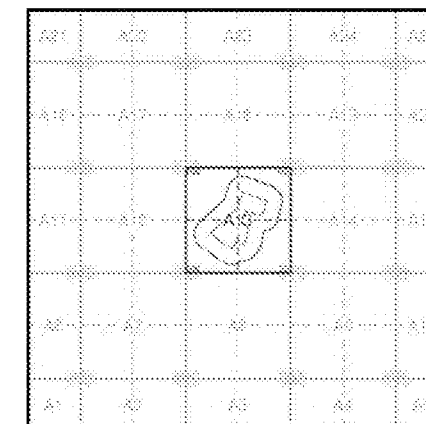
Source map scale - 1:10,000

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

### Map Name(s) and Date(s)



### Historical Map - Slice A



### Order Details

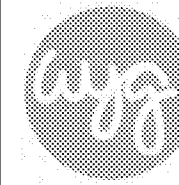
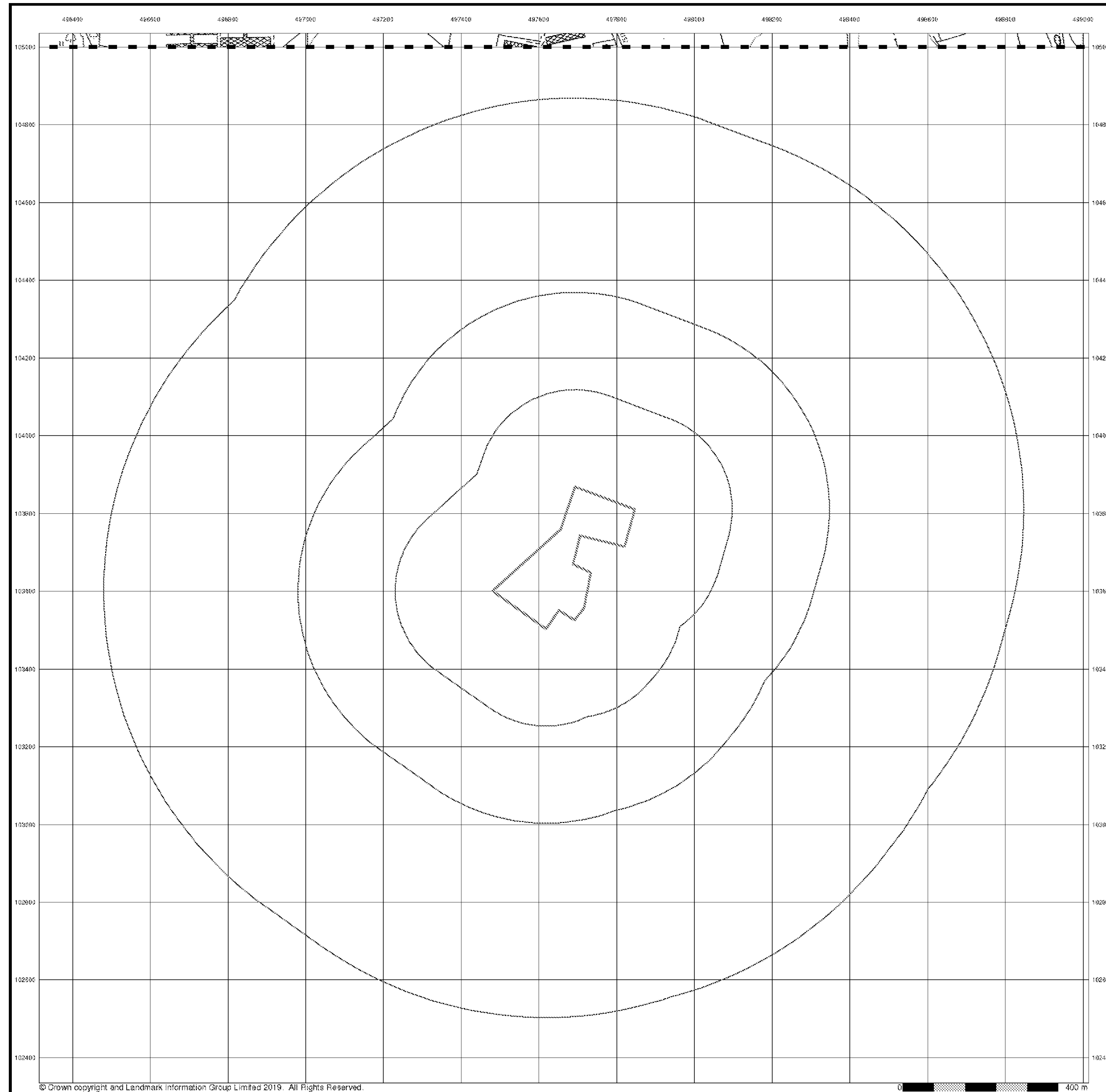
Order Number: 195300019\_1\_1  
Customer Ref: A112666  
National Grid Reference: 497670, 103690  
Slice: A  
Site Area (Ha): 5.34  
Search Buffer (m): 1000

### Site Details

Land at Stakers Farm, North End Road, Yaption, ARUNDEL, BN18 0DU

**Landmark**  
INFORMATION GROUP

Tel: 0844 844 9952  
Fax: 0844 844 9951  
Web: [www.envirocheck.co.uk](http://www.envirocheck.co.uk)



## Ordnance Survey Plan

**Published 1979**

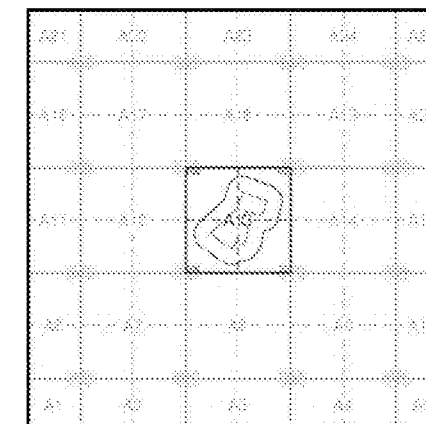
**Source map scale - 1:10,000**

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

### Map Name(s) and Date(s)

SU90NE  
1979  
1:10,000

### Historical Map - Slice A



### Order Details

Order Number: 195300019\_1\_1  
Customer Ref: A112666  
National Grid Reference: 497670, 103690  
Slice: A  
Site Area (Ha): 5.34  
Search Buffer (m): 1000

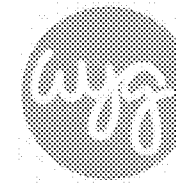
### Site Details

Land at Stakers Farm, North End Road, Yapton, ARUNDEL,  
BN18 0DU

**Landmark**  
INFORMATION GROUP

Tel: 0844 844 9952  
Fax: 0844 844 9951  
Web: [www.envirocheck.co.uk](http://www.envirocheck.co.uk)





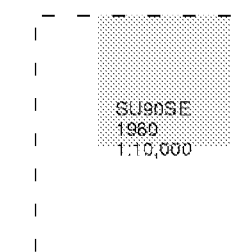
## Ordnance Survey Plan

Published 1980

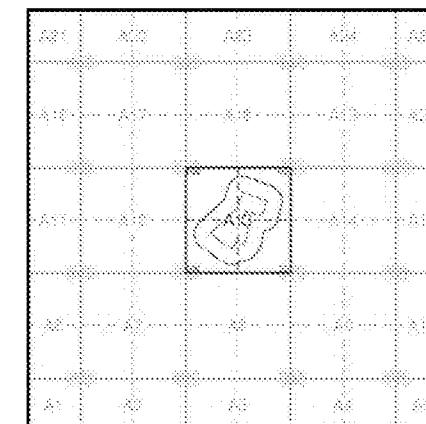
Source map scale - 1:10,000

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

### Map Name(s) and Date(s)



### Historical Map - Slice A



### Order Details

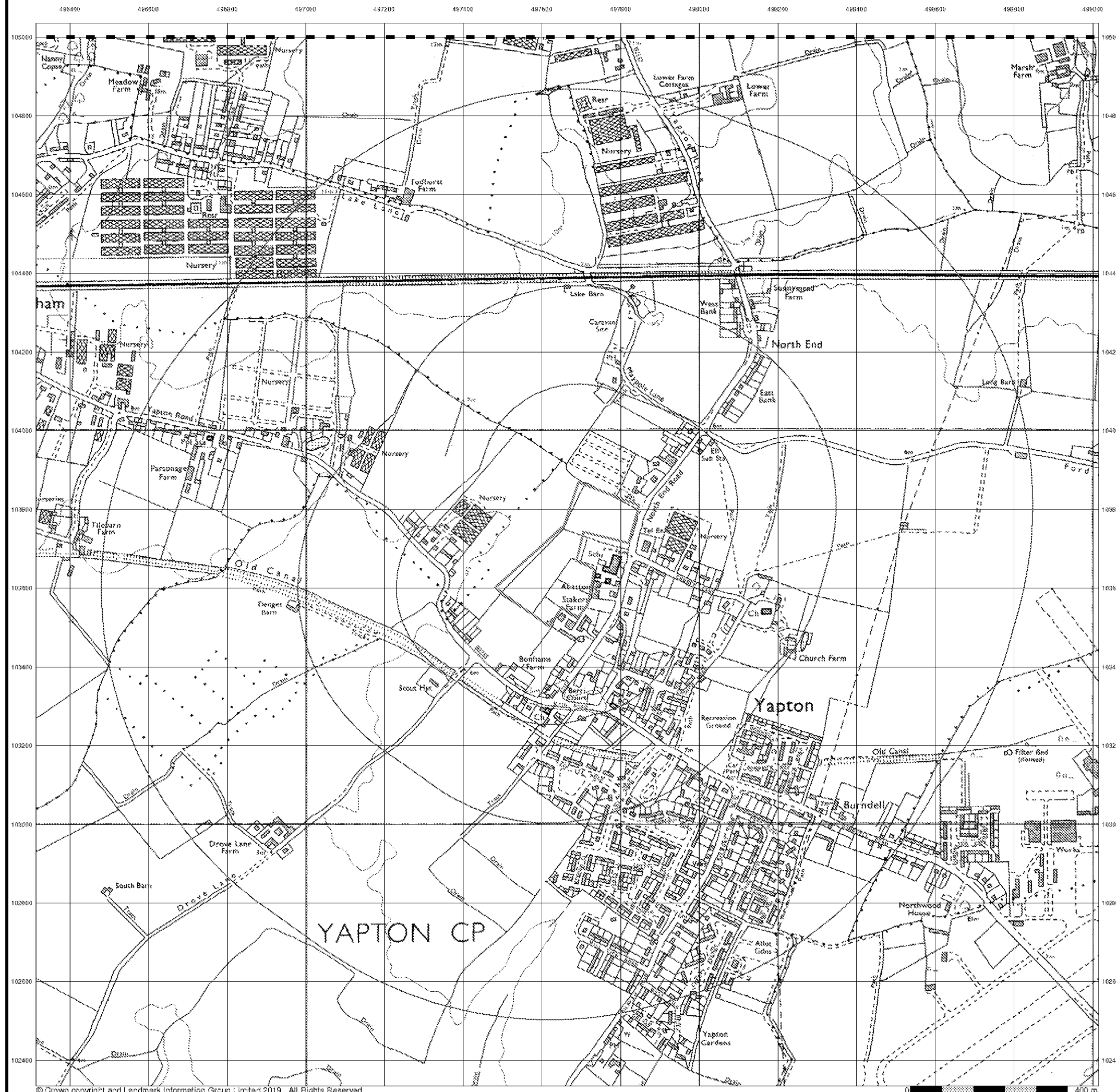
Order Number: 195300019\_1\_1  
Customer Ref: A112666  
National Grid Reference: 497670, 103690  
Slice: A  
Site Area (Ha): 5.34  
Search Buffer (m): 1000

### Site Details

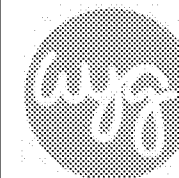
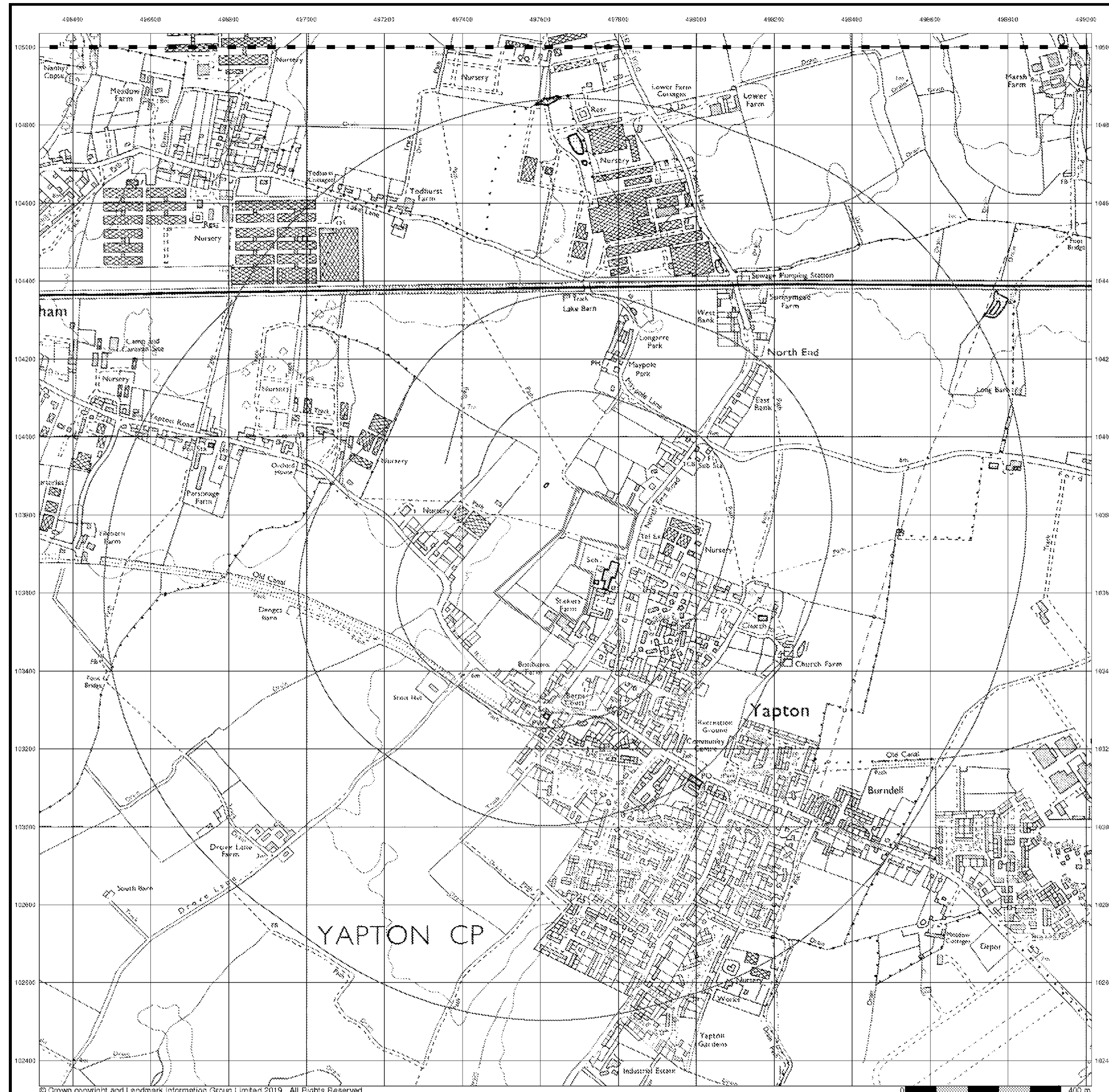
Land at Stakers Farm, North End Road, Yapton, ARUNDEL, BN18 0DU

**Landmark**  
INFORMATION GROUP

Tel: 0844 844 9952  
Fax: 0844 844 9951  
Web: [www.envirocheck.co.uk](http://www.envirocheck.co.uk)







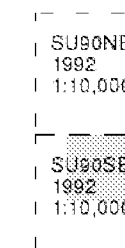
## Ordnance Survey Plan

Published 1992

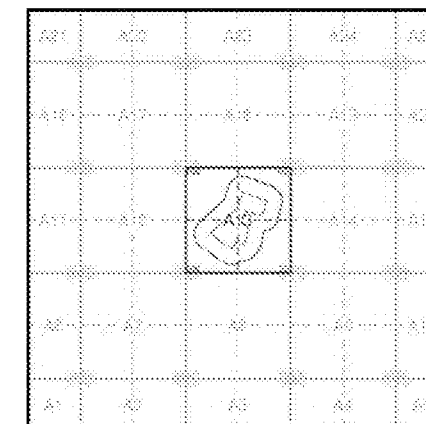
Source map scale - 1:10,000

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

### Map Name(s) and Date(s)



### Historical Map - Slice A



### Order Details

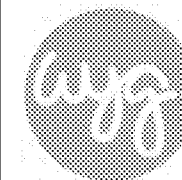
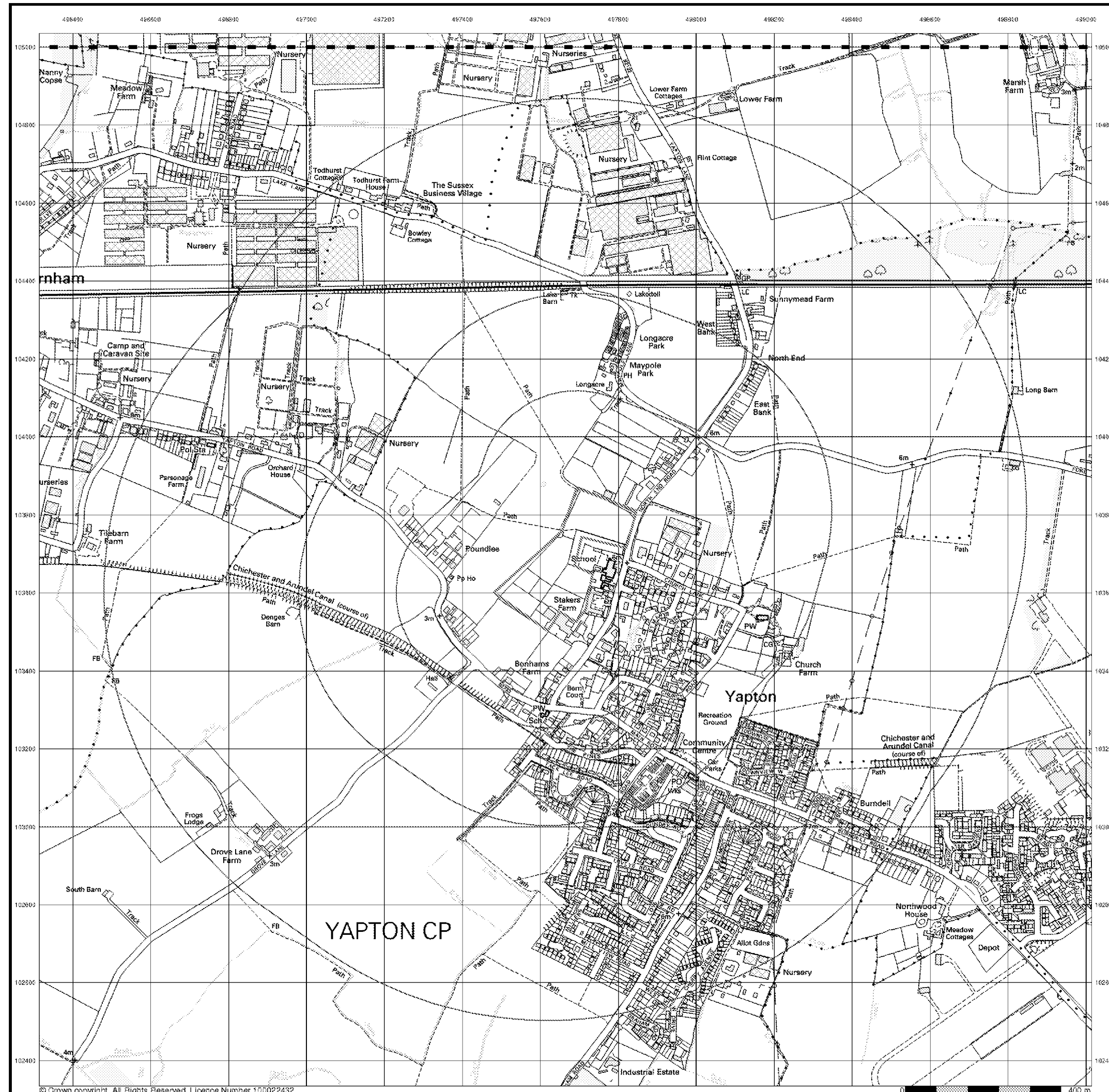
Order Number: 195300019\_1\_1  
Customer Ref: A112666  
National Grid Reference: 497670, 103690  
Slice: A  
Site Area (Ha): 5.34  
Search Buffer (m): 1000

### Site Details

Land at Stakers Farm, North End Road, Yapton, ARUNDEL, BN18 0DU

**Landmark**  
INFORMATION GROUP

Tel: 0844 844 9952  
Fax: 0844 844 9951  
Web: [www.envirocheck.co.uk](http://www.envirocheck.co.uk)



## 10k Raster Mapping

Published 2000

Source map scale - 1:10,000

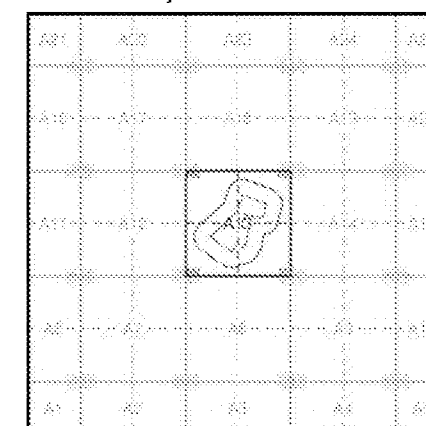
The historical maps shown were produced from the Ordnance Survey's 1:10,000 colour raster mapping. These maps are derived from Landplan which replaced the old 1:10,000 maps originally published in 1970. The data is highly detailed showing buildings, fences and field boundaries as well as all roads, tracks and paths. Road names are also included together with the relevant road number and classification. Boundary information depiction includes county, unitary authority, district, civil parish and constituency.

### Map Name(s) and Date(s)

SU90NE  
2000  
1:10,000

SU90SE  
2000  
1:10,000

### Historical Map - Slice A



### Order Details

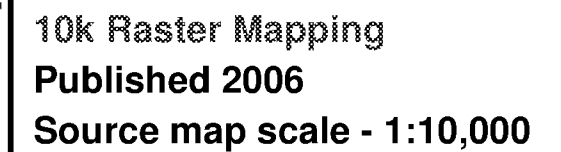
Order Number: 195300019\_1\_1  
Customer Ref: A112666  
National Grid Reference: 497670, 103690  
Slice: A  
Site Area (Ha): 5.34  
Search Buffer (m): 1000

### Site Details

Land at Stakers Farm, North End Road, Yapton, ARUNDEL, BN18 0DU

**Landmark**  
INFORMATION GROUP

Tel: 0844 844 9952  
Fax: 0844 844 9951  
Web: [www.envirocheck.co.uk](http://www.envirocheck.co.uk)



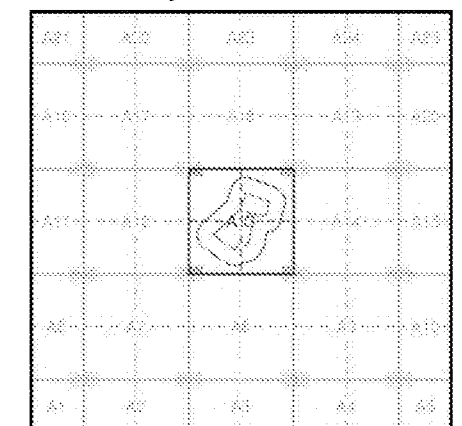
The historical maps shown were produced from the Ordnance Survey's 1:10,000 colour raster mapping. These maps are derived from Landplan which replaced the old 1:10,000 maps originally published in 1970. The data is highly detailed showing buildings, fences and field boundaries as well as all roads, tracks and paths. Road names are also included together with the relevant road number and classification. Boundary information depiction includes county, unitary authority, district, civil parish and constituency.

## Map Name(s) and Date(s)

SU90NE  
2006  
1:10,000

SU90SE  
2006  
1:10,000

### Historical Map - Slice A



## Order Details

Order Number: 195300019\_1\_1  
Customer Ref: A112666  
National Grid Reference: 497670, 103690  
Slice: A  
Site Area (Ha): 5.34  
Search Buffer (m): 1000

## Site Details

Land at Stakers Farm, North End Road, Yapton, ARUNDEL,  
BN18 0DU

**Landmark**  
 INFORMATION GROUP

Tel: 0844 844 9952  
Fax: 0844 844 9951  
Web: [www.envirocheck.co.uk](http://www.envirocheck.co.uk)







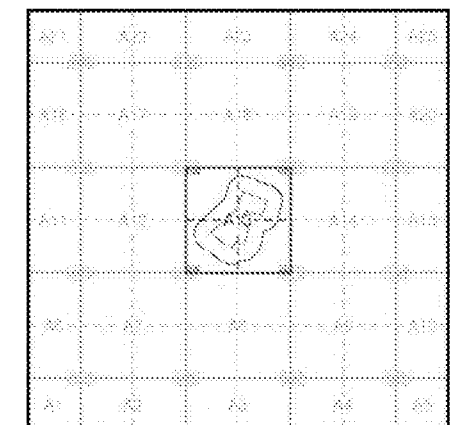
VectorMap Local (Raster) is Ordnance Survey's highest detailed 'backdrop' mapping product. These maps are produced from OS's VectorMap Local, a simple vector dataset at a nominal scale of 1:10,000, covering the whole of Great Britain, that has been designed for creating graphical mapping. OS VectorMap Local is derived from large-scale information surveyed at 1:1250 scale (covering major towns and cities), 1:2500 scale (smaller towns, villages and developed rural areas), and 1:10 000 scale (mountain, moorland and river estuary areas).

## Map Name(s) and Date(s)

| SLI90N |  
2019 |  
Variable |

SU90SE  
2019  
Variable

### Historical Map - Slice A



## Order Details

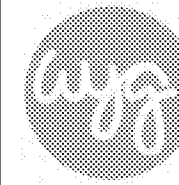
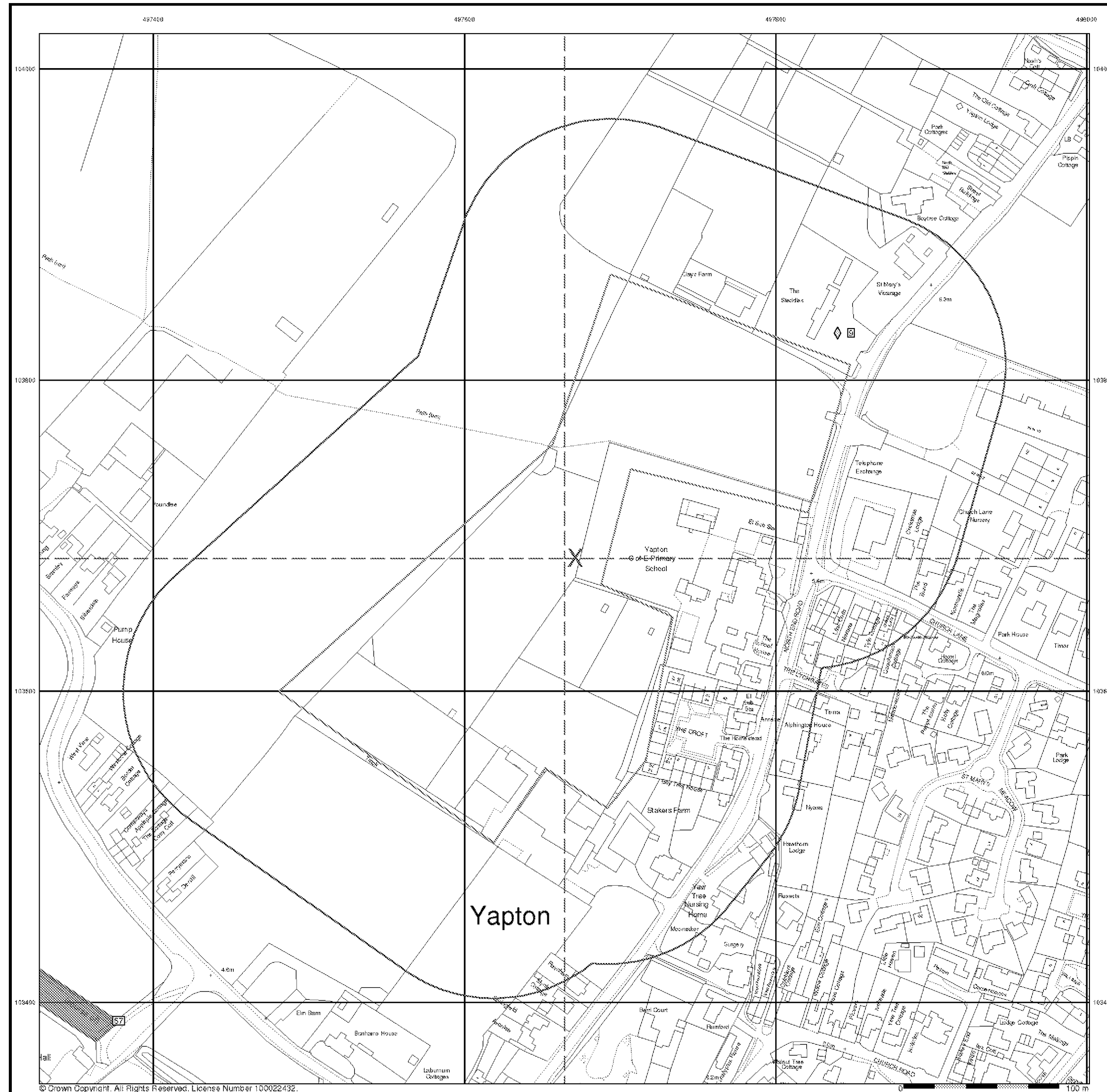
Order Number: 195300019\_1\_1  
Customer Ref: A112666  
National Grid Reference: 497670, 103690  
Slice: A  
Site Area (Ha): 5.34  
Search Buffer (m): 1000

## Site Details

Land at Stakers Farm, North End Road, Yapton, ARUNDEL,  
BN18 0DU

**Landmark**<sup>®</sup>

Tel: 0844 844 9952  
Fax: 0844 844 9951  
Web: [www.envirocheck.co.uk](http://www.envirocheck.co.uk)



### General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Map ID
- Several of Type at Location
- Pylon
- Overhead Transmission Line

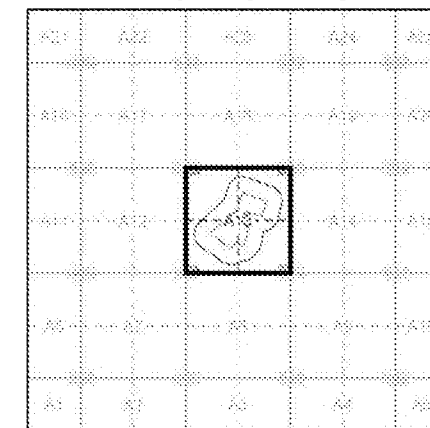
### Agency and Hydrological

- Contaminated Land Register Entry or Notice (Location)
- Contaminated Land Register Entry or Notice
- Discharge Consent
- Enforcement or Prohibition Notice
- Integrated Pollution Control
- Integrated Pollution Prevention Control
- Local Authority Integrated Pollution Prevention and Control
- Local Authority Pollution Prevention and Control Enforcement
- Pollution Incident to Controlled Waters
- Prosecution Relating to Authorised Processes
- Prosecution Relating to Controlled Waters
- Registered Radioactive Substance
- River Network or Water Feature
- River Quality Sampling Point
- Substantiated Pollution Incident Register
- Water Abstraction
- Water Industry Act Referral
- Hazardous Substances
  - COMAH Site
  - Explosive Site
  - NIHHS Site
  - Planning Hazardous Substance Consent
  - Planning Hazardous Substance Enforcement
- Geological
  - BGS Recorded Mineral Site

### Waste

- BGS Recorded Landfill Site (Location)
- BGS Recorded Landfill Site
- EA Historic Landfill (Buffered Point)
- EA Historic Landfill (Polygon)
- Integrated Pollution Control Registered Waste Site
- Licensed Waste Management Facility (Landfill boundary)
- Licensed Waste Management Facility (Location)
- Local Authority Recorded Landfill Site (Location)
- Local Authority Recorded Landfill Site
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Water)
- Potentially Infilled Land (Water)
- Potentially Infilled Land (Water)
- Registered Landfill Site
- Registered Landfill Site (Location)
- Registered Landfill Site (Point Buffered to 100m)
- Registered Landfill Site (Point Buffered to 250m)
- Registered Waste Transfer Site (Location)
- Registered Waste Transfer Site
- Registered Waste Treatment or Disposal Site (Location)
- Registered Waste Treatment or Disposal Site

### Site Sensitivity Map - Segment A13



### Order Details

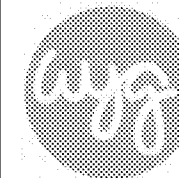
Order Number: 195300019\_1\_1  
Customer Ref: A112666  
National Grid Reference: 497670, 103690  
Slice: A  
Site Area (Ha): 5.34  
Plot Buffer (m): 100

### Site Details

Land at Stakers Farm, North End Road, Yapton, ARUNDEL, BN18 0DU

**Landmark**  
INFORMATION GROUP

Tel: 0844 844 9952  
Fax: 0844 844 9951  
Web: www.envirocheck.co.uk



- General**

  - Specified Site
  - Specified Buffer(s)
  - Bearing Reference Point
  - Map ID

**Agency and Hydrological**

  - Contaminated Land Register Entry or Notice (Location)
  - Contaminated Land Register Entry or Notice
  - Discharge Consent
  - Enforcement or Prohibition Notice
  - Integrated Pollution Control
  - Integrated Pollution Prevention Control
  - Local Authority Integrated Pollution Prevention and Control
  - Local Authority Pollution Prevention and Control
  - Local Authority Pollution Prevention and Control Enforcement
  - Pollution Incident to Controlled Waters
  - Prosecution Relating to Authorised Processes
  - Prosecution Relating to Controlled Waters
  - Registered Radioactive Substance
  - River Network or Water Feature
  - River Quality Sampling Point
  - Substantiated Pollution Incident Register
  - Water Abstraction
  - Water Industry Act Referral

**Hazardous Substances**

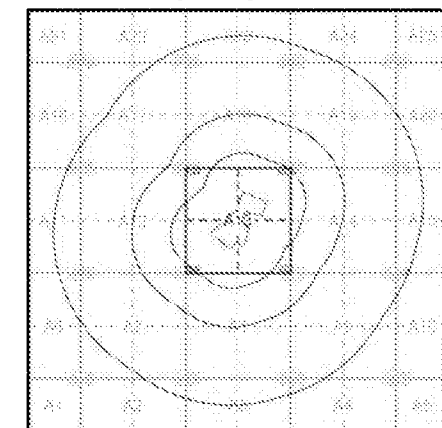
  - COMAH Site
  - Explosive Site
  - NIHS Site
  - Planning Hazardous Substance Consent
  - Planning Hazardous Substance Enforcement

**Geological**

  - BGS Recorded Mineral Site
- Waste**

  - BGS Recorded Landfill Site (Location)
  - BGS Recorded Landfill Site
  - EA Historic Landfill (Buffered Point)
  - EA Historic Landfill (Polygon)
  - Integrated Pollution Control Registered Waste Site
  - Licensed Waste Management Facility (Landfill Boundary)
  - Licensed Waste Management Facility (Location)
  - Local Authority Recorded Landfill Site (Location)
  - Local Authority Recorded Landfill Site
  - Potentially Infilled Land (Non-water)
  - Potentially Infilled Land (Non-water)
  - Potentially Infilled Land (Non-water)
  - Potentially Infilled Land (Water)
  - Potentially Infilled Land (Water)
  - Potentially Infilled Land (Water)
  - Potentially Infilled Land (Water)
  - Registered Landfill Site (Location)
  - Registered Landfill Site (Point Buffered to 100m)
  - Registered Landfill Site (Point Buffered to 250m)
  - Registered Waste Transfer Site (Location)
  - Registered Waste Transfer Site
  - Registered Waste Treatment or Disposal Site (Location)
  - Registered Waste Treatment or Disposal Site

Site Sensitivity Map - Slice A

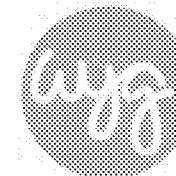


**Order Details**  
Order Number: 195300019\_1\_1  
Customer Ref: A112666  
National Grid Reference: 497670, 103690  
Slice: A  
Site Area (Ha): 5.34  
Search Buffer (m): 1000

**Site Details**  
Land at Stakers Farm, North End Road, Yapton, ARUNDEL, BN18 0DU

**Landmark**  
INFORMATION GROUP  
Tel: 0844 844 9952  
Fax: 0844 844 9951  
Web: www.envirocheck.co.uk





## Industrial Land Use Map

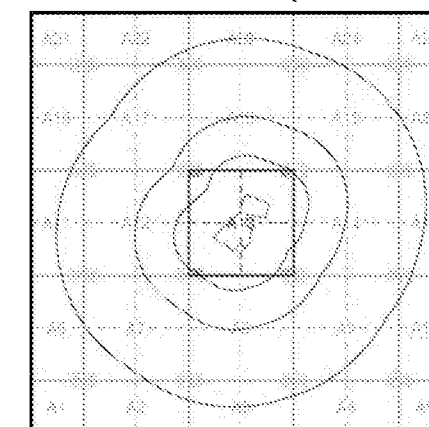
### General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

### Industrial Land Use

- ★ Contemporary Trade Directory Entry
- ★ Fuel Station Entry
- Gas Pipeline
- ★ Points of Interest - Commercial Services
- ★ Points of Interest - Education and Health
- ★ Points of Interest - Manufacturing and Production
- ★ Points of Interest - Public Infrastructure
- ★ Points of Interest - Recreational and Environmental
- Underground Electrical Cables

### Industrial Land Use Map - Slice A



### Order Details

Order Number: 195300019\_1\_1  
Customer Ref: A112666  
National Grid Reference: 497670, 103690  
Slice: A  
Site Area (Ha): 5.34  
Search Buffer (m): 1000

### Site Details

Land at Stakers Farm, North End Road, Yapton, ARUNDEL,  
BN18 0DU

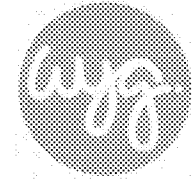
**Landmark**  
INFORMATION GROUP

Tel: 0844 844 9952  
Fax: 0844 844 9951  
Web: www.envirocheck.co.uk





© Crown Copyright. All Rights Reserved. Licence Number: 100022432.



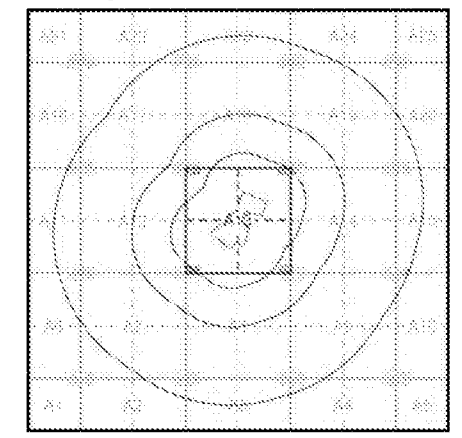
**General**

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point

**Agency and Hydrological (Flood)**

- Extreme Flooding from Rivers or Sea without Defences (Zone 2)
- Flooding from Rivers or Sea without Defences (Zone 3)
- Area Benefiting from Flood Defence
- Flood Water Storage Areas
- Flood Defence

**Flood Map - Slice A**



**Order Details**

Order Number: 195300019\_1\_1  
 Customer Ref: A112666  
 National Grid Reference: 497670, 103690  
 Slice: A  
 Site Area (Ha): 5.34  
 Search Buffer (m): 1000

**Site Details**

Land at Stakers Farm, North End Road, Yapton, ARUNDEL, BN18 0DU

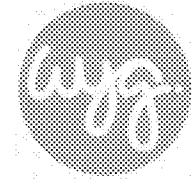


Tel: 0844 844 9952  
 Fax: 0844 844 9951  
 Web: [www.envirocheck.co.uk](http://www.envirocheck.co.uk)





© Crown Copyright. All Rights Reserved. License Number 100022432.



### General

- Specified Site
- Specified Buffer(s)
- X Bearing Reference Point
- Map ID
- Several of Type at Location

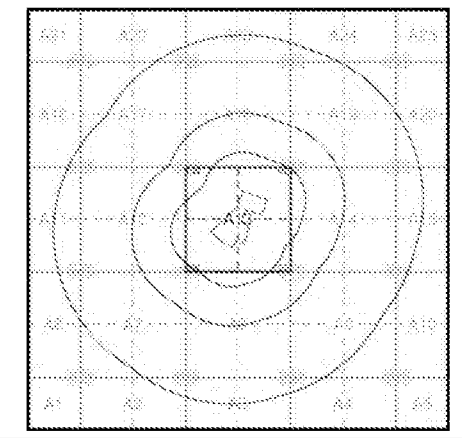
### Agency and Hydrological (Boreholes)

- BGS Borehole Depth 0 - 10m
- BGS Borehole Depth 10 - 30m
- BGS Borehole Depth 30m +
- Confidential
- Other

For Borehole information please refer to the Borehole .csv file which accompanied this slice.

A copy of the BGS Borehole Ordering Form is available to download from the Support section of [www.envirocheck.co.uk](http://www.envirocheck.co.uk).

### Borehole Map - Slice A



### Order Details

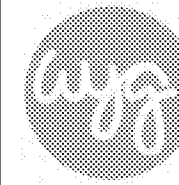
Order Number: 195300019\_1\_1  
Customer Ref: A112666  
National Grid Reference: 497670, 103690  
Slice: A  
Site Area (Ha): 5.34  
Search Buffer (m): 1000

### Site Details

Land at Stakers Farm, North End Road, Yapton, ARUNDEL, BN18 0DU



Tel: 0844 844 9952  
Fax: 0844 844 9951  
Web: [www.envirocheck.co.uk](http://www.envirocheck.co.uk)



#### General

- Specified Site
- Specified Buffer(s)
- X Bearing Reference Point

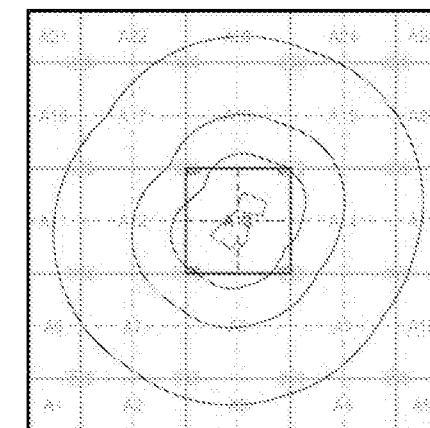
#### OS Water Network Data

- |                |                           |
|----------------|---------------------------|
| — Canal        | — Drain                   |
| — Reservoir    | — Other                   |
| — Foreshore    | — Lake                    |
| — Marsh        | — Transfer                |
| — Tidal River  | — Lock Or Flight Of Locks |
| — Inland River | — Sea                     |

#### Contours (height in meters)

- |                  |                   |
|------------------|-------------------|
| Standard Contour | — Mean Low Water  |
| Master Contour   | — Mean High Water |
| Spot Height      |                   |

#### OS Water Network Map - Slice A



#### Order Details

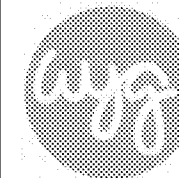
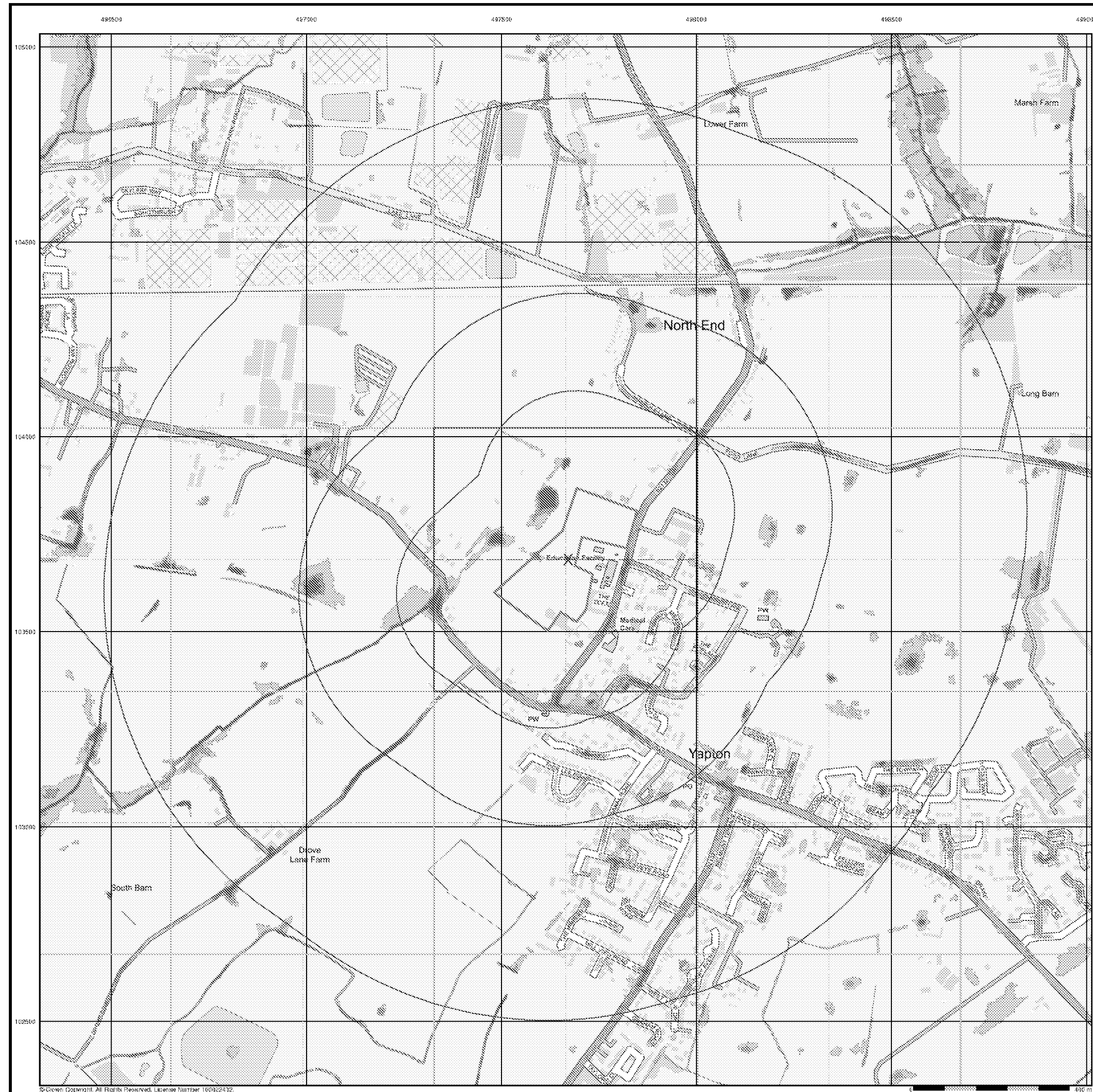
Order Number: 195300019\_1\_1  
 Customer Ref: A112666  
 National Grid Reference: 497670, 103690  
 Slice: A  
 Site Area (Ha): 5.34  
 Search Buffer (m): 1000

#### Site Details

Land at Stakers Farm, North End Road, Yapton, ARUNDEL,  
 BN18 0DU

**Landmark**  
 INFORMATION GROUP

Tel: 0844 844 9952  
 Fax: 0844 844 9951  
 Web: www.envirocheck.co.uk



### General

- Specified Site
- Specified Buffer(s)
- X Bearing Reference Point

### Risk of Flooding from Surface Water

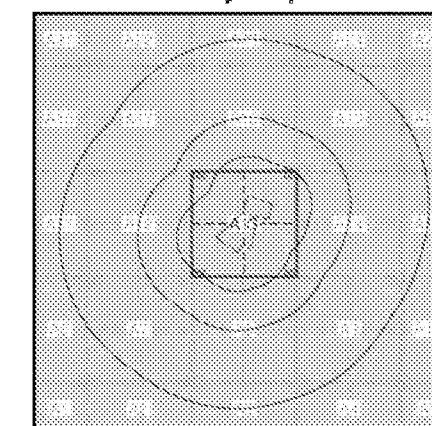
- High - 30 Year Return
- Medium - 100 Year Return
- Low - 1000 Year Return

### Suitability

See the suitability map below

- National to county
- County to town
- Town to street
- Street to parcels of land
- Property

### EA/NRW Suitability Map - Slice A



### Order Details

Order Number: 195300019\_1\_1  
Customer Ref: A112666  
National Grid Reference: 497670, 103690  
Slice: A  
Site Area (Ha): 5.34  
Search Buffer (m): 1000

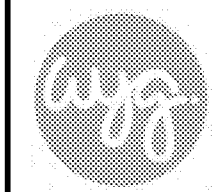
### Site Details

Land at Stakers Farm, North End Road, Yapton, ARUNDEL, BN18 0DU

**Landmark**  
INFORMATION GROUP

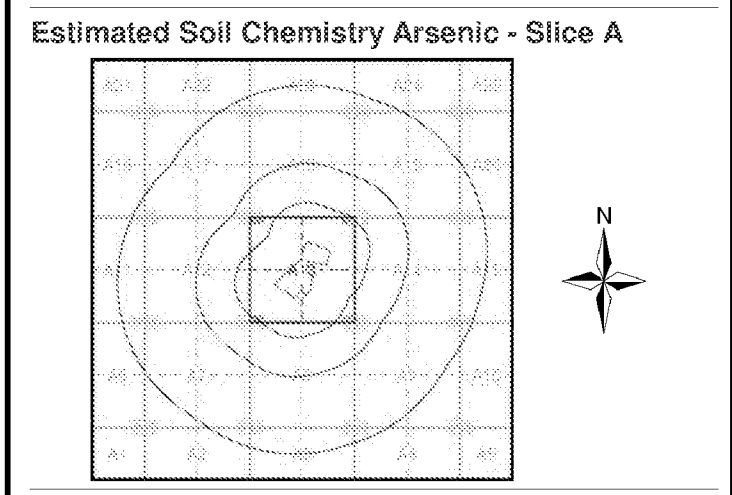
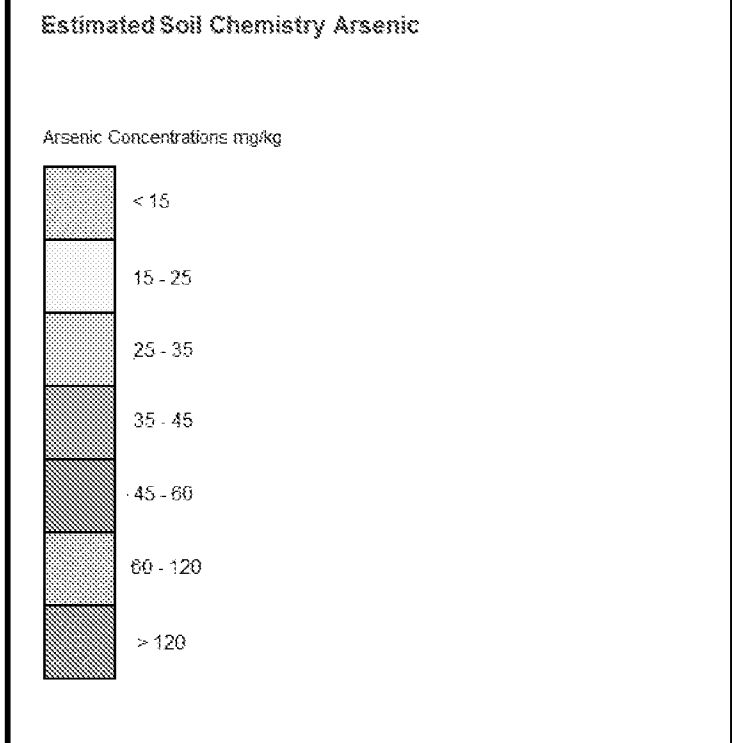
Tel: 0844 844 9952  
Fax: 0844 844 9951  
Web: [www.envirocheck.co.uk](http://www.envirocheck.co.uk)





**General**

Specified Site      Specified Buffer(s)      Bearing Reference Point



**Order Details**

Order Details: 195300019\_1\_1  
Customer Ref: A112666  
National Grid Reference: 497670, 103690  
Slice: A  
Site Area (Ha): 5.34  
Search Buffer (m): 1000

**Site Details**  
Land at Stakers Farm, North End Road, Yapton, ARUNDEL,  
BN18 0DU

**Landmark**  
INFORMATION GROUP

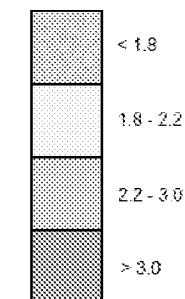
Tel: 0844 844 9952  
Fax: 0844 844 9951  
Web: [www.envirocheck.co.uk](http://www.envirocheck.co.uk)

## General

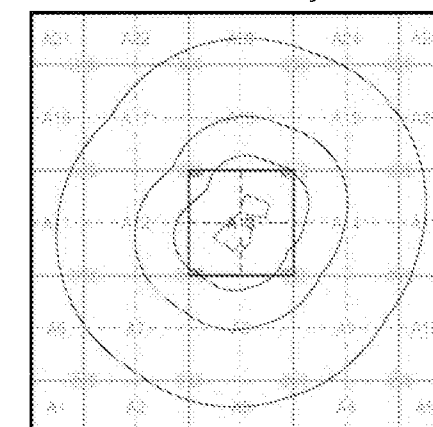
 Specified Site       Specified Buffer(s)       Bearing Reference Point

### Estimated Soil Chemistry Cadmium

Cadmium Concentrations mg/kg



### Estimated Soil Chemistry Cadmium - Slice A



## Order Details

Order Details: 195300019\_1\_1  
Customer Ref: A112666  
National Grid Reference: 497670, 103690  
Slice: A  
Site Area (Ha): 5.34  
Search Buffer (m): 1000

## Site Details

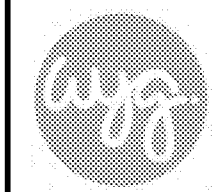
Land at Stakers Farm, North End Road, Yapton, ARUNDEL,  
BN18 0DU

**Landmark**  
INFORMATION GROUP

Tel: 0844 844 9952  
Fax: 0844 844 9951  
Web: [www.envirocheck.co.uk](http://www.envirocheck.co.uk)



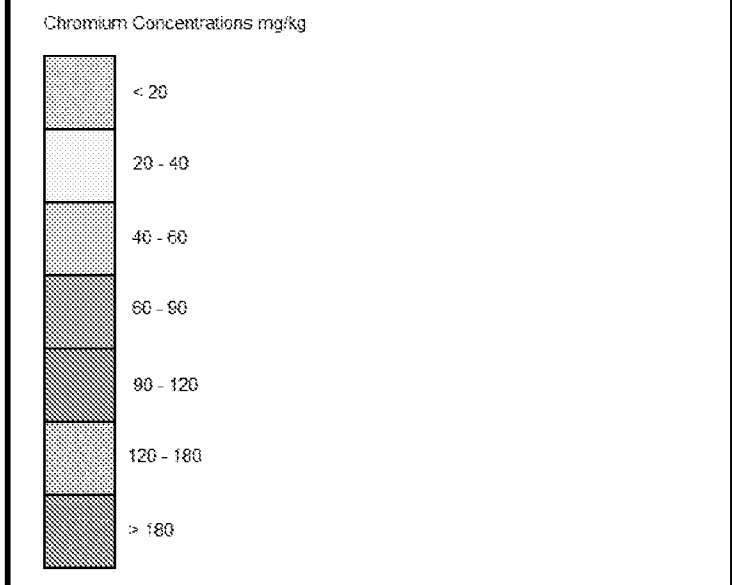




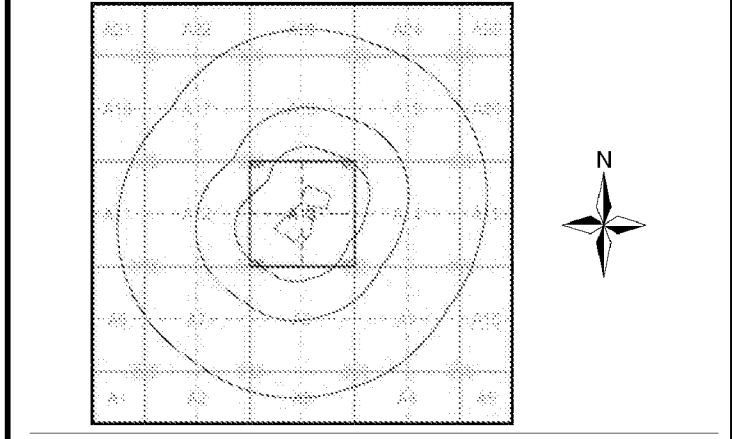
**General**

Specified Site    Specified Buffer(s)    Bearing Reference Point

**Estimated Soil Chemistry Chromium**



**Estimated Soil Chemistry Chromium - Slice A**



**Order Details**

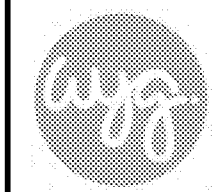
Order Details: 195300019\_1\_1  
Customer Ref: A112666  
National Grid Reference: 497670, 103690  
Slice: A  
Site Area (Ha): 5.34  
Search Buffer (m): 1000

**Site Details**  
Land at Stakers Farm, North End Road, Yapton, ARUNDEL,  
BN18 0DU

**Landmark**  
INFORMATION GROUP

Tel: 0844 844 9952  
Fax: 0844 844 9951  
Web: [www.envirocheck.co.uk](http://www.envirocheck.co.uk)



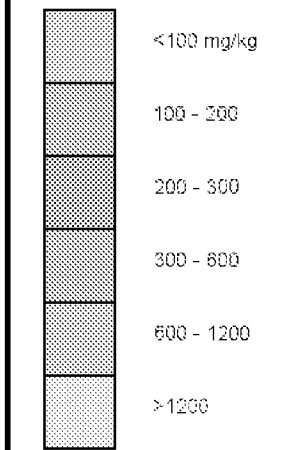


**General**

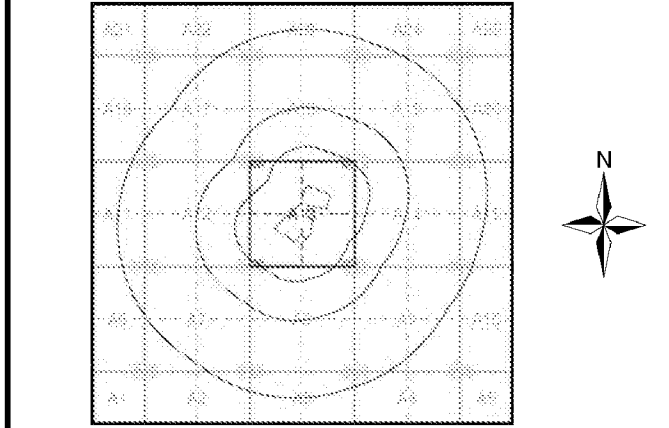
- Specified Site
- Specified Buffer(s)
- Bearing Reference Point

**Estimated Soil Chemistry Lead**

Lead Concentrations mg/kg



**Estimated Soil Chemistry Lead - Slice A**



**Order Details**

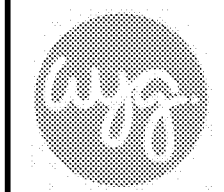
Order Details: 195300019\_1\_1  
Customer Ref: A112666  
National Grid Reference: 497670, 103690  
Slice: A  
Site Area (Ha): 5.34  
Search Buffer (m): 1000

**Site Details**

Land at Stakers Farm, North End Road, Yapton, ARUNDEL, BN18 0DU



Tel: 0844 844 9952  
Fax: 0844 844 9951  
Web: www.envirocheck.co.uk

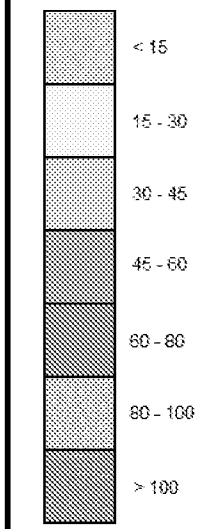


**General**

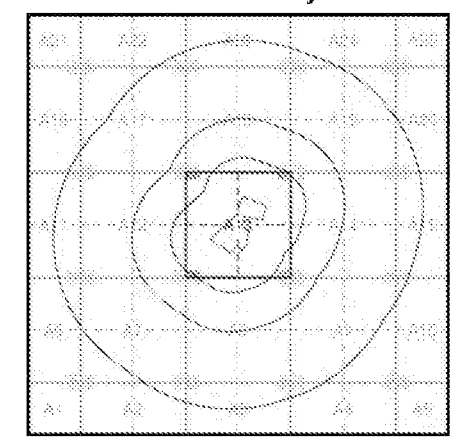
- Specified Site
- Specified Buffer(s)
- Bearing Reference Point

**Estimated Soil Chemistry Nickel**

Nickel Concentrations mg/kg



**Estimated Soil Chemistry Nickel - Slice A**



**Order Details**

Order Details: 195300019\_1\_1  
Customer Ref: A112666  
National Grid Reference: 497670, 103690  
Slice: A  
Site Area (Ha): 5.34  
Search Buffer (m): 1000

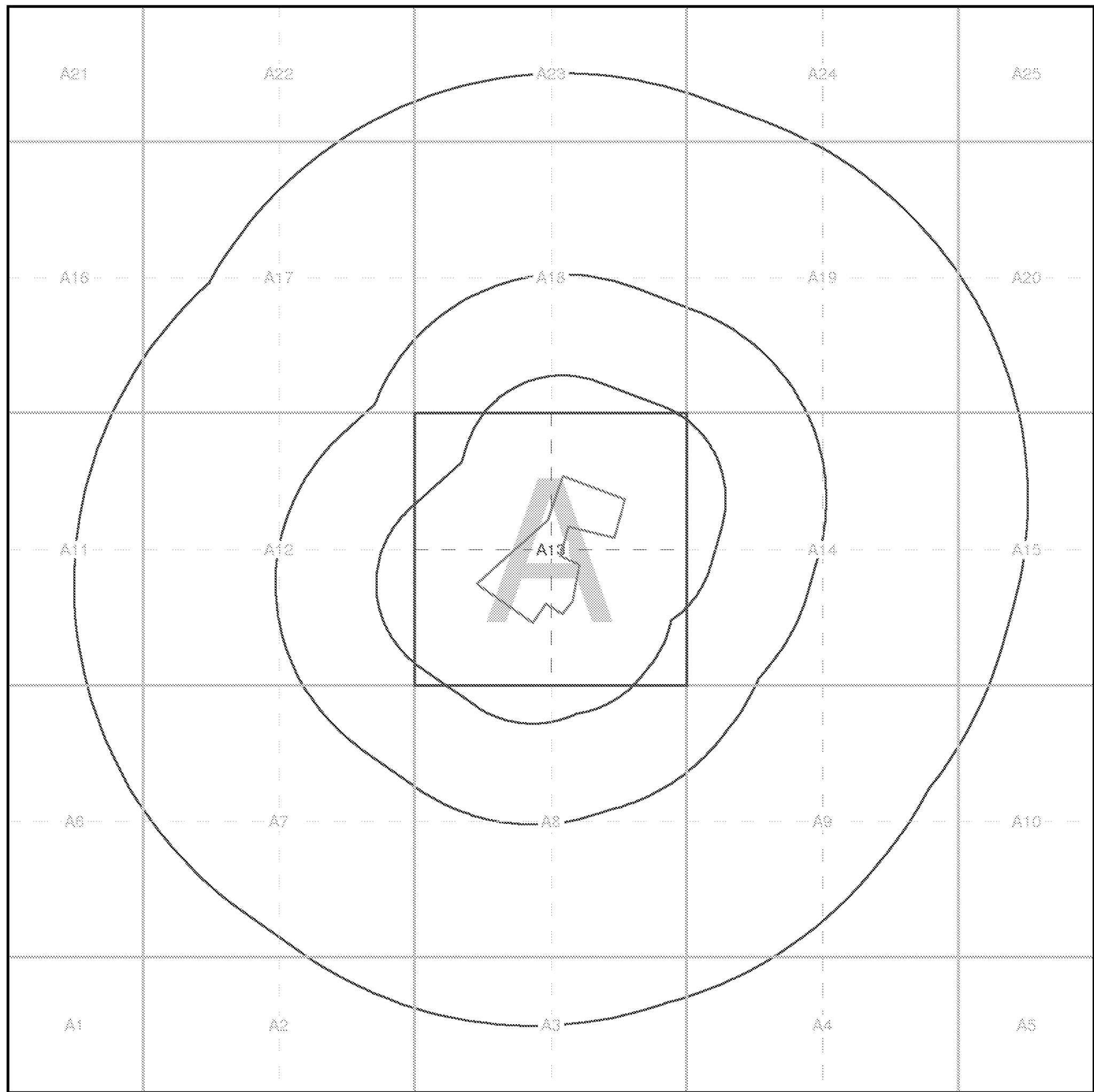
**Site Details**

Land at Stakers Farm, North End Road, Yapton, ARUNDEL, BN18 0DU



Tel: 0844 844 9952  
Fax: 0844 844 9951  
Web: www.envirocheck.co.uk





## Index Map

For ease of identification, your site and buffer have been split into Slices, Segments and Quadrants. These are illustrated on the Index Map opposite and explained further below.

### Slice

Each slice represents a 1:10,000 plot area (2.7km x 2.7km) for your site and buffer. A large site and buffer may be made up of several slices (represented by a red outline), that are referenced by letters of the alphabet, starting from the bottom left corner of the slice "grid". This grid does not relate to National Grid lines but is designed to give best fit over the site and buffer.

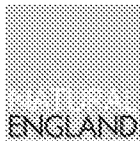
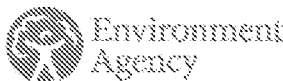
### Segment

A segment represents a 1:2,500 plot area. Segments that have plot files associated with them are shown in dark green, others in light blue. These are numbered from the bottom left hand corner within each slice.

### Quadrant

A quadrant is a quarter of a segment. These are labelled as NW, NE, SW, SE and are referenced in the datasheet to allow features to be quickly located on plots. Therefore a feature that has a quadrant reference of A7NW will be in Slice A, Segment 7 and the NW Quadrant.

A selection of organisations who provide data within this report:



Envirocheck reports are compiled from 136 different sources of data.

## Client Details

Dr S Roberts, WYG Environment Planning Transport Ltd,  
Level 5, Longcross Court, 47 Newport Road, Cardiff, CF24  
0AD

## Order Details

Order Number: 195300019\_1\_1  
Customer Ref: A112666  
National Grid Reference: 497670, 103680  
Site Area (Ha): 5.34  
Search Buffer (m): 1000

## Site Details

Land at Stakers Farm, North End Road, Yapton, ARUNDEL,  
BN18 0DU

Full Terms and Conditions can be found on the following link:  
<http://www.landmarkinfo.co.uk/Terms/Show/515>



Tel: 0844 844 9952  
Fax: 0844 844 9951  
Web: [www.envirocheck.co.uk](http://www.envirocheck.co.uk)

# Land at Stakers Farm, Yapton

## Ground Investigation – Interpretative Report



### Appendix I – CIRIA C552 Qualitative Risk Assessment Matrix

The following tables are derived from CIRIA C552 and have been used to define the risk rating presented in the Qualitative Risk Assessment matrix.

#### Classification of consequence

| Classification | Definition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Severe</b>  | Short term (acute) risk to human health likely to result in 'significant harm' as defined by the Environment Protection Act 1990, Part IIA. Short term risk of pollution (note; Water Resources Act contains no scope for considering significant pollution) of sensitive water resource. Catastrophic damage to building/property. A short term risk to a particular ecosystem, or organism forming part of such ecosystem. (Note the definitions of ecological systems within the Draft Circular on Contaminated Land DETR, 2000). |
| <b>Medium</b>  | Chronic damage to human health ('significant harm', as defined In DETR, 2000). Pollution of sensitive water resources (note; Water Resources Act contains no scope for considering significant pollution). A significant change in a particular ecosystem, or an organism forming part of such an ecosystem. (Note the definitions of ecological systems within the Draft Circular on Contaminated Land DETR, 2000).                                                                                                                 |
| <b>Mild</b>    | Pollution of non-sensitive water resources. Significant damage to crops, buildings, structures and services ('significant harm', as defined In DETR, 2000). Damage to sensitive buildings/structures/services or the environment.                                                                                                                                                                                                                                                                                                    |
| <b>Minor</b>   | Harm, although not necessarily significant harm, which may result in a financial loss, or expenditure to resolve. Non-permanent health effects to human health (easily prevented by means such as personal protective clothing etc). Easily repairable effects of damage to buildings, structures and services.                                                                                                                                                                                                                      |

#### Classification of probability

| Classification         | Definition                                                                                                                                                                                                                                                            |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>High likelihood</b> | There is a pollution linkage and an event that either appears very likely in the short term and almost inevitable over the long term or there is evidence at the receptor of harm or pollution.                                                                       |
| <b>Likely</b>          | There is a pollutant linkage and all the elements are present and in the right place, which means that it is probable that an event will occur. Circumstances are such that an event is not inevitable, but possible in the short term and likely over the long term. |
| <b>Low likelihood</b>  | There is a pollution linkage and circumstances are possible under which an event could occur. However, it is by no means certain that even over a longer period that such an event would take place and is even less likely in the shorter term.                      |
| <b>Unlikely</b>        | There is a pollution linkage but circumstances are such that it is improbable that an event would occur even in the very long term.                                                                                                                                   |

# Land at Stakers Farm, Yapton

## Ground Investigation – Interpretative Report



### Matrix of consequence against probability to gain a risk classification

|             |                 | Consequence       |                   |                   |                   |
|-------------|-----------------|-------------------|-------------------|-------------------|-------------------|
|             |                 | Severe            | Medium            | Mild              | Minor             |
| Probability | High Likelihood | Very High Risk    | High Risk         | Moderate Risk     | Moderate/Low Risk |
|             | Likely          | High Risk         | Moderate Risk     | Moderate/Low Risk | Low Risk          |
|             | Low likelihood  | Moderate Risk     | Moderate/Low Risk | Low Risk          | Very Low Risk     |
|             | Unlikely        | Moderate/Low Risk | Low Risk          | Very Low Risk     | Very Low Risk     |