

Condition 24, Incidental Mineral Extraction Scheme Land West of Yapton Lane, Walberton

Planning Permission: WA/2/22/OUT

Appeal Reference: APP/C3810/W/22/3309365

1. Introduction

1.1 This Incidental Mineral Extraction Scheme has been prepared on behalf of Doswell Projects Ltd in support of the discharge of Condition 24 attached to outline planning permission WA/2/22/OUT, granted on appeal under reference APP/C3810/W/22/3309365, for residential development on land west of Yapton Lane, Walberton.

1.2 Condition 24 states:

Prior to the commencement of development, a scheme for incidental extraction of the safeguarded mineral resources underlying the site shall be submitted to and approved in writing by the local planning authority. The scheme shall include but not be limited to:

- an assessment of the extent, volume and practicability for incidental extraction, which shall be based on detailed ground investigations; and
- the methodology for which any identified incidental mineral extraction would be carried out, which shall include a detailed programme/phasing of extraction, and details of the proposed destination/use of the mineral.

1.3 The purpose of this document is to address the requirements of Condition 24 by considering the extent, nature, volume and practicability of recovering the safeguarded mineral resource underlying the site, informed by the detailed intrusive ground investigations subsequently undertaken, and to establish the methodology for managing mineral-bearing material encountered incidentally during construction.

1.4 This submission should be read in conjunction with the Mineral Resource Assessment prepared by Wardell Armstrong LLP and the subsequent intrusive ground investigation undertaken by Geo-Environmental Services Limited.

1.5 A number of phases of intrusive investigation have been undertaken across the site by Geo-Environmental between 2020 and 2024. The most recent phase, undertaken in April 2024, included 10 machine-dug trial pits to depths of between approximately 2.2m and 3.0m below ground level and six dynamic sampler boreholes to 5.0m below ground level. The investigation locations were distributed across the proposed development area.

1.6 The documents relevant to this submission are appended as follows:

- **Appendix A:** Mineral Resource Assessment, Wardell Armstrong LLP, January 2022;
- **Appendix B:** Geo-Environmental Services Limited, Site at Yapton Lane, Walberton, Preliminary Information, 16 April 2024;
- **Appendix C:** Geo-Environmental Services Limited, Final Exploratory Hole Logs, May 2024; and
- **Appendix D:** Proposed Development/Site Layout.

2. Mineral Resource Context

2.1 The Mineral Resource Assessment identifies that the site lies within a Minerals Safeguarding Area associated with sharp sand and gravel.

2.2 Published geological information identifies River Terrace Deposits beneath the site. These superficial deposits are associated with sand and gravel resources. The underlying solid geology comprises the London Clay Formation, which is not identified as a safeguarded mineral resource.

2.3 The Mineral Resource Assessment considered the approximately 2.4-hectare site and the potential for prior extraction of the safeguarded resource before residential development.

2.4 The assessment concluded that the quantity of potentially recoverable sand and gravel associated with the site was limited and that extraction would be significantly constrained by the relationship of the site with existing residential development.

2.5 In particular, the Mineral Resource Assessment identified that mineral extraction would ordinarily require an appropriate stand-off from existing residential properties. The proximity of residential development adjoining the site would therefore substantially constrain the area within which a separate mineral extraction operation could practically take place.

2.6 The Mineral Resource Assessment consequently concluded that extraction of the resource as a separate mineral-working operation would not be commercially or environmentally practicable.

3. Detailed Ground Investigation

3.1 Since preparation of the Mineral Resource Assessment, further detailed intrusive investigation has been undertaken across the site by Geo-Environmental.

3.2 Geo-Environmental's April 2024 investigation comprised:

- 10 machine-dug trial pits, TP301–TP310, extending to depths of approximately 2.2m–3.0m below ground level;
- six dynamic sampler boreholes, WS301–WS306, extending to 5.0m below ground level;
- in-situ testing and logging of recovered soils; and
- geotechnical and geochemical sampling.

These works supplemented earlier investigations undertaken between 2020 and 2024, including soakage testing, window sampler boreholes and winter groundwater monitoring.

3.3 The investigation locations provide coverage across the proposed development area and enable the nature and distribution of the underlying River Terrace Deposits to be assessed against the proposed development.

3.4 The investigation confirmed that the general geological sequence encountered was consistent with the published geological information and previous investigations, comprising approximately 0.3m of topsoil, or locally Made Ground, overlying River Terrace Deposits.

3.5 Importantly, the intrusive investigation demonstrates that the River Terrace Deposits do not comprise a uniform sequence of clean sand and gravel. Instead, they comprise a variable sequence of cohesive and granular soils.

4. Extent, Nature and Volume of the Mineral Resource

Extent and nature

4.1 The detailed investigation confirms that River Terrace Deposits extend across the development area beneath the surface topsoil.

4.2 However, the composition of those deposits varies materially across the site. Materials encountered include:

- slightly gravelly silty clay;
- sandy and gravelly clay;
- very clayey gravel/very gravelly clay;
- sandy gravel;
- sand and gravel; and
- locally, sand at greater depth.

The relative proportions, depths and thicknesses of these materials vary between exploratory locations.

4.3 For example, the borehole records demonstrate that potentially more granular horizons are commonly interbedded with substantial cohesive deposits. At WS304, sandy very clayey gravel/very gravelly clay was encountered between approximately 1.8m and 2.2m, followed by sand and gravel to approximately 3.6m, before further sandy gravelly clay and then sand at greater depth. At WS305, clayey/gravelly materials extend to approximately 2.8m, followed by sandy gravel, further clay and sand at greater depth.

4.4 The detailed investigation therefore confirms the geological presence of the safeguarded River Terrace Deposits but does not identify a consistent near-surface body of clean sand and gravel capable of straightforward extraction as a discrete mineral resource.

Volume

4.5 The intrusive investigation establishes the general extent and composition of the River Terrace Deposits but does not identify a discrete and consistent mineral horizon from which a reliable volume of commercially or practically recoverable sand and gravel can reasonably be calculated.

4.6 A calculation based simply upon the area of the site and the overall thickness of the River Terrace Deposits would materially overstate the potentially recoverable mineral resource. A significant proportion of the investigated deposits comprise clay, gravelly clay and clayey gravel, with potentially more useful granular horizons varying materially in depth, thickness and composition.

4.7 Accordingly, the gross geological volume of River Terrace Deposits beneath the site should not be regarded as equivalent to the volume of recoverable sand and gravel.

4.8 The volume of mineral-bearing material actually excavated will instead be determined principally by the excavations required to construct the approved development, including roads, drainage, utilities, foundations and other below-ground infrastructure.

4.9 Suitable granular material encountered within those excavations will be assessed for beneficial reuse as part of the development in accordance with the methodology set out below.

5. Practicability of Mineral Extraction

5.1 In addition to the variable and clay-rich nature of the River Terrace Deposits, the detailed ground investigation identifies groundwater as a significant constraint to systematic mineral recovery.

5.2 Groundwater was encountered within the majority of the April 2024 exploratory locations. Winter groundwater monitoring undertaken between December 2023 and April 2024 also recorded groundwater at depths of approximately 1.52m to 2.72m below ground level.

5.3 The practical consequences of these groundwater conditions were apparent during the intrusive investigation. With the exception of TP301 and TP302, the trial pits were terminated because of instability and collapse associated with encountering the water table. The dynamic sampler boreholes also collapsed following completion, and Geo-Environmental identified the potential for groundwater to cause constructability issues where excavations extend into the water table.

5.4 Systematic recovery of the deeper and potentially more granular horizons would therefore require excavation into or below the groundwater table, together with associated excavation support, temporary works and groundwater management.

5.5 The extracted material would also require segregation and potentially processing to separate useful granular material from the significant clay content demonstrated by the detailed ground investigation.

5.6 These constraints must be considered alongside those identified within the Mineral Resource Assessment, including:

- the limited scale of the site and resource;
- the proximity of existing residential development;
- the operational constraints associated with appropriate stand-offs from neighbouring residential properties; and
- the environmental effects associated with extracting, processing, stockpiling and transporting relatively limited quantities of mineral.

5.7 When considered collectively, the Mineral Resource Assessment and subsequent detailed intrusive investigation demonstrate that systematic prior extraction of the safeguarded mineral resource as a separate mineral-working operation would not be practically or environmentally feasible.

6. Incidental Extraction Methodology

6.1 In view of the conclusions above, no separate phase of mineral working is proposed prior to construction of the approved residential development.

6.2 Instead, River Terrace Deposits will be encountered and extracted incidentally through the excavations necessary to construct the development.

6.3 Incidental extraction is anticipated principally in association with:

- site earthworks and areas requiring reduced levels;
- roads and associated infrastructure;
- drainage and utility excavations;
- foundation excavations; and
- other below-ground infrastructure required as part of the approved development.

6.4 Material excavated during these works will be visually assessed and, where appropriate, subject to any necessary geotechnical assessment to determine its suitability for beneficial reuse.

6.5 Where technically and environmentally suitable, granular material will be segregated from unsuitable excavated material and retained for beneficial reuse within the development.

6.6 Potential uses may include engineering fill and other suitable construction applications, subject in each case to the material meeting the necessary engineering specification for its intended use.

6.7 This approach will ensure that suitable mineral-bearing material necessarily excavated as part of the development is recovered and beneficially used wherever practicable without requiring a separate mineral extraction operation.

7. Programme and Phasing

7.1 As no separate mineral-working operation is proposed, incidental extraction will take place progressively alongside the earthworks and construction operations required for the approved development.

7.2 The anticipated sequence will comprise:

1. site preparation and removal of topsoil;
2. commencement of earthworks and excavation associated with roads, drainage, utilities and other infrastructure;
3. foundation and other development-related excavations;
4. identification and segregation, where practicable, of suitable granular material encountered during those operations;
5. assessment of excavated material for its suitability for beneficial reuse;
6. temporary stockpiling of suitable material where required before reuse;
7. beneficial reuse of suitable material within the development; and
8. appropriate removal of surplus material which cannot practicably be reused on site.

7.3 The timing and quantity of incidental mineral extraction will therefore correspond with the construction programme and the extent of development-related excavations rather than comprising a separate phase preceding development.

8. Destination and Use of Mineral

8.1 The proposed approach is based upon maximising the beneficial reuse of suitable excavated material and minimising the unnecessary removal of material from the site.

8.2 Where suitable mineral-bearing material is encountered, the following hierarchy will apply:

First, suitable material will, wherever technically practicable, be retained and beneficially reused within the development.

Second, where material cannot be directly reused in the location in which it arises, it may be temporarily segregated and stockpiled for subsequent beneficial reuse elsewhere within the development.

Third, surplus material which cannot appropriately or practicably be reused on site will be removed from the site and directed to an appropriately authorised facility for recovery or recycling where practicable.

8.3 The precise use of excavated material will depend upon its composition, moisture content and geotechnical properties together with the engineering specification applicable to its intended end use.

8.4 The destination of any material removed from the site will therefore be determined during construction having regard to the nature and suitability of the material and the availability of appropriate authorised recovery or recycling facilities at that time.

9. Conclusion

9.1 The Mineral Resource Assessment identified the presence of safeguarded sand and gravel associated with River Terrace Deposits beneath the site but concluded that prior mineral extraction would be significantly constrained by the limited scale of the resource and the site's relationship with surrounding residential development.

9.2 Detailed intrusive ground investigations undertaken subsequently provide substantially greater site-specific information regarding the nature and distribution of those deposits.

9.3 The investigations confirm that River Terrace Deposits extend across the development area but comprise a heterogeneous sequence of cohesive and granular soils rather than a consistent body of readily recoverable clean sand and gravel.

9.4 More granular horizons vary materially in depth, thickness and composition and are frequently interbedded with clay-rich material. The gross volume of River Terrace Deposits beneath the site cannot therefore reasonably be equated with a recoverable volume of mineral.

9.5 Groundwater presents an additional significant constraint. Groundwater has been recorded at relatively shallow depths and caused instability and collapse during much of the April 2024 trial-pit investigation. Recovery of some of the deeper and more granular horizons would consequently require working at or below groundwater level.

9.6 Having regard to the limited and variable nature of the potentially recoverable mineral, groundwater conditions, proximity of residential development and practical and environmental implications of undertaking a separate extraction operation, systematic prior extraction of the safeguarded mineral resource is not considered practicable.

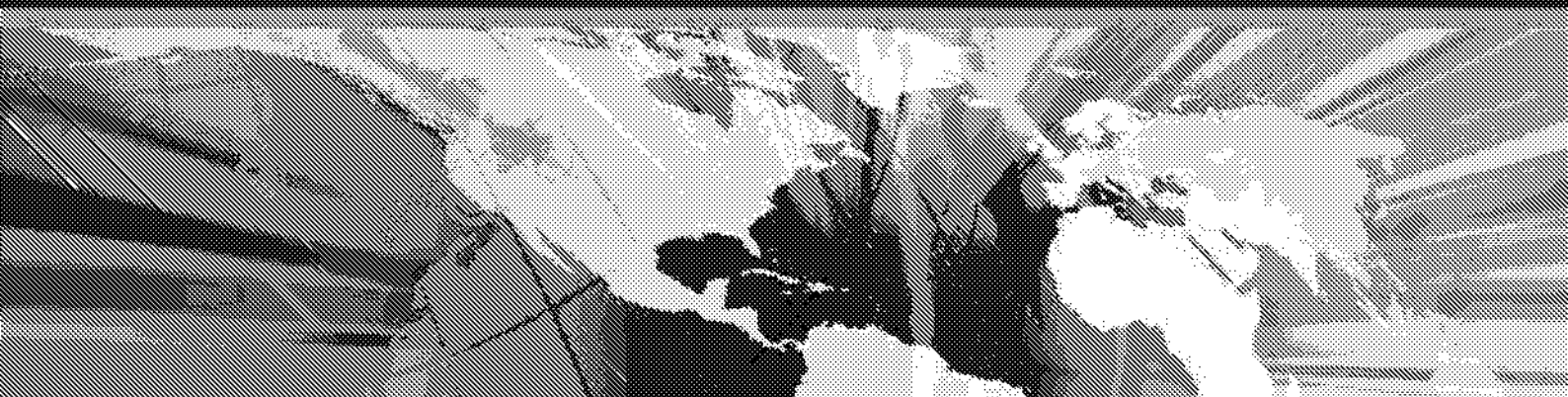
9.7 Instead, mineral-bearing material will be extracted incidentally through the earthworks and excavations necessary to construct the approved development. Suitable material will be segregated and beneficially reused within the development wherever technically practicable, with surplus material directed to an appropriately authorised recovery or recycling facility where appropriate.

9.8 The submitted scheme therefore addresses the extent, volume and practicability of incidental mineral extraction, based upon detailed ground investigation, together with the methodology, programme/phasing and proposed destination/use of material arising.

9.9 On this basis, the requirements of Condition 24 are considered to have been satisfactorily addressed and the condition can be discharged.

Appendix A

Mineral Resource Assessment, Wardell Armstrong LLP, January 2022



LAND QUEST UK (SOUTHERN) LIMITED

PROPOSED DEVELOPMENT ON LAND OFF YAPTON LANE, WALBERTON

MINERAL RESOURCE ASSESSMENT

JANUARY 2022

DATE ISSUED: January 2022
JOB NUMBER: ST18568
REPORT NUMBER: 001
VERSION: V3.0
STATUS: Final

LAND QUEST UK (SOUTHERN) LIMITED

PROPOSED DEVELOPMENT ON LAND OFF YAPTON LANE, WALBERTON

MINERAL RESOURCE ASSESSMENT

JANUARY 2022

PREPARED &

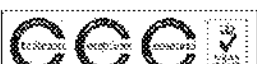
APPROVED BY:

Stephen Barry

Technical Director &
Chartered Mineral Surveyor

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ENERGY AND CLIMATE CHANGE
ENVIRONMENT AND SUSTAINABILITY
INFRASTRUCTURE AND UTILITIES
LAND AND PROPERTY
MINING AND MINERAL PROCESSING
MINERAL ESTATES
WASTE RESOURCE MANAGEMENT

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APPENDICES

Appendix 1: Policy M9 Safeguarding Minerals

DRAWINGS TITLE

ST18568-001 Superficial Geology

EXECUTIVE SUMMARY

This report has been prepared to support a planning application by Land Quest UK (Southern) Limited for proposed development on land off Yapton Lane, Walberton, which is located approximately 8km north east of Bognor Regis. The site has been reviewed in relation to the mineral safeguarding policies of the West Sussex Joint Minerals Local Plan.

The site comprises approximately 2.4 ha of agricultural land. Published geological maps for the area indicate that the superficial geology on the site comprises a river terrace sand and gravel deposit, which is the safeguarded mineral resource on the site. The solid geology underneath the site comprises the London Clay Formation, which is not a safeguarded mineral resource.

The quantity of sand and gravel on the proposed development site is too small to be of any economic value and the minerals have already been indirectly sterilised by the presence of existing development adjoining the north-eastern and the north-western boundaries of the proposed development site. Consequently, prior extraction is neither practicable nor environmentally feasible, so the safeguarded mineral resource has no economic value and the proposed development is therefore compatible with criteria (b) (i) and (b) (iii) of the mineral safeguarding policy.

1 INTRODUCTION

- 1.1 This report has been prepared in accordance with instructions from Land Quest UK (Southern) Limited to prepare a Mineral Resource Assessment report in support of an outline planning application for proposed development on land off Yapton Lane, Walberton. The site is located approximately 8 km to the north east of Bognor Regis. The site boundary is shown edged red on the attached drawing ST18568-001 which also shows the superficial geology on the site. The site comprises approximately 2.4 ha of agricultural land, and it is bounded by residential gardens to the north, Yapton Lane to the east, and agricultural land to the south and west. Walberton Place Care Home adjoins the north western corner of the site.

2 GEOLOGY

- 2.1 Geologically, a distinction is made between “superficial deposits” and “solid geology”. Superficial deposits such as sand and gravel are found at, or close to, the surface. The solid bedrock beneath the superficial deposits is called the “solid geology”.

Superficial geology

- 2.2 The British Geological Survey (BGS) online geological map shows that the entire site is covered by a river terrace sand and gravel deposit. The sand and gravel deposit is a safeguarded mineral resource, as it contains sharp sand and gravel.
- 2.3 The area of sand and gravel deposit on the site is approximately 2.4 ha which is not large enough to comprise a commercially viable mineral resource. An estimate of mineral quantity must take into account the standoff that would be required to protect the amenity of existing residential properties, both of which adjoin the northern boundary of the site. The normal standoff would be approximately 100m wide, which means existing indirect sterilisation due to the buffer zone would cover almost the entire proposed development site. The combination of these factors indicates that the sand and gravel on the proposed development site is much too small to comprise a commercially viable mineral resource. The small quantity of sand and gravel on the proposed development site is also too small to make any meaningful contribution to the landbank for sharp sand and gravel in West Sussex.

Solid geology

- 2.4 The BGS online geological map indicates that the solid geology on the site is the London Clay Formation. The London Clay Formation is composed of clay, silt and sand and it is not a safeguarded mineral resource.

3 MINERAL SAFEGUARDING GUIDANCE AND POLICY

Guidance

- 3.1 West Sussex County Council has produced a Draft Minerals Safeguarding Guidance document, which states that a mineral resource assessment should be proportionate to the size of the site and “may include consideration of other locations for the development that are outside the Mineral Safeguarding Area”.

Policy

- 3.2 The relevant mineral planning policies are contained in the West Sussex Joint Minerals Local Plan (MLP), which was developed by West Sussex County Council and South Downs National Park Authority. It was adopted in July 2018 and is due for review by 2033. The MLP has been designed to set out West Sussex County Council’s vision, objectives, strategy and policies for the minerals supply.

“Policy M9: Safeguarding Minerals”, which is attached at Appendix 1, states that soft sand (including potential silica sand), sharp sand and gravel, brick making clay, building stone resources and chalk reserves are safeguarded against sterilisation. Proposals for non-mineral development within the Mineral Safeguarding Areas will not be permitted unless:

- (i) Mineral sterilisation will not occur; or
- (ii) It is appropriate and practicable to extract the mineral prior to the development taking place, having regard to the other policies in this Plan; or
- (iii) The overriding need for the development outweighs the safeguarding of the mineral and it has been demonstrated that prior extraction is not practicable or environmentally feasible.

Compliance with the adopted safeguarding policy

Policy M9 Criterion (b) (i)

- 3.3 Paragraph 6.9.13 of the MLP states that mineral sterilisation will not occur if the mineral resource is not economically viable. The geology section of this report shows that the unconstrained area of sand and gravel on the proposed development site is too small to be commercially viable. The site therefore meets the requirement of criterion (b) (i) because mineral sterilisation will not occur.

Policy M9 Criterion (b) (iii)

- 3.4 In terms of mineral extraction, the site is constrained by existing residential development adjoining the northern boundary of the site, as shown on the attached drawing ST18568-001. It is clear that mineral extraction in such a confined area so close to residential property is not practicable or environmentally feasible and a buffer zone to protect the amenity of those properties would cover almost all of the sand and gravel on the site. The site therefore meets criterion b (iii) of Policy M9 Safeguarding Minerals for built development to be acceptable in a Mineral Safeguarding Area.

4 CONCLUSION

- 4.1 The proposed development site is located within a mineral safeguarding area for sharp sand and gravel. The quantity of sand and gravel on the proposed development site is too small to be commercially viable and prior extraction is not feasible.
- 4.2 Much of the mineral resource on the site is already indirectly sterilised by the presence of existing residential development, which is usually protected by a 100m wide buffer zone. A buffer zone of that size would cover almost the entire proposed development site.
- 4.3 As a consequence of the small area of the mineral resource on the site and the existing indirect sterilisation by existing properties, the mineral is of no economic value as there is no realistic prospect that it would ever be worked. Prior extraction is not practicable or environmentally feasible because the site is surrounded by existing residential development which would act as a constraint on mineral extraction. The site therefore meets the requirements of criterion (b) (i) and criterion (b) (iii) of the mineral safeguarding Policy M9, so the proposed development would be acceptable in a Mineral Safeguarding Area.

APPENDICES

Appendix 1: Policy M9 Safeguarding Minerals

Gault formation clay, which supplies Pitsham brickworks, will not be safeguarded in its entirety because it is only extracted in small quantities and not economically significant.

Sandstone (building stone)

6.9.11. In West Sussex, sandstone is only used on a small scale for local projects. If the character of historic buildings is to be maintained, supplies of new matching stone are needed for repair and for new construction. The Hythe Formation, Horsham Stone, Ardingly Sandstone and Cuckfield Stone are included in the MSA for stone matching purposes (excluding urban areas). Safeguarding the most important building stones will ensure that they are available for the repair of historic buildings in the future. The Strategic Stone Study provides a database of the most significant building stone types and which quarries they were sourced from.

Oil and Gas

The precise extent of oil and gas resources in West Sussex is unknown. Sterilisation of oil and gas resources is not likely to occur due to the depth at which it takes place, and the ability to use horizontal drilling. Existing onshore hydrocarbon exploration, appraisal and production facilities will be safeguarded from proximate development (see Policy M10).

Policy M9: Safeguarding Minerals

- (a) Existing minerals extraction sites⁴⁴ will be safeguarded against non-mineral development that prejudices their ability to supply minerals in the manner associated with the permitted activities.**
- (b) Soft sand (including potential silica sand), sharp sand and gravel, brick-making clay, building stone resources and chalk reserves⁴⁵ are safeguarded against sterilisation. Proposals for non-mineral development within the Minerals Safeguarded Areas (as shown on maps in Appendix E) will not be permitted unless:**
 - (i) Mineral sterilisation will not occur; or**
 - (ii) it is appropriate and practicable to extract the mineral prior to the development taking place, having regards to the other policies in this Plan; or**
 - (iii) the overriding need for the development outweighs the safeguarding of the mineral and it has been demonstrated that prior extraction is not practicable or environmentally feasible.**

⁴⁴ The existing minerals extraction sites which are safeguarded by Policy M9 are listed in the Annual Monitoring Report

⁴⁵ Chalk reserves specified in the Annual Monitoring Report will be safeguarded.

6.9.12. In order to ensure that consultation takes place between the County and District planning authorities a Mineral Consultation Area (MCA) has been defined. The MCA, which is published separately from the Minerals Local Plan, covers the same area as the MSA but also includes safeguarded minerals infrastructure. The MSA is to be included in District and Borough Council Local Plan Policies Maps. The MCA is a mechanism intended to ensure that consultation takes place between county and district/borough planning authorities in two-tier authority areas when mineral interests could be compromised by non-minerals development, especially in close proximity to a known mineral resource. District and Borough Councils will be required to consult the Authorities on proposals for non-mineral development in the MCA. Further explanation is provided in separate guidance on safeguarding.

6.9.13. Where non-mineral development is proposed, developers may be required to carry out investigation work to ascertain whether economically viable mineral resources are present and whether prior extraction is practicable. The results of this work should be reported in a 'Minerals Resource Assessment' that is submitted with any application (for more detail see separate guidance on safeguarding). For the Authorities to raise no objection to the non-mineral development, they will need to be satisfied that either minerals sterilisation will not occur (either because the mineral resources are not economically viable or that an appropriate and practicable level of prior extraction can take place) or because there is an overriding need for the development.

6.9.14. Pre-application discussions are encouraged to ensure that minerals safeguarding is considered at the earliest opportunity. Separate guidance has been published that explains further how safeguarding will work in practice.

6.9.15. MCAs will also include other infrastructure such as wharves, railheads, hydrocarbon production facilities, concrete batching plants and asphalt plants (see Policy M10). A list of safeguarded facilities is maintained in the Annual Monitoring Report.

Implementation and Monitoring	
<i>Actions</i>	<i>Key Organisation(s)</i>
Record all planning permissions for non-mineral development in the safeguard areas	WSCC, SDNPA, District and Borough planning authorities
<i>Measure/Indicator</i>	<i>Trend/Target</i>

DRAWINGS

Site Boundary
River Terrace sand and gravel deposit



0 100
Metres

Mapac/ Microsoft

Contains British Geological Survey materials UKRI [2021]

CLIENT	Land Quest UK (Southern) Limited	JOB NO	ST18568-001	SCALE	1:2,500 @ A4	DATE	16/12/2021
PROJECT NAME	LAND OFF YAPTON LANE, WALBERTON	DRAWN BY	BVC	CHECKED BY	SDB	APPROVED BY	SDB
DRAWING TITLE	SUPERFICIAL GEOLOGY						

STOKE-ON-TRENT

Sir Henry Doulton House
Forge Lane
Etoria
Stoke-on-Trent

CARDIFF

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16 Cathedral Road
Cardiff
CF11 9LJ

LONDON

Third Floor
46 Chancery Lane
London
WC2A 1JE

BIRMINGHAM

Two Devon Way
Longbridge Technology Park
Longbridge
Birmingham
B31 2TS

CARLISLE

Marconi Road
Burgh Road Industrial Estate
Carlisle
Cumbria
CA2 7NA

NEWCASTLE UPON TYNE

City Quadrant
11 Waterloo Square
Newcastle upon Tyne
NE1 4DP

BOLTON

41 SO Futura Park
Aspinall Way
Middlebrook
Bolton
BL6 6SU

EDINBURGH

Great Michael House
14 Links Place
Edinburgh
EH6 7EF

Batonu House

Wheal Jane Earth Science Park
Balaflu
Truro
TR3 6EH

BRISTOL

Decklodge
2 Redcliffe Way
Bristol
BS1 6NL

GLASGOW

24 St Vincent Place
Glasgow
G1 2EU

International offices:

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Hyatt Regency Hotel
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Almaty
Kazakhstan
050040

BURY ST EDMUNDS

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Bury St Edmunds
Suffolk
IP27 6AH

LEEDS

36 Park Row
Leeds
LS1 5JL

MOSCOW

21/5 Kuznetsky Most St.
Moscow
Russia

Appendix B

Geo-Environmental Services Limited, Site at Yapton Lane, Walberton, Preliminary Information, 16 April 2024

16th April 2024

Our ref: GE22437/KOD01/240416

Sam Pinkus
Elivia Homes Southern



By email only

Dear Sam,

RE: Site at Yapton Lane, Walberton – Preliminary Information

Geo-Environmental Services Limited (Geo-Environmental) was instructed by Elivia Homes to undertake geotechnical and geoenvironmental intrusive investigation at the above named site. This letter presents the preliminary findings of the investigation.

Background

At the time of this phase of investigation, the site comprised part of an open agricultural field which was generally flat and level, with some sparse crops and some vegetation comprising grass and weeds across the surface of the site. The site was bounded by mature trees and hedgerows to the north, west and east. There was no physical southern boundary separating site from the further area of agricultural fields. A single mature tree was observed south of the southern boundary.

The area surrounding the site comprised commercial and residential properties to the north and south with open fields to the east and west. The site was accessed via an unlocked gate in the northeast corner of the site, east of DM Chainsaws Ltd.

Published geological records and previous phases of investigation indicate that the ground conditions are likely to comprise River Terrace Deposits overlying London Clay Formation. The River Terrace Deposits are typically characterised as a sand and gravel albeit with a variable and sometimes appreciable clay content. Investigations undertaken by Geo-Environmental across the site and surrounding land to date have found the River Terrace Deposits to comprise an upper horizon of sandy clay over clayey sandy gravel. In this area, the underlying London Clay Formation often comprises sandy clay. Groundwater is often at relatively shallow depth.

It is understood that the site is proposed to be developed with residential properties, private gardens, access roads and associated infrastructure.

A number of previous intrusive investigations have been undertaken on site by Geo-Environmental from 2020 to 2024. Soakage testing has been carried out across the site on three separate occasions (March 2021, January 2022 and February 2024), window sampler boreholes have been undertaken with monitoring wells installed on two separate occasions (November 2020 and December 2023) and two phases of winter groundwater monitoring (winters 2020/2021 and 2023/2024) have been undertaken previously. These works have been reported under separate cover.

It is understood that further investigation was required including window sampling with SPTs and trial pitting across the site as well as targeting areas of proposed roads on the site to inform the emerging design for the site.

Geo-Environmental Services Ltd

Yapton Lane, West Sussex BN6 9GL

rs | Site Investigations

Geo-Environmental Services Ltd incorporated in England number 3214980 VAT number 679544479



Scope of Works

The following scope of works was agreed with the Client:

- Attendance of a specialist surveyor to undertake buried utilities pre-dig checks using radiodetection and ground penetrating radar techniques. The survey included capture of co-ordinates and levels of exploratory holes using GPS surveying.
- Attendance of a Geo-Environmental Engineer to set out and supervise the intrusive investigation and undertake in-situ testing and logging of recovered soils from exploratory holes.
- The excavation of 10No. machine dug trial pits (TP301-TP310) to depths of between 2.20-3.00m bgl, with logging and sampling to enable geotechnical and geochemical analysis.
- Undertake 6No. dynamic sampler boreholes (WS301-WS306) to depths of 5.00m bgl with SPTs at 1m intervals, with logging and sampling to enable geotechnical and geochemical analysis.

The intrusive investigation works were undertaken on the 5th and the 8th of April 2024 with the works supervised by a Geo-Environmental Engineer. The Client attended site on the morning of the 5th April 2024 to agree the proposed scope and location of works and ensure access to the site.

Figure 2 presents the exploratory hole locations undertaken as part of this phase of works and also highlights investigation locations undertaken as part of previous phases of works by Geo-Environmental on the site since 2020.

Ground Conditions

The ground conditions encountered during the investigation were broadly consistent with the published sequence of strata and previously encountered conditions. In summary, ground conditions at the point of investigation locations comprised a mantle of Topsoil overlying soils inferred to be River Terrace Deposits. Made Ground soils were encountered in one location and comprised mainly Topsoil material with rare brick fragments.

A generalised summary of the encountered conditions encountered is presented in Table 1.

Top (m bgl)	Base (m bgl)	Geology	Location
0	0.30	Topsoil: Dark brown slightly gravelly silty CLAY with varying proportions of rootlets and roots.	All except WS306
0	0.30	Made Ground: Dark brown slightly gravelly silty CLAY with rare brick fragments.	WS306
0.30	2.20 – 4.40	River Terrace Deposits: Firm orangish brown CLAY with varying proportions of silt, gravel, rootlets and roots (1-2mm); Orangish brown very clayey GRAVEL/very gravelly CLAY with varying proportions of sand, cobbles, boulders, black ferruginous fragments and rootlets and roots (1-2mm); Cream/pale brown/brown CLAY/GRAVEL with varying proportions of sand gravel and cobbles (gravel is fine to coarse sub angular flint and fine sub rounded chalk);	All
3.90 – 4.40	5.00+	River Terrace Deposits: Orangish brown slightly gravelly fine SAND with varying proportions of orange staining and black flecking.	WS301-WS306

Table 1 Summary of Ground Conditions

In situ Standard Penetration Tests (SPTs) were undertaken at intervals within the dynamic sampler boreholes. SPT 'N' values ranged between N=3 and N=33 within the soils of the River Terrace Deposits with no noticeable pattern in the strength profiles. The SPT N values correspond to a range of strengths from soft to stiff cohesive soils and very loose to medium dense granular soils. A reduction in strength was initially noted where groundwater was encountered within the investigation positions.

In situ hand penetrometer testing was undertaken in the more cohesive soils within the River Terrace Deposits. These results ranged from 0.40kg/cm² to 2.20kg/cm² (very soft to stiff).

With the exception of those encountered within the Topsoil, roots and rootlets were encountered within the exploratory holes on site to maximum depths as summarised in Table 2.

Location	Maximum depth (m bgl)	Description
TP301	0.80	Rootlets and roots 1-2mm
TP302	0.70	Rootlets
TP303	0.70	Rootlets
TP304	0.90	Rootlets
	2.20	Some rootlets and roots 1-2mm
TP305	1.10	Rootlets
TP306	0.60	Rootlets and roots 1-2mm
TP307	0.70	Rootlets and roots 1-2mm
	2.30	Frequent roots 1-30mm
TP308	0.60	Rootlets
TP309	1.40	Rootlets and roots 1-2mm
TP310	1.10	Rootlets
WS301	0.90	Rootlets and roots 1-2mm.
WS302	1.00	Some rootlets and roots 1-2mm
WS303	1.40	Rootlets and roots 1-2mm.
WS304	1.80	Rootlets and roots 1-2mm.
WS305	0.70	Rootlets and roots 1-2mm.
WS306	1.20	Rootlets and roots 1-2mm.

Table 2 Summary of Roots and Rootlets Encountered

For more a detailed description of the ground conditions, reference should be made to the exploratory hole logs enclosed in Appendix A.

Obstructions/Constructability Issues

No obstructions were encountered within the investigation locations undertaken during the investigation works. However, the presence of obstructions elsewhere on the site cannot be discounted.

With the exception of TP301 and TP302, all of the trial pits were terminated due to pit collapse caused by instability associated with encountering the water table. Pits were terminated at depths of between 2.20m and 2.70m bgl due to collapse. Additionally, all dynamic sampler boreholes were constructed to 5.0m bgl and collapsed to depths of between 1.95m and 3.25m bgl within 20 mins of completion of the borehole. It is considered likely that groundwater could cause constructability issues should foundations extend into the water table beneath the site.

Groundwater

Groundwater was encountered within all exploratory holes with the exception of (TP306, TP307, TP309 and TP310) during the ground investigation. Details of the groundwater encountered is presented within Table 3.

Location	Depth strike (m bgl)	Rose to (m bgl)	Time elapsed (min)
TP301	2.90	2.90	5
TP302	2.40	2.50	5
TP303	1.90	1.90	2

Location	Depth strike (m bgl)	Rose to (m bgl)	Time elapsed (min)
TP304	2.00	2.00	10
TP305	2.30	2.40	10
TP308	2.40	2.40	1
WS301	4.00	2.15	20
WS302	3.70	2.40	20
WS303	2.70	2.70	20
WS304	2.30	2.30	20
WS305	2.30	1.90	20
WS306	2.30	1.95	20

Table 3 Summary of Groundwater Encountered

It should also be noted that changes in groundwater levels do occur for a number of reasons including seasonal effects and variations in drainage. Such fluctuations may only be recorded by the measurement of the groundwater level within a series of standpipes or piezometers installed within appropriate response zones.

The 2023 to 2024 winter groundwater monitoring undertaken on the site within previous monitoring wells installed WS201 to WS206 and reported under separate cover has also identified groundwater at depths between 1.52m and 2.72m bgl between December 2023 and April 2024.

Geo-Environmental and Geotechnical Assessment

At the time of writing, laboratory testing is underway, the results of which will be presented within the final report for the site on receipt.

Closure

We trust we have interpreted your request correctly and provided sufficient information for your current requirements.

If you have any questions or queries in relation the information provided at this stage, please do not hesitate to contact the undersigned.

Yours sincerely
For and on Behalf of Geo-Environmental


Katie O'Dea BSc (Hons), MSc, FGS


Enc Figure 1 – Site Location Plan
 Figure 2 & 3 – Exploratory Hole Location Plan

Appendix A – Exploratory Hole Logs

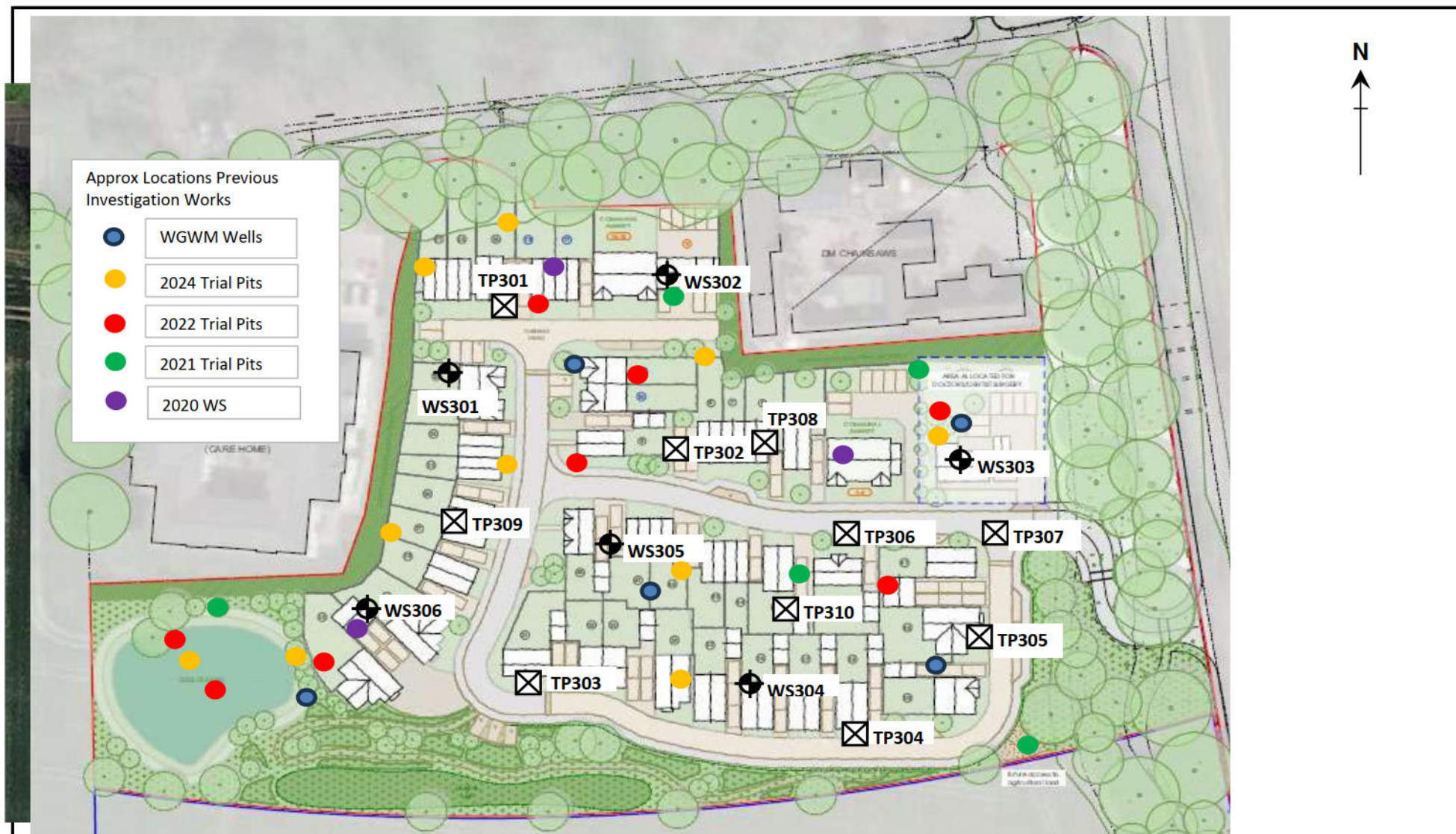


FIGURES

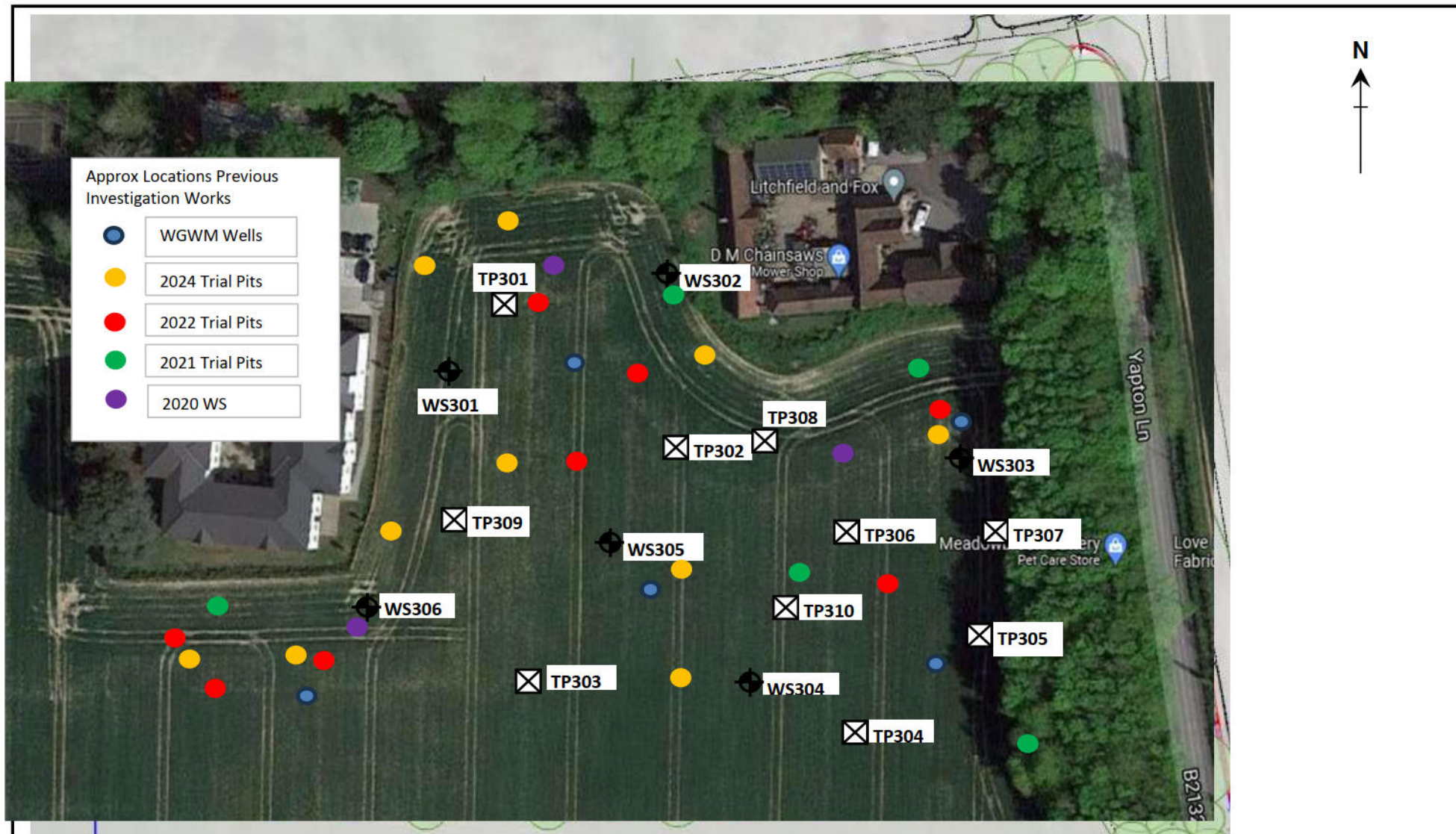




Project:	Land off Yapton Lane, Walberton, BN18 0AS			Title	Site Location Plan	
Client:	Elivia Homes Southern			Geo-Environmental Services Ltd Unit 7 Danworth Farm, Cuckfield Road Hurstpierpoint, West Sussex BN6 9GL +44(0)1273 832972 www.gesl.net	 Geo-Environmental	
Ref No:	GE20521	Revision:	1			
Drawn:	LL	Date:	03/04/2024			
Figure:	1	Scale:	Not to scale			



Project:	Land off Yapton Lane, Walberton, BN18 0AS			Title	Exploratory Hole Locations (Aerial)	
Client:	Elivia Homes Southern			Geo-Environmental Services Ltd Unit 7 Danworth Farm, Cuckfield Road Hurstpierpoint, West Sussex BN6 9GL +44(0)1273 832972 www.gesl.net  Geo-Environmental		
Ref No:	GE20521	Revision:	1			
Drawn:	LL	Date:	16/04/2024			
Figure:	2	Scale:	Not to scale			



Project:	Land off Yapton Lane, Walberton, BN18 0AS			Title	Exploratory Hole Locations (Proposed Development Plan)		
Client:	Elivia Homes Southern			Geo-Environmental Services Ltd Unit 7 Danworth Farm, Cuckfield Road Hurstpierpoint, West Sussex BN6 9GL +44(0)1273 832972 www.gesl.net		 Geo-Environmental	
Ref No:	GE20521	Revision:	1				
Drawn:	LL	Date:	16/04/2024				
Figure:	3	Scale:	Not to scale				

APPENDIX A

Exploratory Hole Logs



 Geo-Environmental	Contract Name: Yapton Lane, Walberton			Client: Elivia Homes Southern			Trial Pit ID: TP301		
	Contract Number: GE22437	Date Started: 08/04/2024	Logged By: KOD	Checked By: LL	Status: PRELIM	Sheet 1 of 1			
	Easting: 497527.0	Northing: 105639.2	Ground Level: 13.57mOD	Plant Used: JCB 3CX	Date Printed: 16/04/2024	Scale: 1:25			
Trial Pit Log		Weather: Dry, cloudy, cool			Hole Termination:		Stability: Localised spalling		
Samples & In Situ Testing			Strata Details					Water	Backfill
Depths	Sample ID	Test Result	Reduced Level	Depth (m) (Thickness)	Legend	Strata Description			
0.20	ES1	PP=1.1kg/cm2	13.27	(0.30)		Weeds overlying dark brown slightly gravelly silty CLAY with frequent rootlets and roots 1-2mm. Gravel is fine to coarse sub angular flint. TOPSOIL	0.5		
0.50	D1			0.30		Firm orangish brown slightly gravelly silty CLAY with some rootlets and roots 1-2mm. Gravel is fine to coarse sub angular flint. RIVER TERRACE DEPOSITS			
0.70	ES2			(0.50)					
1.00	D2		12.77	0.80		Orangish brown sandy very clayey GRAVEL/very gravelly CLAY with black ferruginous fragments. Sand is fine to coarse. Gravel is fine to coarse sub angular flint. RIVER TERRACE DEPOSITS			1.0
1.50	D3			(1.10)					1.5
2.00	D4			1.90		Cream very sandy very gravelly CLAY. Sand is fine to coarse. Gravel is fine to coarse sub angular flint and fine sub rounded chalk. RIVER TERRACE DEPOSITS			2.0
2.50	D5	11.67	(1.10)			2.5			
3.00	D6		10.57	3.00			3.0		
3.00	ES3					End of Trial Pit at 3.00m	3.5		
Dimensions:						Photo:			
Final Depth:	3.00m					 PhotoofPit			
Final Width:	0.60m								
Final Length:	2.40m								
Remarks						 PhotoofSpoil			
Water Strikes (mbgl)									
Depth Strike	Rose to		Time Elapsed (mins)						
2.90	2.90		5						

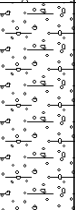
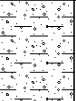
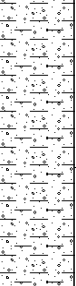
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	Contract Number: GE22437	Date Started: 08/04/2024	Logged By: KOD	Checked By: LL	Status: PRELIM	Sheet 1 of 1				
	Easting: 497564.5	Northing: 105613.1	Ground Level: 13.56mOD	Plant Used: JCB 3CX	Date Printed: 16/04/2024	Scale: 1:25				
Trial Pit Log		Weather: Warm, dry, clear		Hole Termination:			Stability: Localised spalling			
Samples & In Situ Testing				Strata Details					Water	Backfill
Depths	Sample ID	Test Result	Reduced Level	Depth (m) (Thickness)	Legend	Strata Description				
0.20	ES1	PP=1.1kg/cm2	13.26	(0.30)		Weeds overlying dark brown slightly gravelly silty CLAY with frequent rootlets and roots 1-3mm. TOPSOIL				
0.50	B1			0.30		Firm orangish brown slightly gravelly silty CLAY with some rootlets. RIVER TERRACE DEPOSITS				
0.50	D1			(0.40)						
1.00	D2		12.86	0.70		Orangish brown sandy very clayey GRAVEL/very gravelly CLAY with frequent black ferruginous fragments. Sand is fine to coarse. Gravel is fine to coarse sub angular flint. RIVER TERRACE DEPOSITS				
	1.30			ES2	(1.20)					
				1.50						
2.00	D4	11.66	1.90		Cream very sandy very gravelly CLAY. Sand is fine to coarse. Gravel is fine to coarse sub angular flint and fine sub rounded chalk. RIVER TERRACE DEPOSITS					
2.50	D5	(1.10)								
3.00	D6					10.56	3.00	End of Trial Pit at 3.00m		
Dimensions:					Photo:					
Final Depth:	3.00m				 PhotoofPit					
Final Width:	0.60m									
Final Length:	2.40m									
Remarks					 PhotoofSpoil					
Water Strikes (mbgl)										
Depth Strike	Rose to		Time Elapsed (mins)							
2.40	2.50		5							

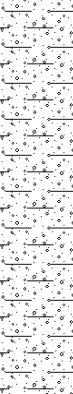
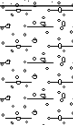
 Geo-Environmental	Contract Name: Yapton Lane, Walberton			Client: Elivia Homes Southern			Trial Pit ID: TP303		
	Contract Number: GE22437	Date Started: 08/04/2024	Logged By: KOD	Checked By: LL	Status: PRELIM	Sheet 1 of 1			
	Easting: 497527.6	Northing: 105570.5	Ground Level: 13.18mOD	Plant Used: JCB 3CX	Date Printed: 16/04/2024	Scale: 1:25			
Trial Pit Log		Weather: Warm, dry, cloudy			Hole Termination:		Stability: Sides unstable below water table		
Samples & In Situ Testing				Strata Details				Water	Backfill
Depths	Sample ID	Test Result	Reduced Level	Depth (m) (Thickness)	Legend	Strata Description			
0.20	ES1	PP=1kg/cm2	12.88	(0.30)		Weeds overlying dark brown slightly gravelly silty CLAY with frequent rootlets and roots. TOPSOIL			
0.50 0.50	B1 D1			0.30		Firm orangish brown slightly gravelly silty CLAY with some rootlets. Gravel is fine to coarse sub angular flint. RIVER TERRACE DEPOSITS			
0.80	ES2		12.48	0.70		Orangish brown sandy very clayey GRAVEL/very gravelly CLAY with black ferruginous fragments. RIVER TERRACE DEPOSITS			
1.00	D2			(1.00)					
1.50	D3		11.48	1.70		Cream and brown very sandy very gravelly CLAY. Sand is fine to coarse. Gravel is fine to coarse sub angular flint and fine sub rounded chalk. RIVER TERRACE DEPOSITS			
2.00 2.00	D4 ES3	(0.90)							
2.50	D5	10.58	2.60		End of Trial Pit at 2.60m				
Dimensions:						Photo:			
Final Depth:	2.60m					 PhotoofPit			
Final Width:	0.60m								
Final Length:	2.50m								
Remarks						 PhotoofSpoil			
Terminated at 2.6m bgl due to collapse.									
Water Strikes (mbgl)									
Depth Strike	Rose to		Time Elapsed (mins)						
1.90	1.90		2						

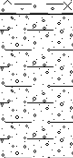
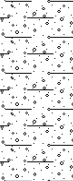
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	Contract Number: GE22437	Date Started: 08/04/2024	Logged By: KOD	Checked By: LL	Status: PRELIM	Sheet 1 of 1					
	Easting: 497605.1	Northing: 105560.6	Ground Level: 13.32mOD	Plant Used: JCB 3CX	Date Printed: 16/04/2024	Scale: 1:25					
Trial Pit Log			Weather: Dry, cool, cloudy			Hole Termination:			Stability: Sides unstable below water table		
Samples & In Situ Testing				Strata Details						Water	Backfill
Depths	Sample ID	Test Result	Reduced Level	Depth (m) (Thickness)	Legend	Strata Description					
0.10	ES1	PP=1.0kg/cm2	13.02	(0.30)		Grass and some weeds overlying dark brown slightly gravelly silty CLAY with abundant rootlets and roots. Gravel is fine to coarse sub angular flint. TOPSOIL			0.5		
0.50	B1			0.30		Firm orangish brown slightly gravelly silty CLAY with frequent rootlets. Gravel is fine to coarse sub angular flint. RIVER TERRACE DEPOSITS					
0.50	D1			(0.60)							
1.00	D2			0.90		Orangish brown sandy cobbly very clayey GRAVEL/very gravelly CLAY with frequent black ferruginous fragments and some rootlets and roots 1-2mm. Sand is fine to coarse. Gravel and cobbles are fine to coarse sub angular flint. RIVER TERRACE DEPOSITS					
1.20	ES2			(1.30)							
1.50	D3										
2.00	D4										
			11.12	2.20		End of Trial Pit at 2.20m			2.0		
									2.5		
									3.0		
									3.5		
Dimensions:						Photo:					
Final Depth:	2.20m					 PhotoofPit					
Final Width:	0.60m										
Final Length:	2.40m										
Remarks						 PhotoofSpoil					
Terminated at 2.2m bgl due to pit collapse											
Water Strikes (mbgl)											
Depth Strike	Rose to		Time Elapsed (mins)								
2.00	2.00		10								

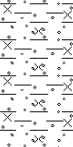
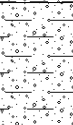
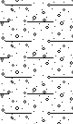
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	Contract Number: GE22437	Date Started: 08/04/2024	Logged By: KOD	Checked By: LL	Status: PRELIM	Sheet 1 of 1			
	Easting: 497634.5	Northing: 105584.6	Ground Level: 13.62mOD	Plant Used: JCB 3CX	Date Printed: 16/04/2024	Scale: 1:25			
Trial Pit Log		Weather: Cool, dry, cloudy.			Hole Termination:		Stability: Sides unstable below water table		
Samples & In Situ Testing			Strata Details					Water	Backfill
Depths	Sample ID	Test Result	Reduced Level	Depth (m) (Thickness)	Legend	Strata Description			
0.20	ES1	PP=0.8kg/cm2	13.32	(0.30)		Weeds and some crop overlying dark slightly gravelly silty CLAY with abundant rootlets and roots 1-2mm TOPSOIL		0.5	
0.40	ES2			0.30		Firm orangish brown slightly gravelly silty CLAY with some rootlets. RIVER TERRACE DEPOSITS			
0.50	B1			(0.80)					
0.50	D1								
1.00	D2			12.52	1.10		Orangish brown sandy very clayey cobbly GRAVEL/very gravelly CLAY with black ferruginous fragments. Sand is fine to coarse. Gravel is fine to coarse sub angular flint. RIVER TERRACE DEPOSITS		
1.50	D3	11.72	1.90	(0.80)		Pale brown to cream very sandy very gravelly cobbly CLAY. Sand is fine to coarse. Gravel is fine to coarse sub angular flint and fine sub rounded chalk. RIVER TERRACE DEPOSITS		1.5	
1.50	ES3								
2.00	D4	11.12	2.50	(0.60)		Wet.		2.0	
2.50	D5								
						End of Trial Pit at 2.50m		2.5	
								3.0	
								3.5	
Dimensions:						Photo:			
Final Depth:	2.50m								
Final Width:	0.60m								
Final Length:	2.50m								
Remarks									
Terminated at 2.5m bgl due to collapse.									
Water Strikes (mbgl)									
Depth Strike	Rose to		Time Elapsed (mins)						
2.30	2.40		10						

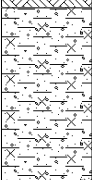
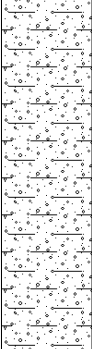
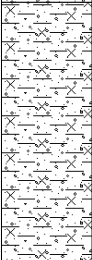
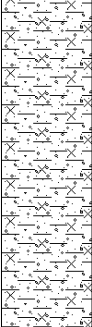
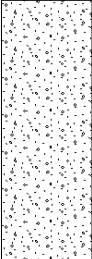
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	Contract Number: GE22437	Date Started: 08/04/2024	Logged By: KOD	Checked By: LL	Status: PRELIM	Sheet 1 of 1				
	Easting: 497604.0	Northing: 105597.9	Ground Level: 13.62mOD	Plant Used: JCB 3CX	Date Printed: 16/04/2024	Scale: 1:25				
Trial Pit Log		Weather: Warm, clear, dry			Hole Termination:		Stability: Sides unstable below water table			
Samples & In Situ Testing			Strata Details					Water	Backfill	
Depths	Sample ID	Test Result	Reduced Level	Depth (m) (Thickness)	Legend	Strata Description				
0.20	ES1	PP=1.1kg/cm2	13.32	(0.30)		Weeds overlying dark brown slightly gravelly CLAY with abundant rootlets and roots 1-3mm. TOPSOIL		0.5		
0.50	D1			13.02	0.30		Firm orangish brown slightly gravelly silty CLAY with frequent rootlets and roots 1-2mm. Gravel is fine to coarse sub angular flint. RIVER TERRACE DEPOSITS			
0.50	D2				0.60		Orangish brown sandy very gravelly CLAY/very clayey GRAVEL with abundant black ferruginous fragments. Gravel is fine to coarse sub angular flint. RIVER TERRACE DEPOSITS			
0.70	ES2		12.02	(1.00)						
1.00	D3									
1.50	D4									
1.50	ES3	11.12	2.50		Interbedded pale brown to cream very sandy very gravelly CLAY and brown very sandy very gravelly CLAY. Sand is fine to coarse. Gravel is fine to coarse sub angular flint and fine sub rounded chalk. RIVER TERRACE DEPOSITS		2.0			
2.00	D5									
2.50	D6									
						End of Trial Pit at 2.50m		2.5		
Dimensions:					Photo:					
Final Depth:	2.50m				 					
Final Width:	0.60m									
Final Length:	2.40m									
Remarks										
Terminated at 2.5m bgl due to pit collapse										
Water Strikes (mbgl)										
Depth Strike	Rose to		Time Elapsed (mins)							

 Geo-Environmental	Contract Name: Yapton Lane, Walberton			Client: Elivia Homes Southern			Trial Pit ID: TP307				
	Contract Number: GE22437	Date Started: 08/04/2024	Logged By: KOD	Checked By: LL	Status: PRELIM	Sheet 1 of 1					
	Easting: 497640.9	Northing: 105601.7	Ground Level: 13.68mOD	Plant Used: JCB	Date Printed: 16/04/2024	Scale: 1:25					
Trial Pit Log			Weather: Dry, cool, cloudy			Hole Termination:			Stability: Sides unstable below water table		
Samples & In Situ Testing					Strata Details					Water	Backfill
Depths	Sample ID	Test Result	Reduced Level	Depth (m) (Thickness)	Legend	Strata Description					
0.10	ES1	PP=1.4kg/cm2	13.38	(0.30)		Weeds and crop overlying dark brown slightly gravelly silty CLAY. Gravel is fine to coarse sub angular flint. TOPSOIL			0.5		
0.50	B1			0.30		Firm orangish brown slightly cobbly silty gravelly CLAY with some rootlets and roots 1-3mm. Gravel and cobbles is fine to coarse sub angular flint. RIVER TERRACE DEPOSITS					
0.50	D1			(0.40)		Orangish brown sandy cobbly, bouldery very clayey flint GRAVEL with black ferruginous fragments. Sand is fine to coarse. Gravel cobbles and boulders are fine to coarse sub angular flint. RIVER TERRACE DEPOSITS					
0.60	ES2										
1.00	D2			12.98	0.70						
1.50	D3	12.28	1.40		Off white to cream very sandy very gravelly CLAY. Sand is fine to coarse. Gravel is fine to coarse sub angular flint and fine sub rounded chalk. RIVER TERRACE DEPOSITS <i>Frequent roots 1-30mm.</i>			1.5			
2.00	D4			(1.30)		End of Trial Pit at 2.70m					
2.50	D5										
2.50	ES3	10.98	2.70				3.0				
									3.5		
Dimensions:					Photo:						
Final Depth:	2.70m				 PhotoofPit						
Final Width:	0.60m										
Final Length:	2.20m										
Remarks					 PhotoofSpoil						
Terminated at 2.7m bgl due to collapse.											
Water Strikes (mbgl)											
Depth Strike		Rose to		Time Elapsed (mins)							

 Geo-Environmental	Contract Name: Yapton Lane, Walberton			Client: Elivia Homes Southern			Trial Pit ID: TP308				
	Contract Number: GE22437	Date Started: 08/04/2024	Logged By: KOD	Checked By: LL	Status: PRELIM	Sheet 1 of 1					
	Easting: 497586.7	Northing: 105617.1	Ground Level: 13.70mOD	Plant Used: JCB 3CX	Date Printed: 16/04/2024	Scale: 1:25					
Trial Pit Log		Weather: Warm, dry, clear			Hole Termination:		Stability: Sides unstable below water table				
Samples & In Situ Testing			Strata Details					Water	Backfill		
Depths	Sample ID	Test Result	Reduced Level	Depth (m) (Thickness)	Legend	Strata Description					
0.10	ES1	PP=1.1kg/cm2	13.40	(0.30)		Weeds and some crop overlying dark brown slightly gravelly silty CLAY with frequent rootlets and roots 1-2mm. TOPSOIL		0.5			
0.50	D1			0.30		Firm orangish brown slightly gravelly silty CLAY with some rootlets. Gravel is fine to coarse sub angular flint. RIVER TERRACE DEPOSITS					
0.50	ES2			0.60		Orangish brown sandy very clayey GRAVEL/very gravelly CLAY with frequent black ferruginous fragments. RIVER TERRACE DEPOSITS					
1.00	D2			(1.50)				1.0			
1.50	D3										
2.00	D4										
2.50	D5		11.60	2.10		Cream and brown clayey sandy cobbly GRAVEL. Sand is fine to coarse. Gravel is fine to coarse sub angular flint and fine sub rounded chalk. RIVER TERRACE DEPOSITS		2.0			
2.50	ES3			(0.40)							
			11.20	2.50		End of Trial Pit at 2.50m		2.5			
								3.0			
								3.5			
Dimensions:										Photo:	
Final Depth:	2.50m									 PhotoofPit	
Final Width:	0.60m										
Final Length:	2.30m										
Remarks											
Terminated at 2.5m bgl due to collapse.											
Water Strikes (mbgl)											
Depth Strike	Rose to			Time Elapsed (mins)							
2.40	2.40			1							
 PhotoofSpoil											

 Geo-Environmental	Contract Name: Yapton Lane, Walberton			Client: Elivia Homes Southern			Trial Pit ID: TP309																				
	Contract Number: GE22437	Date Started: 08/04/2024	Logged By: KOD	Checked By: LL	Status: PRELIM	Sheet 1 of 1																					
	Easting: 497512.6		Northing: 105595.0		Ground Level: 13.28mOD		Plant Used: JCB		Date Printed: 16/04/2024		Scale: 1:25																
Trial Pit Log				Weather: Cloudy, cool, drizzle				Hole Termination:				Stability: Sides unstable below water table															
Samples & In Situ Testing						Strata Details						Water		Backfill													
Depths		Sample ID		Test Result		Reduced Level		Depth (m) (Thickness)		Legend		Strata Description															
0.10		ES1		PP=0.6kg/cm2		12.98		(0.30)				Weeds overlying dark brown slightly gravelly silty CLAY with frequent rootlets and roots 1-2mm. TOPSOIL															
0.50		D1						0.30				Soft becoming firm orangish brown slightly gravelly silty CLAY with some black ferruginous fragments and some rootlets and roots 1-2mm. RIVER TERRACE DEPOSITS															
0.70		ES2						(1.10)																			
1.00		D2		PP=1.2kg/cm2		11.88		1.40				Orangish brown sandy very clayey GRAVEL/very gravelly CLAY with frequent black ferruginous fragments. RIVER TERRACE DEPOSITS															
1.50		D3						(1.10)																			
2.00		D4						2.50																			
2.50		D5				10.78		2.50				End of Trial Pit at 2.50m															
2.50		ES3																									
Dimensions:														Photo:													
Final Depth:		2.50m												 PhotoofPit													
Final Width:		0.60m																									
Final Length:		2.30m																									
Remarks														 PhotoofSpoil													
Terminated at 2.5m bgl due to collapse.																											
Water Strikes (mbgl)																											
Depth Strike				Rose to				Time Elapsed (mins)																			

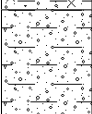
 Geo-Environmental	Contract Name: Yapton Lane, Walberton			Client: Elivia Homes Southern			Trial Pit ID: TP310			
	Contract Number: GE22437	Date Started: 08/04/2024	Logged By: KOD	Checked By: LL	Status: PRELIM	Sheet 1 of 1				
	Easting: 497590.4	Northing: 105589.3	Ground Level: 13.47mOD	Plant Used: JCB	Date Printed: 16/04/2024	Scale: 1:25				
Trial Pit Log		Weather: Warm, dry, clear		Hole Termination:		Stability: Sides unstable below water table				
Samples & In Situ Testing				Strata Details					Water	Backfill
Depths	Sample ID	Test Result	Reduced Level	Depth (m) (Thickness)	Legend	Strata Description				
0.10	ES1	PP=1.1kg/cm2	13.17	(0.30)		Weeds overlying dark brown slightly gravelly silty CLAY with some rootlets and roots. TOPSOIL			0.5	
0.50	D1			(0.80)		Firm orangish brown slightly gravelly silty CLAY with some rootlets and some black flecking. RIVER TERRACE DEPOSITS				
0.80	ES2	PP=1.2kg/cm2	12.37	1.10		Orangish brown sandy very clayey cobbly GRAVEL/very gravelly CLAY with frequent black ferruginous fragments. RIVER TERRACE DEPOSITS			1.0	
1.00	D2									
1.50	D3									
1.80	ES3									
2.00	D4			(1.40)					2.0	
2.50	D5		10.97	2.50					2.5	
						End of Trial Pit at 2.50m			3.0	
									3.5	
Dimensions:						Photo:				
Final Depth:	2.50m					 PhotoofPit				
Final Width:	0.60m									
Final Length:	2.40m									
Remarks						 PhotoofSpoil				
Terminated due to pit collapse.										
Water Strikes (mbgl)										
Depth Strike		Rose to		Time Elapsed (mins)						

 Unit 7, Danworth Farm Hurstpierpoint BN6 9GL www.gesl.net				Borehole Log				Borehole No. WS301 Sheet 1 of 2			
Project Name: Yapton Lane, Walberton				Project No. GE22437		Co-ords: 497512E - 105626N		Hole Type WLS			
Location: Walberton, West Sussex BN18 0AS				Level: 13.55		Scale 1:25					
Client: Elivia Homes Southern				Dates: 05/04/2024		Logged By KOD					
Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description			
		Depth (m)	Type	Results							
		0.20	ES	1.0kg/cm2	0.30	13.24		Weeds overlying dark brown silty gravelly CLAY with frequent rootlets and roots 1-3mm. TOPSOIL			
		0.50	D				0.90	12.64			Orangish brown slightly sandy slightly gravelly silty CLAY with some rootlets and roots 1-2mm. RIVER TERRACE DEPOSITS
		0.50	PP								
		0.80	ES	2.2kg/cm2 N=15 (5,8/5,4,3,3)	2.10	11.44		Orangish brown sandy very gravelly CLAY/very clayey GRAVEL. Sand is fine to coarse. Gravel is fine to coarse sub angular flint. RIVER TERRACE DEPOSITS			
		1.00	D								
		1.00	PP								
		1.00	SPT								
		1.50	D	N=8 (2,1/2,2,2,2)	2.10	11.44		Pale brown to cream very sandy very gravelly CLAY. Sand is fine to coarse. Gravel is fine to coarse sub angular flint and fine sub rounded chalk. RIVER TERRACE DEPOSITS			
		2.00	D								
		2.00	SPT								
		2.50	D	N=13 (3,3/2,4,3,4)	4.10	9.44		Orangish brown slightly gravelly fine SAND. Gravel is fine to medium sub rounded flint. RIVER TERRACE DEPOSITS			
		2.70	ES								
		3.00	D								
		3.00	SPT	N=24 (2,4/6,6,6,6)	5.00	8.54		Continued on Next Sheet			
		3.50	D								
4.00	D										
4.00	SPT										
4.50	D										
5.00	D										

Dynamic Sampling Run Details			Water Strike Details (mbgl)		Remarks
Depth Top	Depth Base	Diameter	Depth Strike	Rose To	
			4.00	2.15	
					Hole collapse to 2.45m bgl.  Status PRELIM

 Unit 7, Danworth Farm Hurstpierpoint BN6 9GL www.gesl.net		Borehole Log					Borehole No. WS301 Sheet 2 of 2			
Project Name: Yapton Lane, Walberton		Project No. GE22437		Co-ords: 497512E - 105626N		Hole Type WLS				
Location: Walberton, West Sussex BN18 0AS				Level: 13.55		Scale 1:25				
Client: Elivia Homes Southern				Dates: 05/04/2024		Logged By KOD				
Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description		
		Depth (m)	Type	Results						
		5.00	SPT	N=17 (3,5/4,5,5,3)				End of Borehole at 5.00m		
									6	
									7	
									8	
									9	
									10	
Dynamic Sampling Run Details		Water Strike Details (mbgl)		Remarks						
Depth Top	Depth Base	Diameter	Depth Strike							Rose To
			4.00	2.15	Hole collapse to 2.45m bgl.					
					 Status PRELIM					

 Unit 7, Danworth Farm Hurstpierpoint BN6 9GL www.gesl.net				Borehole Log Borehole No. WS302 Sheet 1 of 2					
Project Name: Yapton Lane, Walberton				Project No. GE22437		Co-ords: 497563E - 105647N		Hole Type WLS	
Location: Walberton, West Sussex BN18 0AS				Level: 13.73		Scale 1:25			
Client: Elivia Homes Southern				Dates: 05/04/2024		Logged By KOD			

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description		
		Depth (m)	Type	Results						
		0.10	ES	0.7kg/cm2	0.30	13.43		Weeds overlying dark brown slightly sandy silty gravelly CLAY with frequent rootlets. Sand is fine. Gravel is fine to medium sub angular flint. TOPSOIL		
		0.40	ES				RIVER TERRACE DEPOSITS			Soft orangish brown slightly sandy silty gravelly CLAY with some rootlets and roots 1-2mm. Sand is fine. Gravel is fine to coarse sub angular flint. RIVER TERRACE DEPOSITS
		0.50	D							
		0.50	PP	N=19 (5,8/7,5,4,3)	0.70	13.03		Orangish brown clayey sandy GRAVEL/very gravelly CLAY. Sand is fine. Gravel is fine to coarse sub angular flint. RIVER TERRACE DEPOSITS		
		1.00	D							
		1.00	SPT							
		1.30	ES							
		1.50	D	0.4kg/cm2	1.40	12.33		Soft orangish brown sandy gravelly CLAY. Sand is fine. Gravel is fine to medium sub angular flint. RIVER TERRACE DEPOSITS		
		1.50	PP							
		2.00	D	N=22 (2,3/4,6,6,6)	1.60	12.13		Pale brown to cream silty sandy very gravelly CLAY. Sand is fine to coarse. Gravel is fine to coarse sub angular flint and fine sub rounded chalk. RIVER TERRACE DEPOSITS		
		2.00	SPT							
		2.50	D							
		3.00	D	N=20 (4,4/6,6,4,4)	3.10	10.63		Cream clayey SAND and GRAVEL. Sand is fine to coarse. Gravel is fine to coarse sub angular flint and fine sub rounded chalk. RIVER TERRACE DEPOSITS		
		3.00	SPT							
		3.50	D	N=7 (1,0/1,0,2,4)	3.80	9.93		Pale orangish brown sandy very gravelly CLAY. Sand is fine to coarse. Gravel is fine to coarse sub angular flint and fine sub rounded chalk. RIVER TERRACE DEPOSITS		
4.00	D									
4.00	SPT									
4.50	D	N=7 (1,0/1,0,2,4)	4.40	9.33		Orangish brown slightly gravelly fine SAND. Gravel is fine to coarse sub angular flint. RIVER TERRACE DEPOSITS				
5.00	D									
Continued on Next Sheet								5		

Dynamic Sampling Run Details			Water Strike Details (mbgl)		Remarks	 Status PRELIM
Depth Top	Depth Base	Diameter	Depth Strike	Rose To		
			3.70	2.40		
					Some clays too gravelly for pocket penetrometer testing. Hole collapse to 3.25m bgl.	

 Unit 7, Danworth Farm Hurstpierpoint BN6 9GL www.gesl.net		Borehole Log					Borehole No. WS302 Sheet 2 of 2			
Project Name: Yapton Lane, Walberton		Project No. GE22437		Co-ords: 497563E - 105647N		Hole Type WLS				
Location: Walberton, West Sussex BN18 0AS				Level: 13.73		Scale 1:25				
Client: Elivia Homes Southern				Dates: 05/04/2024		Logged By KOD				
Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description		
		Depth (m)	Type	Results						
		5.00	SPT	N=14 (1,0/1,3,5,5)				End of Borehole at 5.00m		
									6	
									7	
									8	
									9	
									10	
Dynamic Sampling Run Details		Water Strike Details (mbgl)		Remarks						
Depth Top	Depth Base	Diameter	Depth Strike							Rose To
			3.70	2.40	Some clays too gravelly for pocket penetrometer testing. Hole collapse to 3.25m bgl.					
					 Status PRELIM					



www.gesl.net

Borehole Log

WS303

Sheet 2 of 2

Project Name: Yapton Lane, Walberton

Project No.	GE22437
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Co-ords: 497632E - 105614N

Hole Type	WLS
1	0.0000
2	0.0000
3	0.0000
4	0.0000
5	0.0000
6	0.0000
7	0.0000
8	0.0000
9	0.0000
10	0.0000
11	0.0000
12	0.0000
13	0.0000
14	0.0000
15	0.0000
16	0.0000
17	0.0000
18	0.0000
19	0.0000
20	0.0000
21	0.0000
22	0.0000
23	0.0000
24	0.0000
25	0.0000
26	0.0000
27	0.0000
28	0.0000
29	0.0000
30	0.0000
31	0.0000
32	0.0000
33	0.0000
34	0.0000
35	0.0000
36	0.0000
37	0.0000
38	0.0000
39	0.0000
40	0.0000
41	0.0000
42	0.0000
43	0.0000
44	0.0000
45	0.0000
46	0.0000
47	0.0000
48	0.0000
49	0.0000
50	0.0000
51	0.0000
52	0.0000
53	0.0000
54	0.0000
55	0.0000
56	0.0000
57	0.0000
58	0.0000
59	0.0000
60	0.0000
61	0.0000
62	0.0000
63	0.0000
64	0.0000
65	0.0000
66	0.0000
67	0.0000
68	0.0000
69	0.0000
70	0.0000
71	0.0000
72	0.0000
73	0.0000
74	0.0000
75	0.0000
76	0.0000
77	0.0000
78	0.0000
79	0.0000
80	0.0000
81	0.0000
82	0.0000
83	0.0000
84	0.0000
85	0.0000
86	0.0000
87	0.0000
88	0.0000
89	0.0000
90	0.0000
91	0.0000
92	0.0000
93	0.0000
94	0.0000
95	0.0000
96	0.0000
97	0.0000
98	0.0000
99	0.0000
100	0.0000

Location: Walberton, West Sussex BN18 0AS

Level:	14.03
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Scale
1:25

Client: Elivia Homes Southern

Dates: 05/04/2024

Logged By
KOD

[illegible]

 Unit 7, Danworth Farm Hurstpierpoint BN6 9GL www.gesl.net		Borehole Log				Borehole No. WS304 Sheet 1 of 2	
Project Name: Yapton Lane, Walberton		Project No. GE22437		Co-ords: 497583E - 105575N		Hole Type WLS	
Location: Walberton, West Sussex BN18 0AS				Level: 13.31		Scale 1:25	
Client: Elivia Homes Southern				Dates: 05/04/2024		Logged By KOD	

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.20	ES		0.30	13.01		Weeds overlying slightly gravelly very silty CLAY with frequent rootlets and roots 1-2mm. TOPSOIL	1
		0.50	D						
		0.50	PP	0.7kg/cm2					
		0.70	ES					Soft orangish brown slightly gravelly very silty CLAY with some rootlets and roots 1-2mm. RIVER TERRACE DEPOSITS	
		1.00	D						
		1.00	SPT	N=15 (5,7/6,4,3,2)					
		1.50	D						
		2.00	D		1.80	11.51			
		2.00	SPT	N=3 (1,0/0,1,1,1)				Brown and grey sandy very clayey GRAVEL/very gravelly CLAY. Sand is fine to coarse. Gravel is fine to coarse sub angular flint. RIVER TERRACE DEPOSITS	2
		2.50	D		2.20	11.11		Pale brown and grey slightly gravelly SAND and GRAVEL. Sand is fine to coarse. Gravel is fine to coarse sub angular flint. RIVER TERRACE DEPOSITS	
		3.00	D						
		3.00	SPT	N=6 (1,0/0,0,2,4)					3
		3.50	D						
		3.80	ES		3.60	9.71		Stiff pale orangish brown sandy gravelly CLAY with some orange staining. Sand is fine to coarse. Gravel is fine to medium sub angular flint and fine sub rounded chalk. RIVER TERRACE DEPOSITS	4
		4.00	D						
		4.00	PP	1.6kg/cm2					
		4.00	SPT	N=6 (1,0/1,0,2,3)					
		4.50	D		4.40	8.91		Orangish brown slightly gravelly fine SAND. Gravel is fine to medium sub rounded flint. RIVER TERRACE DEPOSITS	
		5.00	D		5.00	8.31		Continued on Next Sheet	5

Dynamic Sampling Run Details			Water Strike Details (mbgl)		Remarks
Depth Top	Depth Base	Diameter	Depth Strike	Rose To	
			2.30	2.30	
					Hole collapse to 1.95m bgl.

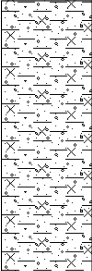
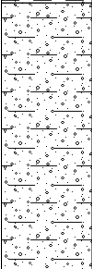
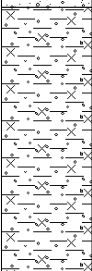
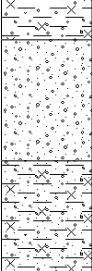
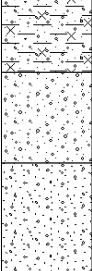
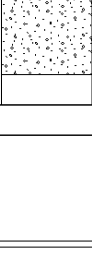

 Status
 PRELIM

 Unit 7, Danworth Farm Hurstpierpoint BN6 9GL www.gesl.net		Borehole Log					Borehole No. WS304 Sheet 2 of 2			
Project Name: Yapton Lane, Walberton		Project No. GE22437		Co-ords: 497583E - 105575N		Hole Type WLS				
Location: Walberton, West Sussex BN18 0AS				Level: 13.31		Scale 1:25				
Client: Elivia Homes Southern				Dates: 05/04/2024		Logged By KOD				
Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description		
		Depth (m)	Type	Results						
		5.00	SPT	N=11 (1,0/1,2,3,5)				End of Borehole at 5.00m		
									6	
									7	
									8	
									9	
									10	
Dynamic Sampling Run Details		Water Strike Details (mbgl)		Remarks						
Depth Top	Depth Base	Diameter	Depth Strike							Rose To
			2.30	2.30	Hole collapse to 1.95m bgl.					
					 Status PRELIM					

 Unit 7, Danworth Farm Hurstpierpoint BN6 9GL www.gesl.net			Borehole Log				Borehole No. WS305 Sheet 1 of 2			
Project Name: Yapton Lane, Walberton			Project No. GE22437		Co-ords: 497549E - 105593N		Hole Type WLS			
Location: Walberton, West Sussex BN18 0AS					Level: 13.25		Scale 1:25			
Client: Elivia Homes Southern					Dates: 05/04/2024		Logged By KOD			
Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description		
		Depth (m)	Type	Results						
		0.10	ES		0.30	12.94		Weeds overlying dark brown slightly gravelly very silty CLAY with frequent rootlets and roots 1-2mm. TOPSOIL		
		0.40	ES					Dark orangish brown silty gravelly slightly cobbly CLAY with some rootlets. RIVER TERRACE DEPOSITS		
		0.50	D							
					0.70	12.54		Brown sandy slightly cobbly very clayey GRAVEL/very gravelly CLAY. Orangish brown and grey sandy GRAVEL. Sand is fine to coarse. Gravel is fine to coarse sub angular flint. RIVER TERRACE DEPOSITS		
		1.00	D	N=30 (9,15/11,9,5,5)						
		1.00	SPT							
		1.20	ES							
		1.50	D							
		2.00	D	N=5 (2,1/2,1,1,1)	2.10	11.14		Pale orangish brown slightly clayey sandy GRAVEL. Sand is fine to coarse. Gravel is fine to coarse sub angular flint. RIVER TERRACE DEPOSITS		
		2.00	SPT							
2.50	D									
3.00	D	N=19 (4,4/5,4,5,5)	2.80	10.44		Pale brown to cream sandy gravelly CLAY. Sand is fine to coarse. Gravel is fine to coarse sub angular flint and fine sub rounded chalk. RIVER TERRACE DEPOSITS				
3.00	SPT									
4.00	D	N=22 (1,0/1,5,9,7)	3.90	9.35		Orangish brown slightly gravelly fine SAND with some orange staining and black flecking. RIVER TERRACE DEPOSITS				
4.00	SPT									
4.50	D									
5.00	D		5.00	8.24		Continued on Next Sheet		5		
Dynamic Sampling Run Details		Water Strike Details (mbgl)		Remarks						
Depth Top	Depth Base	Diameter	Depth Strike							Rose To
			2.30	1.90	Collapse to 2.10m bgl. Clay unsuitable for pocket penetrometer testing.					
					 Status PRELIM					

 Unit 7, Danworth Farm Hurstpierpoint BN6 9GL www.gesl.net		Borehole Log					Borehole No. WS305 Sheet 2 of 2			
Project Name: Yapton Lane, Walberton		Project No. GE22437		Co-ords: 497549E - 105593N		Hole Type WLS				
Location: Walberton, West Sussex BN18 0AS				Level: 13.25		Scale 1:25				
Client: Elivia Homes Southern				Dates: 05/04/2024		Logged By KOD				
Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description		
		Depth (m)	Type	Results						
		5.00	SPT	N=23 (4,6/6,5,5,7)				End of Borehole at 5.00m		
									6	
									7	
									8	
									9	
									10	
Dynamic Sampling Run Details		Water Strike Details (mbgl)		Remarks						
Depth Top	Depth Base	Diameter	Depth Strike							Rose To
			2.30	1.90	Collapse to 2.10m bgl. Clay unsuitable for pocket penetrometer testing.					
					 Status PRELIM					

 Unit 7, Danworth Farm Hurstpierpoint BN6 9GL www.gesl.net		Borehole Log				Borehole No. WS306 Sheet 1 of 2	
Project Name: Yapton Lane, Walberton		Project No. GE22437		Co-ords: 497493E - 105579N		Hole Type WLS	
Location: Walberton, West Sussex BN18 0AS				Level: 13.29		Scale 1:25	
Client: Elivia Homes Southern				Dates: 05/04/2024		Logged By KOD	

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.20	ES		0.30	12.99		Weeds overlying dark brown slightly gravelly very silty CLAY with rare brick fragments. MADE GROUND	
		0.50 0.50 0.60	D PP ES	1.3kg/cm2				Firm orangish brown slightly sandy slightly gravelly silty CLAY with frequent black ferruginous fragments and some rootlets and roots 1-2mm. Sand is fine. Gravel is fine to coarse sub angular flint. RIVER TERRACE DEPOSITS	1
		1.00 1.00 1.00	D PP SPT	1.4kg/cm2 N=33 (5,8/7,8,8,10)	1.20	12.09		Brown and grey sandy very gravelly CLAY/very clayey GRAVEL. Sand is fine. Gravel is fine to coarse sub angular flint. RIVER TERRACE DEPOSITS	
		1.50	D						2
		2.00 2.00	D SPT	N=4 (1,0/1,1,1,1)	2.10	11.19		Soft orangish brown and pale brown slightly gravelly silty CLAY. RIVER TERRACE DEPOSITS	
		2.50 2.50	D PP	0.5kg/cm2				<u>Some orange sandy lenses</u>	
		3.00 3.00	D SPT	N=7 (2,1/2,2,1,2)	3.10	10.19		<u>Poor recovery</u>	3
		3.30	D					Orangish brown and grey sandy GRAVEL. Sand is fine to coarse. Gravel is fine to coarse sub angular flint. RIVER TERRACE DEPOSITS	
					3.50	9.79		Pale brown silty sandy gravelly CLAY. Sand is fine. Gravel is fine to coarse sub angular flint and fine sub rounded chalk. RIVER TERRACE DEPOSITS	
		4.00 4.00 4.20	D SPT D	N=7 (1,1/2,1,2,2)	4.10	9.19		Pale brown and cream sandy GRAVEL. Sand is fine to coarse. Gravel is fine to coarse sub angular flint. RIVER TERRACE DEPOSITS	4
		4.60	ES			8.89		Orangish brown slightly gravelly fine SAND. Gravel is fine to medium sub rounded flint. RIVER TERRACE DEPOSITS	
		5.00	D		5.00	8.29		Continued on Next Sheet	5

Dynamic Sampling Run Details			Water Strike Details (mbgl)		Remarks
Depth Top	Depth Base	Diameter	Depth Strike	Rose To	
			2.30	1.95	Collapse to 2.65m bgl.


 Status
 PRELIM



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Borehole Log

WS306

Sheet 2 of 2

Project Name: Yapton Lane, Walberton

Project No.	GE22437
-------------	---------

Co-ords: 497493E - 105579N

Hole Type	WLS
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3	0.0000
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6	0.0000
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100	0.0000

Location: Walberton, West Sussex BN18 0AS

Level: 13.29

Scale
1:25

Client: Elivia Homes Southern

Dates: 05/04/2024

Logged By
KOD

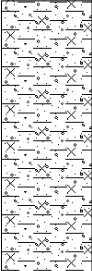
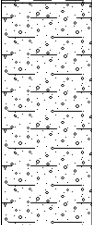
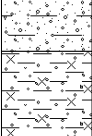
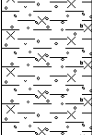
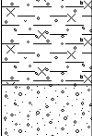
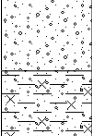
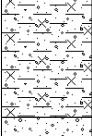
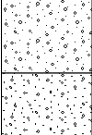
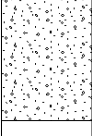
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Appendix C

Geo-Environmental Services Limited, Final Exploratory Hole Logs, May 2024

 Geo-Environmental	Contract Name: Yapton Lane, Walberton			Client: Elivia Homes Southern			Trial Pit ID: TP301						
	Contract Number: GE22437	Date Started: 08/04/2024	Logged By: KOD	Checked By: LL	Status: FINAL	Sheet 1 of 1							
	Easting: 497527.0	Northing: 105639.2	Ground Level: 13.57mOD	Plant Used: JCB 3CX	Date Printed: 01/05/2024	Scale: 1:25							
Trial Pit Log			Weather: Dry, cloudy, cool			Hole Termination:			Stability: Localised spalling				
Samples & In Situ Testing						Strata Details						Water	Backfill
Depths	Sample ID	Test Result	Reduced Level	Depth (m) (Thickness)	Legend	Strata Description							
0.20	ES1	PP=1.1kg/cm2	13.27	(0.30)		Weeds overlying dark brown slightly gravelly silty CLAY with frequent rootlets and roots 1-2mm. Gravel is fine to coarse sub angular flint. TOPSOIL	0.5						
0.50	D1			0.30		Firm orangish brown slightly gravelly silty CLAY with some rootlets and roots 1-2mm. Gravel is fine to coarse sub angular flint. RIVER TERRACE DEPOSITS							
0.70	ES2			(0.50)									
1.00	D2		12.77	0.80		Orangish brown sandy very clayey GRAVEL/very gravelly CLAY with black ferruginous fragments. Sand is fine to coarse. Gravel is fine to coarse sub angular flint. RIVER TERRACE DEPOSITS					1.0		
1.50	D3			(1.10)								1.5	
2.00	D4			1.90		Cream very sandy very gravelly CLAY. Sand is fine to coarse. Gravel is fine to coarse sub angular flint and fine sub rounded chalk. RIVER TERRACE DEPOSITS							2.0
2.50	D5	11.67	(1.10)			2.5							
3.00	D6		3.00				End of Trial Pit at 3.00m	3.0					
3.00	ES3								10.57			3.5	
Dimensions:						Photo:							
Final Depth:	3.00m					 PhotoofPit							
Final Width:	0.60m												
Final Length:	2.40m												
Remarks						 PhotoofSpoil							
Water Strikes (mbgl)													
Depth Strike	Rose to		Time Elapsed (mins)										
2.90	2.90		5										

 Unit 7, Danworth Farm Hurstpierpoint BN6 9GL www.gesl.net		Borehole Log				Borehole No. WS306 Sheet 1 of 2	
Project Name: Yapton Lane, Walberton		Project No. GE22437		Co-ords: 497493E - 105579N		Hole Type WLS	
Location: Walberton, West Sussex BN18 0AS				Level: 13.29		Scale 1:25	
Client: Elivia Homes Southern				Dates: 05/04/2024		Logged By KOD	

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.20	ES		0.30	12.99		Weeds overlying dark brown slightly gravelly very silty CLAY with rare brick fragments. MADE GROUND	
		0.50 0.50 0.60	D PP ES	1.3kg/cm2				Firm orangish brown slightly sandy slightly gravelly silty CLAY with frequent black ferruginous fragments and some rootlets and roots 1-2mm. Sand is fine. Gravel is fine to coarse sub angular flint. RIVER TERRACE DEPOSITS	1
		1.00 1.00 1.00	D PP SPT	1.4kg/cm2 N=33 (5,8/7,8,8,10)	1.20	12.09		Brown and grey slightly sandy very gravelly silty CLAY. Sand is fine. Gravel is fine to coarse sub angular flint. RIVER TERRACE DEPOSITS	
		1.50	D						
		2.00 2.00	D SPT	N=4 (1,0/1,1,1,1)	2.10	11.19		Soft orangish brown and pale brown slightly gravelly silty CLAY. RIVER TERRACE DEPOSITS	2
		2.50 2.50	D PP	0.5kg/cm2				<u>Some orange sandy lenses</u>	
		3.00 3.00	D SPT	N=7 (2,1/2,2,1,2)	3.10	10.19		<u>Poor recovery</u>	3
		3.30	D					Orangish brown and grey sandy GRAVEL. Sand is fine to coarse. Gravel is fine to coarse sub angular flint. RIVER TERRACE DEPOSITS	
					3.50	9.79		Pale brown silty sandy gravelly CLAY. Sand is fine. Gravel is fine to coarse sub angular flint and fine sub rounded chalk. RIVER TERRACE DEPOSITS	
		4.00 4.00 4.20	D SPT D	N=7 (1,1/2,1,2,2)	4.10	9.19		Pale brown and cream sandy GRAVEL. Sand is fine to coarse. Gravel is fine to coarse sub angular flint. RIVER TERRACE DEPOSITS	4
		4.60	ES		4.40	8.89		Orangish brown slightly gravelly fine SAND. Gravel is fine to medium sub rounded flint. RIVER TERRACE DEPOSITS	
		5.00	D		5.00	8.29		Continued on Next Sheet	5

Dynamic Sampling Run Details			Water Strike Details (mbgl)		Remarks
Depth Top	Depth Base	Diameter	Depth Strike	Rose To	
			2.30	1.95	Collapse to 2.65m bgl.


Status
FINAL



www.gesl.net

Borehole Log

WS306

Sheet 2 of 2

Project Name: Yapton Lane, Walberton

Project No.	GE22437
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Co-ords: 497493E - 105579N

Hole Type	WLS
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Location: Walberton, West Sussex BN18 0AS

Level: 13.29

Scale
1:25

Client: Elivia Homes Southern

Dates: 05/04/2024

Logged By
KOD

[illegible]

 Unit 7, Danworth Farm Hurstpierpoint BN6 9GL www.gesl.net				Borehole Log Borehole No. WS305 Sheet 1 of 2					
Project Name: Yapton Lane, Walberton				Project No. GE22437		Co-ords: 497549E - 105593N		Hole Type WLS	
Location: Walberton, West Sussex BN18 0AS				Level: 13.25		Scale 1:25			
Client: Elivia Homes Southern				Dates: 05/04/2024		Logged By KOD			

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.10	ES		0.30	12.94		Weeds overlying dark brown slightly gravelly very silty CLAY with frequent rootlets and roots 1-2mm. TOPSOIL	
		0.40	ES					Dark orangish brown silty gravelly slightly cobbly CLAY with some rootlets. RIVER TERRACE DEPOSITS	
		0.50	D						
				N=30 (9,15/11,9,5,5)	0.70	12.54		Brown sandy slightly cobbly very clayey GRAVEL/very gravelly CLAY. Orangish brown and grey sandy GRAVEL. Sand is fine to coarse. Gravel is fine to coarse sub angular flint. RIVER TERRACE DEPOSITS	
		1.00	D						
		1.00	SPT						
		1.20	ES						
		1.50	D	N=5 (2,1/2,1,1,1)	2.10	11.14		Pale orangish brown slightly clayey sandy GRAVEL. Sand is fine to coarse. Gravel is fine to coarse sub angular flint. RIVER TERRACE DEPOSITS	
		2.00	D						
		2.00	SPT						
		2.50	D						
		3.00	D	N=19 (4,4/5,4,5,5)	2.80	10.44		Pale brown to cream sandy gravelly CLAY. Sand is fine to coarse. Gravel is fine to coarse sub angular flint and fine sub rounded chalk. RIVER TERRACE DEPOSITS	
		3.00	SPT						
		3.00							
		4.00	D	N=22 (1,0/1,5,9,7)	3.90	9.35		Orangish brown slightly gravelly fine SAND with some orange staining and black flecking. RIVER TERRACE DEPOSITS	
4.00	SPT								
4.50	D								
5.00	D		5.00	8.24		Continued on Next Sheet		5	

Dynamic Sampling Run Details			Water Strike Details (mbgl)		Remarks
Depth Top	Depth Base	Diameter	Depth Strike	Rose To	
			2.30	1.90	
					Collapse to 2.10m bgl. Clay unsuitable for pocket penetrometer testing.



Status
FINAL



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Borehole Log

WS305

Sheet 2 of 2

Project No.
GE22437

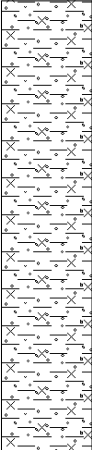
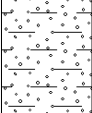
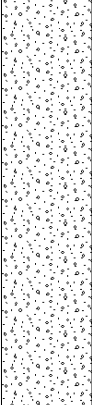
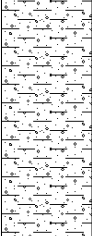
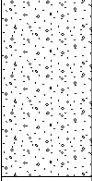
Hole Type	WLS
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Scale
1:25

Logged By
KOD

6

Status
FINAL

 Unit 7, Danworth Farm Hurstpierpoint BN6 9GL www.gesl.net			Borehole Log				Borehole No. WS304 Sheet 1 of 2			
Project Name: Yapton Lane, Walberton			Project No. GE22437		Co-ords: 497583E - 105575N		Hole Type WLS			
Location: Walberton, West Sussex BN18 0AS					Level: 13.31		Scale 1:25			
Client: Elivia Homes Southern					Dates: 05/04/2024		Logged By KOD			
Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description		
		Depth (m)	Type	Results						
	▼	0.20	ES	0.7kg/cm2	0.30	13.01		Weeds overlying slightly gravelly very silty CLAY with frequent rootlets and roots 1-2mm. TOPSOIL	1	
		0.50	D				N=15 (5,7/6,4,3,2)			Soft orangish brown slightly gravelly very silty CLAY with some rootlets and roots 1-2mm. RIVER TERRACE DEPOSITS
		0.50	PP							
		0.70	ES							
		1.00	D	N=3 (1,0/0,1,1,1)	1.80	11.51		Brown and grey sandy very clayey GRAVEL/very gravelly CLAY. Sand is fine to coarse. Gravel is fine to coarse sub angular flint. RIVER TERRACE DEPOSITS	2	
		1.00	SPT							
		1.50	D							
		2.00	D	N=6 (1,0/0,0,2,4)	2.20	11.11		Pale brown and grey slightly gravelly SAND and GRAVEL. Sand is fine to coarse. Gravel is fine to coarse sub angular flint. RIVER TERRACE DEPOSITS	3	
		2.00	SPT							
		2.50	D							
		3.00	D	1.6kg/cm2 N=6 (1,0/1,0,2,3)	3.60	9.71		Stiff pale orangish brown sandy gravelly CLAY with some orange staining. Sand is fine to coarse. Gravel is fine to medium sub angular flint and fine sub rounded chalk. RIVER TERRACE DEPOSITS	4	
		3.00	SPT							
		3.50	D							
		3.80	ES							
		4.00	D	N=6 (1,0/1,0,2,3)	4.40	8.91		Orangish brown slightly gravelly fine SAND. Gravel is fine to medium sub rounded flint. RIVER TERRACE DEPOSITS	5	
4.00	PP									
4.00	SPT									
4.50	D									
5.00	D		5.00	8.31		Continued on Next Sheet				
Dynamic Sampling Run Details		Water Strike Details (mbgl)		Remarks						
Depth Top	Depth Base	Diameter	Depth Strike	Rose To	Hole collapse to 1.95m bgl.					
			2.30	2.30						
					 Status FINAL					



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Borehole Log

WS304

Sheet 2 of 2

Project No.	GE22437
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Hole Type	WLS
1	0.0000
2	0.0000
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6	0.0000
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8	0.0000
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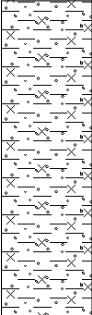
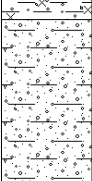
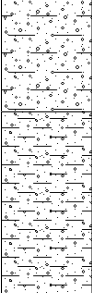
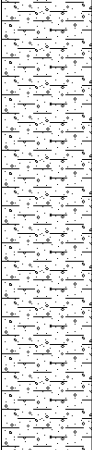
Scale
1:25

Logged By
KOD

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
		5.00	SPT	N=11 (1,0/1,2,3,5)				End of Borehole at 5.00m

Dynamic Sampling Run Details			Water Strike Details (mbgl)		Remarks
Depth Top	Depth Base	Diameter	Depth Strike	Rose To	
			2.30	2.30	Hole collapse to 1.95m bgl.



 Unit 7, Danworth Farm Hurstpierpoint BN6 9GL www.gesl.net		Borehole Log				Borehole No. WS303 Sheet 1 of 2				
Project Name: Yapton Lane, Walberton		Project No. GE22437		Co-ords: 497632E - 105614N		Hole Type WLS				
Location: Walberton, West Sussex BN18 0AS				Level: 14.03		Scale 1:25				
Client: Elivia Homes Southern				Dates: 05/04/2024		Logged By KOD				
Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description		
		Depth (m)	Type	Results						
		0.10	ES	1.3kg/cm2	0.30	13.73		Grass overlying slightly gravelly very silty CLAY. Gravel is fine to coarse sub angular flint. TOPSOIL	1	
		0.50	D				1.2kg/cm2 N=23 (1,1/1,1,10,11)			Firm slightly gravelly silty CLAY with some rootlets and roots 1-2mm. Gravel is fine to coarse sub angular flint. RIVER TERRACE DEPOSITS
		0.50	PP							
		0.60	D	1.2kg/cm2	1.40	12.63		Dark brown sandy very clayey GRAVEL/very gravelly CLAY. Sand is fine to coarse. Gravel is fine to coarse sub angular flint. RIVER TERRACE DEPOSITS	2	
		1.00	D							
		1.00	PP							
		1.00	SPT	N=13 (2,2/4,4,3,2)	2.30	11.73		Pale brown to cream sandy gravelly CLAY. Sand is fine to coarse. Gravel is fine to coarse sub angular flint and fine sub rounded chalk. RIVER TERRACE DEPOSITS	3	
		1.40	PP							
		1.50	D							
		2.00	D	N=17 (1,3/4,4,5,4)	4.40	9.63		Brown slightly gravelly fine SAND. Gravel is fine to medium sub rounded flint. RIVER TERRACE DEPOSITS	4	
		2.00	SPT							
		2.50	D							
		2.60	ES	N=7 (1,1/1,2,2,2)	5.00	9.03		Continued on Next Sheet	5	
		3.00	D							
		3.00	SPT							
3.50	D									
4.00	D									
4.00	SPT									
4.50	D									
5.00	D									

Dynamic Sampling Run Details			Water Strike Details (mbgl)		Remarks
Depth Top	Depth Base	Diameter	Depth Strike	Rose To	
			2.70	2.70	
					Hole collapse to 3.1m bgl.


Status
FINAL



www.gesl.net

Borehole Log

WS303

Sheet 2 of 2

Project No.
GE22437

Hole Type	WLS
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Scale
1:25

Logged By
KOD

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
		5.00	SPT	N=23 (2,3/4,5,7,7)				End of Borehole at 5.00m

Dynamic Sampling Run Details			Water Strike Details (mbgl)		Remarks
Depth Top	Depth Base	Diameter	Depth Strike	Rose To	
			2.70	2.70	Hole collapse to 3.1m bgl.



 Unit 7, Danworth Farm Hurstpierpoint BN6 9GL www.gesl.net		Borehole Log				Borehole No. WS302 Sheet 1 of 2			
Project Name: Yapton Lane, Walberton		Project No. GE22437		Co-ords: 497563E - 105647N		Hole Type WLS			
Location: Walberton, West Sussex BN18 0AS				Level: 13.73		Scale 1:25			
Client: Elivia Homes Southern				Dates: 05/04/2024		Logged By KOD			
Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
	 	0.10	ES	0.7kg/cm2	0.30	13.43		Weeds overlying dark brown slightly sandy silty gravelly CLAY with frequent rootlets. Sand is fine. Gravel is fine to medium sub angular flint. TOPSOIL	
		0.40	ES						
		0.50	D						
		0.50	PP	N=19 (5,8/7,5,4,3)	0.70	13.03		Soft orangish brown slightly sandy silty gravelly CLAY with some rootlets and roots 1-2mm. Sand is fine. Gravel is fine to coarse sub angular flint. RIVER TERRACE DEPOSITS	
		1.00	D						
		1.00	SPT						
		1.30	ES	0.4kg/cm2	1.40	12.33		Orangish brown clayey sandy GRAVEL/very gravelly CLAY. Sand is fine. Gravel is fine to coarse sub angular flint. RIVER TERRACE DEPOSITS	
		1.50	D						
		1.50	PP						
		2.00	D	N=22 (2,3/4,6,6,6)	1.60	12.13		Soft orangish brown sandy gravelly CLAY. Sand is fine. Gravel is fine to medium sub angular flint. RIVER TERRACE DEPOSITS	
		2.00	SPT						
		2.50	D						
		3.00	D	N=20 (4,4/6,6,4,4)	3.10	10.63		Pale brown to cream silty sandy very gravelly CLAY. Sand is fine to coarse. Gravel is fine to coarse sub angular flint and fine sub rounded chalk. RIVER TERRACE DEPOSITS	
		3.00	SPT						
		3.50	D						
4.00	D	N=7 (1,0/1,0,2,4)	3.80	9.93		Cream clayey SAND and GRAVEL. Sand is fine to coarse. Gravel is fine to coarse sub angular flint and fine sub rounded chalk. RIVER TERRACE DEPOSITS			
4.00	SPT								
4.50	D								
5.00	D		5.00	8.73		Pale orangish brown sandy very gravelly CLAY. Sand is fine to coarse. Gravel is fine to coarse sub angular flint and fine sub rounded chalk. RIVER TERRACE DEPOSITS			
							Orangish brown slightly gravelly fine SAND. Gravel is fine to coarse sub angular flint. RIVER TERRACE DEPOSITS		
Continued on Next Sheet									
Dynamic Sampling Run Details		Water Strike Details (mbgl)		Remarks					
Depth Top	Depth Base	Diameter	Depth Strike						Rose To
			3.70	2.40	Some clays too gravelly for pocket penetrometer testing. Hole collapse to 3.25m bgl.				
					 Status FINAL				

 Unit 7, Danworth Farm Hurstpierpoint BN6 9GL www.gesl.net		Borehole Log					Borehole No. WS302 Sheet 2 of 2			
Project Name: Yapton Lane, Walberton		Project No. GE22437		Co-ords: 497563E - 105647N		Hole Type WLS				
Location: Walberton, West Sussex BN18 0AS				Level: 13.73		Scale 1:25				
Client: Elivia Homes Southern				Dates: 05/04/2024		Logged By KOD				
Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description		
		Depth (m)	Type	Results						
		5.00	SPT	N=14 (1,0/1,3,5,5)				End of Borehole at 5.00m		
									6	
									7	
									8	
									9	
									10	
Dynamic Sampling Run Details		Water Strike Details (mbgl)		Remarks						
Depth Top	Depth Base	Diameter	Depth Strike							Rose To
			3.70	2.40	Some clays too gravelly for pocket penetrometer testing. Hole collapse to 3.25m bgl.					
					 Status FINAL					

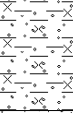
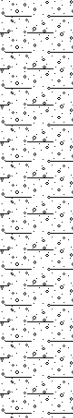
 Unit 7, Danworth Farm Hurstpierpoint BN6 9GL www.gesl.net		Borehole Log				Borehole No. WS301 Sheet 1 of 2	
Project Name: Yapton Lane, Walberton		Project No. GE22437		Co-ords: 497512E - 105626N		Hole Type WLS	
Location: Walberton, West Sussex BN18 0AS				Level: 13.55		Scale 1:25	
Client: Elivia Homes Southern				Dates: 05/04/2024		Logged By KOD	

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.20	ES		0.30	13.24		Weeds overlying dark brown silty gravelly CLAY with frequent rootlets and roots 1-3mm. TOPSOIL	
		0.50 0.50	D PP	1.0kg/cm2				Orangish brown slightly sandy slightly gravelly silty CLAY with some rootlets and roots 1-2mm. RIVER TERRACE DEPOSITS	
		0.80	ES		0.90	12.64		Orangish brown sandy very gravelly CLAY/very clayey GRAVEL. Sand is fine to coarse. Gravel is fine to coarse sub angular flint. RIVER TERRACE DEPOSITS	1
		1.00 1.00 1.00	D PP SPT	2.2kg/cm2 N=15 (5,8/5,4,3,3)					
		1.50	D						
		2.00 2.00	D SPT	N=8 (2,1/2,2,2,2)	2.10	11.44		Pale brown to cream very sandy very gravelly CLAY. Sand is fine to coarse. Gravel is fine to coarse sub angular flint and fine sub rounded chalk. RIVER TERRACE DEPOSITS	2
		2.50	D						
		2.70	ES						
		3.00 3.00	D SPT	N=13 (3,3/2,4,3,4)					3
		3.50	D						
		4.00 4.00	D SPT	N=24 (2,4/6,6,6,6)	4.10	9.44		Orangish brown slightly gravelly fine SAND. Gravel is fine to medium sub rounded flint. RIVER TERRACE DEPOSITS	4
		4.50	D						
		5.00	D		5.00	8.54			5
Continued on Next Sheet									

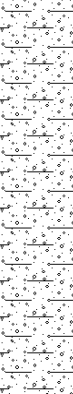
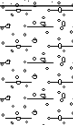
Dynamic Sampling Run Details			Water Strike Details (mbgl)		Remarks
Depth Top	Depth Base	Diameter	Depth Strike	Rose To	
			4.00	2.15	
					Hole collapse to 2.45m bgl.


 Status
 FINAL

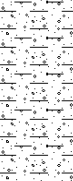
 Unit 7, Danworth Farm Hurstpierpoint BN6 9GL www.gesl.net		Borehole Log					Borehole No. WS301 Sheet 2 of 2			
Project Name: Yapton Lane, Walberton		Project No. GE22437		Co-ords: 497512E - 105626N		Hole Type WLS				
Location: Walberton, West Sussex BN18 0AS				Level: 13.55		Scale 1:25				
Client: Elivia Homes Southern				Dates: 05/04/2024		Logged By KOD				
Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description		
		Depth (m)	Type	Results						
		5.00	SPT	N=17 (3,5/4,5,5,3)				End of Borehole at 5.00m		
									6	
									7	
									8	
									9	
									10	
Dynamic Sampling Run Details		Water Strike Details (mbgl)		Remarks						
Depth Top	Depth Base	Diameter	Depth Strike							Rose To
			4.00	2.15	Hole collapse to 2.45m bgl.					
					 Status FINAL					

 Geo-Environmental	Contract Name: Yapton Lane, Walberton			Client: Elivia Homes Southern			Trial Pit ID: TP310		
	Contract Number: GE22437	Date Started: 08/04/2024	Logged By: KOD	Checked By: LL	Status: FINAL	Sheet 1 of 1			
	Easting: 497590.4	Northing: 105589.3	Ground Level: 13.47mOD	Plant Used: JCB	Date Printed: 01/05/2024	Scale: 1:25			
Trial Pit Log		Weather: Warm, dry, clear			Hole Termination:		Stability: Sides unstable below water table		
Samples & In Situ Testing				Strata Details				Water	Backfill
Depths	Sample ID	Test Result	Reduced Level	Depth (m) (Thickness)	Legend	Strata Description			
0.10	ES1	PP=1.1kg/cm2	13.17	(0.30)		Weeds overlying dark brown slightly gravelly silty CLAY with some rootlets and roots. TOPSOIL		0.5	
0.50	D1			(0.80)		Firm orangish brown slightly gravelly silty CLAY with some rootlets and some black flecking. RIVER TERRACE DEPOSITS			
0.80	ES2	PP=1.2kg/cm2	12.37	1.10		Orangish brown sandy very clayey cobbly GRAVEL/very gravelly CLAY with frequent black ferruginous fragments. RIVER TERRACE DEPOSITS		1.0	
1.00	D2								
1.50	D3			(1.40)		End of Trial Pit at 2.50m		1.5	
1.80	ES3								
2.00	D4								
2.50	D5		10.97	2.50				2.5	
								3.0	
								3.5	
Dimensions:						Photo:			
Final Depth:	2.50m					 PhotoofPit			
Final Width:	0.60m								
Final Length:	2.40m								
Remarks						 PhotoofSpoil			
Terminated due to pit collapse.									
Water Strikes (mbgl)									
Depth Strike		Rose to		Time Elapsed (mins)					

 Geo-Environmental	Contract Name: Yapton Lane, Walberton			Client: Elivia Homes Southern			Trial Pit ID: TP309			
	Contract Number: GE22437	Date Started: 08/04/2024	Logged By: KOD	Checked By: LL	Status: FINAL	Sheet 1 of 1				
	Easting: 497512.6	Northing: 105595.0	Ground Level: 13.28mOD	Plant Used: JCB	Date Printed: 01/05/2024	Scale: 1:25				
Trial Pit Log		Weather: Cloudy, cool, drizzle		Hole Termination:		Stability: Sides unstable below water table				
Samples & In Situ Testing				Strata Details					Water	Backfill
Depths	Sample ID	Test Result	Reduced Level	Depth (m) (Thickness)	Legend	Strata Description				
0.10	ES1	PP=0.6kg/cm2	12.98	(0.30)		Weeds overlying dark brown slightly gravelly silty CLAY with frequent rootlets and roots 1-2mm. TOPSOIL			0.5	
0.50	D1			0.30		Soft becoming firm orangish brown slightly gravelly silty CLAY with some black ferruginous fragments and some rootlets and roots 1-2mm. RIVER TERRACE DEPOSITS				
0.70	ES2			(1.10)						
1.00	D2	PP=1.2kg/cm2	11.88	1.40		Orangish brown sandy very clayey GRAVEL/very gravelly CLAY with frequent black ferruginous fragments. RIVER TERRACE DEPOSITS			1.0	
1.50	D3									
2.00	D4									
2.50	D5		10.78	2.50		End of Trial Pit at 2.50m			1.5	
2.50	ES3									
									2.0	
									2.5	
									3.0	
									3.5	
Dimensions:						Photo:				
Final Depth:	2.50m					 				
Final Width:	0.60m									
Final Length:	2.30m									
Remarks										
Terminated at 2.5m bgl due to collapse.										
Water Strikes (mbgl)										
Depth Strike		Rose to		Time Elapsed (mins)						

 Geo-Environmental	Contract Name: Yapton Lane, Walberton			Client: Elivia Homes Southern			Trial Pit ID: TP308		
	Contract Number: GE22437	Date Started: 08/04/2024	Logged By: KOD	Checked By: LL	Status: FINAL	Sheet 1 of 1			
	Easting: 497586.7	Northing: 105617.1	Ground Level: 13.70mOD	Plant Used: JCB 3CX	Date Printed: 01/05/2024	Scale: 1:25			
Trial Pit Log		Weather: Warm, dry, clear			Hole Termination:		Stability: Sides unstable below water table		
Samples & In Situ Testing				Strata Details				Water	Backfill
Depths	Sample ID	Test Result	Reduced Level	Depth (m) (Thickness)	Legend	Strata Description			
0.10	ES1	PP=1.1kg/cm2	13.40	(0.30)		Weeds and some crop overlying dark brown slightly gravelly silty CLAY with frequent rootlets and roots 1-2mm. TOPSOIL		0.5	
0.50	D1			0.30		Firm orangish brown slightly gravelly silty CLAY with some rootlets. Gravel is fine to coarse sub angular flint. RIVER TERRACE DEPOSITS			
0.50	ES2			0.60		Orangish brown slightly sandy clayey silty GRAVEL with frequent black ferruginous fragments. RIVER TERRACE DEPOSITS			
1.00	D2			(1.50)				1.0	
1.50	D3								
2.00	D4								
2.50	D5		11.60	2.10		Cream and brown clayey sandy cobbly GRAVEL. Sand is fine to coarse. Gravel is fine to coarse sub angular flint and fine sub rounded chalk. RIVER TERRACE DEPOSITS		2.0	
2.50	ES3			(0.40)					
			11.20	2.50		End of Trial Pit at 2.50m		2.5	
								3.0	
								3.5	
Dimensions:						Photo:			
Final Depth:	2.50m					 PhotoofPit			
Final Width:	0.60m								
Final Length:	2.30m								
Remarks						 PhotoofSpoil			
Terminated at 2.5m bgl due to collapse.									
Water Strikes (mbgl)									
Depth Strike	Rose to		Time Elapsed (mins)						
2.40	2.40		1						

 Geo-Environmental	Contract Name: Yapton Lane, Walberton			Client: Elivia Homes Southern			Trial Pit ID: TP307			
	Contract Number: GE22437	Date Started: 08/04/2024	Logged By: KOD	Checked By: LL	Status: FINAL	Sheet 1 of 1				
	Easting: 497640.9	Northing: 105601.7	Ground Level: 13.68mOD	Plant Used: JCB	Date Printed: 01/05/2024	Scale: 1:25				
Trial Pit Log		Weather: Dry, cool, cloudy			Hole Termination:		Stability: Sides unstable below water table			
Samples & In Situ Testing				Strata Details					Water	Backfill
Depths	Sample ID	Test Result	Reduced Level	Depth (m) (Thickness)	Legend	Strata Description				
0.10	ES1	PP=1.4kg/cm2	13.38	(0.30)		Weeds and crop overlying dark brown slightly gravelly silty CLAY. Gravel is fine to coarse sub angular flint. TOPSOIL		0.5		
0.50	B1			0.30		Firm orangish brown slightly cobbly slightly gravelly sandy silty CLAY with some rootlets and roots 1-3mm. Gravel and cobbles is fine to coarse sub angular flint. RIVER TERRACE DEPOSITS				
0.50	D1			(0.40)						
0.60	ES2			0.70		Orangish brown sandy cobbly, bouldery very clayey flint GRAVEL with black ferruginous fragments. Sand is fine to coarse. Gravel cobbles and boulders are fine to coarse sub angular flint. RIVER TERRACE DEPOSITS				
1.00	D2			(0.70)						
1.50	D3		12.28	1.40		Off white to cream very sandy very gravelly CLAY. Sand is fine to coarse. Gravel is fine to coarse sub angular flint and fine sub rounded chalk. RIVER TERRACE DEPOSITS <i>Frequent roots 1-30mm.</i>		1.5		
2.00	D4			(1.30)						
2.50	D5			10.98	2.70					
2.50	ES3									
						End of Trial Pit at 2.70m		3.0		
								3.5		
Dimensions:					Photo:					
Final Depth:	2.70m				 PhotoofPit					
Final Width:	0.60m									
Final Length:	2.20m									
Remarks					 PhotoofSpoil					
Terminated at 2.7m bgl due to collapse.										
Water Strikes (mbgl)										
Depth Strike	Rose to		Time Elapsed (mins)							

 Geo-Environmental	Contract Name: Yapton Lane, Walberton			Client: Elivia Homes Southern			Trial Pit ID: TP306		
	Contract Number: GE22437	Date Started: 08/04/2024	Logged By: KOD	Checked By: LL	Status: FINAL	Sheet 1 of 1			
	Easting: 497604.0	Northing: 105597.9	Ground Level: 13.62mOD	Plant Used: JCB 3CX	Date Printed: 01/05/2024	Scale: 1:25			
Trial Pit Log		Weather: Warm, clear, dry		Hole Termination:		Stability: Sides unstable below water table			
Samples & In Situ Testing			Strata Details					Water	Backfill
Depths	Sample ID	Test Result	Reduced Level	Depth (m) (Thickness)	Legend	Strata Description			
0.20	ES1	PP=1.1kg/cm2	13.32	(0.30)		Weeds overlying dark brown slightly gravelly CLAY with abundant rootlets and roots 1-3mm. TOPSOIL		0.5	
0.50	D1			(0.30)		Firm orangish brown slightly gravelly silty CLAY with frequent rootlets and roots 1-2mm. Gravel is fine to coarse sub angular flint. RIVER TERRACE DEPOSITS			
0.50	D2			(0.60)		Orangish brown sandy very gravelly CLAY/very clayey GRAVEL with abundant black ferruginous fragments. Gravel is fine to coarse sub angular flint. RIVER TERRACE DEPOSITS			
0.70	ES2		13.02	(1.00)				1.0	
1.00	D3								
1.50	D4								
1.50	ES3		12.02	1.60		Interbedded pale brown to cream very sandy very gravelly CLAY and brown very sandy very gravelly CLAY. Sand is fine to coarse. Gravel is fine to coarse sub angular flint and fine sub rounded chalk. RIVER TERRACE DEPOSITS		1.5	
2.00	D5								
2.50	D6								
			11.12	2.50		End of Trial Pit at 2.50m		2.5	
Dimensions:					Photo:				
Final Depth:	2.50m				 PhotoofPit				
Final Width:	0.60m								
Final Length:	2.40m								
Remarks					 PhotoofSpoil				
Terminated at 2.5m bgl due to pit collapse									
Water Strikes (mbgl)									
Depth Strike	Rose to		Time Elapsed (mins)						

 Geo-Environmental	Contract Name: Yapton Lane, Walberton			Client: Elivia Homes Southern			Trial Pit ID: TP305				
	Contract Number: GE22437	Date Started: 08/04/2024	Logged By: KOD	Checked By: LL	Status: FINAL	Sheet 1 of 1					
	Easting: 497634.5	Northing: 105584.6	Ground Level: 13.62mOD	Plant Used: JCB 3CX	Date Printed: 01/05/2024	Scale: 1:25					
Weather: Cool, dry, cloudy.			Hole Termination:			Stability: Sides unstable below water table					
Samples & In Situ Testing			Strata Details					Water	Backfill		
Depths	Sample ID	Test Result	Reduced Level	Depth (m) (Thickness)	Legend	Strata Description					
0.20	ES1	PP=0.8kg/cm2	13.32	(0.30)		Weeds and some crop overlying dark slightly gravelly silty CLAY with abundant rootlets and roots 1-2mm TOPSOIL		0.5			
0.40	ES2			0.30		Firm orangish brown slightly gravelly sandy silty CLAY with some rootlets. RIVER TERRACE DEPOSITS					
0.50	B1			(0.80)		Orangish brown sandy very clayey cobbly GRAVEL/very gravelly CLAY with black ferruginous fragments. Sand is fine to coarse. Gravel is fine to coarse sub angular flint. RIVER TERRACE DEPOSITS					
0.50	D1										
1.00	D2		12.52	1.10		Orangish brown sandy very clayey cobbly GRAVEL/very gravelly CLAY with black ferruginous fragments. Sand is fine to coarse. Gravel is fine to coarse sub angular flint. RIVER TERRACE DEPOSITS		1.0			
1.50	D3			(0.80)							
1.50	ES3					1.90				Pale brown to cream very sandy very gravelly cobbly CLAY. Sand is fine to coarse. Gravel is fine to coarse sub angular flint and fine sub rounded chalk. RIVER TERRACE DEPOSITS	
2.00	D4			(0.60)							
2.50	D5	2.50				End of Trial Pit at 2.50m		2.5			
										3.0	
								3.5			
Dimensions:						Photo:					
Final Depth:	2.50m					 					
Final Width:	0.60m										
Final Length:	2.50m										
Remarks											
Terminated at 2.5m bgl due to collapse.											
Water Strikes (mbgl)											
Depth Strike		Rose to		Time Elapsed (mins)							
2.30		2.40		10							



Trial Pit ID:	TP304
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Status:	FINAL
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Sheet 1 of 1

Date Printed:
01/05/2024

1:25

Stability: Sides unstable below water table

Dimensions:			Photo:
Final Depth:	2.20m		
Final Width:	0.60m		
Final Length:	2.40m		
Remarks			
Terminated at 2.2m bgl due to pit collapse			
Water Strikes (mbgl)			 PhotoofPit
Depth Strike	Rose to	Time Elapsed (mins)	
2.00	2.00	10	


PhotoofSpoil

 Geo-Environmental	Contract Name: Yapton Lane, Walberton			Client: Elivia Homes Southern			Trial Pit ID: TP303			
	Contract Number: GE22437	Date Started: 08/04/2024	Logged By: KOD	Checked By: LL	Status: FINAL	Sheet 1 of 1				
	Easting: 497527.6	Northing: 105570.5	Ground Level: 13.18mOD	Plant Used: JCB 3CX	Date Printed: 01/05/2024	Scale: 1:25				
Trial Pit Log		Weather: Warm, dry, cloudy			Hole Termination:		Stability: Sides unstable below water table			
Samples & In Situ Testing				Strata Details					Water	Backfill
Depths	Sample ID	Test Result	Reduced Level	Depth (m) (Thickness)	Legend	Strata Description				
0.20	ES1	PP=1kg/cm2	12.88	(0.30)		Weeds overlying dark brown slightly gravelly silty CLAY with frequent rootlets and roots. TOPSOIL				
0.50	B1			0.30		Firm orangish brown slightly gravelly sandy silty CLAY with some rootlets. Gravel is fine to coarse sub angular flint. RIVER TERRACE DEPOSITS				
0.50	D1			(0.40)		Orangish brown sandy clayey silty GRAVEL with black ferruginous fragments. RIVER TERRACE DEPOSITS				
0.80	ES2			0.70						
1.00	D2			(1.00)						
1.50	D3		11.48	1.70		Cream and brown very sandy very gravelly CLAY. Sand is fine to coarse. Gravel is fine to coarse sub angular flint and fine sub rounded chalk. RIVER TERRACE DEPOSITS				
2.00	D4			(0.90)						
2.00	ES3									
2.50	D5		10.58	2.60	End of Trial Pit at 2.60m					
Dimensions:						Photo:				
Final Depth:	2.60m					 PhotoofPit				
Final Width:	0.60m									
Final Length:	2.50m									
Remarks						 PhotoofSpoil				
Terminated at 2.6m bgl due to collapse.										
Water Strikes (mbgl)										
Depth Strike	Rose to		Time Elapsed (mins)							
1.90	1.90		2							

 Geo-Environmental	Contract Name: Yapton Lane, Walberton			Client: Elivia Homes Southern			Trial Pit ID: TP302		
	Contract Number: GE22437	Date Started: 08/04/2024	Logged By: KOD	Checked By: LL	Status: FINAL	Sheet 1 of 1			
	Easting: 497564.5	Northing: 105613.1	Ground Level: 13.56mOD	Plant Used: JCB 3CX	Date Printed: 01/05/2024	Scale: 1:25			
Trial Pit Log		Weather: Warm, dry, clear			Hole Termination:		Stability: Localised spalling		
Samples & In Situ Testing			Strata Details					Water	Backfill
Depths	Sample ID	Test Result	Reduced Level	Depth (m) (Thickness)	Legend	Strata Description			
0.20	ES1	PP=1.1kg/cm2	13.26	(0.30)		Weeds overlying dark brown slightly gravelly silty CLAY with frequent rootlets and roots 1-3mm. TOPSOIL			
0.50	B1			0.30		Firm orangish brown slightly gravelly sandy silty CLAY with some rootlets. RIVER TERRACE DEPOSITS			
0.50	D1			(0.40)					
1.00	D2		12.86	0.70		Orangish brown slightly sandy gravelly silty CLAY with frequent black ferruginous fragments. Sand is fine to coarse. Gravel is fine to coarse sub angular flint. RIVER TERRACE DEPOSITS			
1.30	ES2			(1.20)					
1.50	D3								
2.00	D4	11.66	1.90		Cream very sandy very gravelly CLAY. Sand is fine to coarse. Gravel is fine to coarse sub angular flint and fine sub rounded chalk. RIVER TERRACE DEPOSITS	2.5			
2.50	D5		(1.10)						
3.00	D6	10.56	3.00		End of Trial Pit at 3.00m		3.0		
							3.5		
Dimensions:					Photo:				
Final Depth:	3.00m				 PhotoofPit				
Final Width:	0.60m								
Final Length:	2.40m								
Remarks					 PhotoofSpoil				
Water Strikes (mbgl)									
Depth Strike	Rose to		Time Elapsed (mins)						
2.40	2.50		5						

Appendix D

Proposed Development/Site Layout

