



Soil Resource Plan

at

**Land west of Fontwell Avenue, Eastergate,
Chichester, West Sussex PO20 3RX**

for

Reside Developments

**Reference: I8570/SRP_R53
October 2020**

Control Document

Project

Land west of Fontwell Avenue, Eastergate, Chichester, West Sussex PO20 3RX

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This is not a valid document for use in the design of the project unless it is titled Final in the document status box.

Current regulations and good practice were used in the preparation of this report. The recommendations given in this report must be reviewed by an appropriately qualified person at the time of preparation of the scheme design to ensure that any recommendations given remain valid in light of changes in regulation and practice, or additional information obtained regarding the site.

Section 1	Introduction.....	1
1.1	Objective of Investigation.....	1
1.2	Location	1
1.3	Site Description.....	1
1.4	Proposed Development	2
1.5	Anticipated Geology.....	2
1.5.1	Head	2
1.5.2	Lambeth Group.....	2
1.5.3	Lewes Nodular, Seaford and Newhaven Chalk Formation (undifferentiated)	3
1.6	Limitations and Disclaimers	4
Section 2	Site Investigation Works.....	5
2.1	Intrusive Works	5
2.1.1	16695/LR, June 2018.....	5
2.1.2	18158/FLR Rev 1.02, dated February 2020.....	5
2.1.3	‘Agricultural Land Classification and Soil Resources’, dated April 2020	5
2.2	Ground Conditions	6
Section 3	Site Soil Resources.....	7
3.1	Soil Types	7
3.1.1	Topsoil – Profile 1	7
3.1.2	Upper Subsoil – Profile 2	7
3.1.3	Subsoil (Head) – Profile 3	8
Section 4	Soil Management Strategy.....	9
4.1	General.....	9
4.2	Existing Vegetation	9
4.3	General Site Soil Handling.....	9
4.4	Topsoil Stripping	10
4.5	Depth of Strip.....	10
4.6	Stockpiling of Topsoil.....	11
4.6.1	Dry Soil Stockpiling.....	12
4.6.2	Wet Stockpiling	13
4.7	Subsoil Preparation.....	13
4.8	Soil Replacement.....	14

Section 5	Site Soil Inspections	16
5.1	General	16
5.2	Reporting	16

List of Figures

Figure 1 – Dry Stockpiling Method	12
Figure 2 – Wet Stockpiling Method	13
Figure 3 – Soil Re-spreading	14
Figure 4 – Site Location Map	18
Figure 5 – Aerial Photograph	19
Figure 6 – Trial Hole Plan	20
Figure 7 – Typical Soil Profile	21
Figure 8 – Example Soil Management Plan	22

List of Tables

Table 2.1 Final Depth of Trial Holes	5
Table 2.2 Ground Conditions	6
Table 4.1 Depth of Strip	10

List of Appendices

Appendix A	Information Provided by the Client
Appendix B	Engineer Logs
Appendix C	Bibliography

Section I Introduction

I.1 Objective of Investigation

Soils Limited was commissioned by Reside Developments to undertake a Soil Resource Plan in order to advise and outline the strategy for the correct procedures for soil handling operations. These procedures are to include stripping, handling, storage, re-spreading and amelioration of Topsoil. As well as treatments and suitable profiling of the subsoil to enable healthy plant growth.

This Soil Resource Plan has been developed in conjunction with the findings presented within the following reports, on which full reliance is assumed:

- Agricultural Land Classification and Soil Resources Report, undertaken by Reading Agricultural Consultants, dated April 2020.
- Preliminary Investigation Report (Re: 15158/PIR Rev1.02), undertaken by Soils Limited, dated February 2020.
- Factual Letter Report (Ref: 18158/FLR Rev1.02), undertaken by Soils Limited, dated February 2020.
- Letter Report (Ref: 16695/LR Rev1), undertaken by Soils Limited, dated June 2018

In addition, the report has been prepared in accordance with industry best practice and guidance:

- DEFRA Construction Code of Practice for the Sustainable Use of Soils on Construction Sites (2009).

I.2 Location

The site was located west of Fontwell Avenue, Eastergate, Chichester, West Sussex PO20 3RX and had an O.S Land Ranger Grid Reference of SU 947 063. The site was bounded by Level Mare Lane to the north, and Fontwell Avenue to the east. Agricultural land lay to the south and west.

The site location plan is given in Figure 4.

I.3 Site Description

The site comprised open pastureland with an equestrian sand school and tarmac car park in the south quarter of the site. The site was relatively flat with a gentle slope down to the south. Mature trees and vegetation occupied the east, north and west site boundaries.

An aerial photograph of the site and close environs has been included in Figure 5.

1.4 Proposed Development

The proposal development comprised the construction of a low-rise residential development to include 42 No. dwellings with areas of hard landscaping including access roads, driveways and pavements and areas of soft landscaping to include private gardens and public open space.

In compiling this report reliance was placed on drawing 29662A_100-P, dated March 2020, prepared by Clague Architects. Any change or deviation from the scheme outlined in the drawing could invalidate the recommendations presented within this report. Soils Limited must be notified about any such changes.

Development plans provided by the client are presented in Appendix A.

1.5 Anticipated Geology

1:50 000 BGS geology maps showed the site to be located on Lambeth Group over undifferentiated Lewes Nodular, Seaford and Newhaven Chalk Formation, with superficial deposits of Head overlying.

1.5.1 Head

Head deposit are drifts produced by solifluxion, the downslope movement of debris outwash during the periglacial period, and characteristically comprise poorly sorted sands, gravels and chalk of local derivation.

1.5.2 Lambeth Group

Woolwich and Reading Beds, occurs in the London and Hampshire Basins, where it directly overlies the Chalk or Thanet Sand Formation, and is succeeded by the Harwich and London Clay Formations. Although generally less than 50 metres thick, it's lithological variability and position beneath much of London has concerned tunnelling engineers since the early 19th century.

The relationship between the different depositional environments is seen in central and south-east London, where deposits of fine-grained sand, flint gravel beds, mottled clay, shell beds and altered beds form a complex interdigitating sequence, which is divided into three formations, the Woolwich and the Reading Formation, depending on the local succession, both overlying the Upnor Formation.

Vertically and laterally variable sequences mainly of clay, some silty or sandy, with some sands and gravels, minor limestones and lignites and occasional sandstone and conglomerate.

The top of the Lambeth Group is marked by the eroded or interburrowed surface at the base of the overlying Thames Group. The uppermost part of the Lambeth Group can be the Reading Formation or the Woolwich Formation, depending on the local succession, or the Upnor Formation, depending on the depth of pre-Thames Group erosion. The Lambeth Group is overlain by sands, silts, clays or

gravel beds of the Harwich Formation, depending on the local sequences, or gravelly sandy clays at the base of the London Clay Formation.

In the Hampshire Basin and the west of the London Basin, the Lambeth Group overlies the Chalk Group.

1.5.3 Lewes Nodular, Seaford and Newhaven Chalk Formation (undifferentiated)

Lewes Nodular Chalk Formation is composed of hard to very hard nodular chalks and hardgrounds (which resist scratching by finger-nail) with interbedded soft to medium hard chalks (some grainy) and marls; some griotte chalks. The softer chalks become more abundant towards the top. Nodular chalks are typically lumpy and iron-stained (usually marking sponges). Brash is rough and flaggy or rubbly, and tends to be dirty. First regular seams of nodular flint, some large, commence near the base and continue throughout

Seaford Chalk Formation can be described as firm white chalk with conspicuous semi-continuous nodular and tabular flint seams. Hardgrounds and thin marls are known from the lowest beds. Some flint nodules are large to very large.

The Newhaven Chalk Formation is a soft white friable microporous limestone composed of coccolith biomicrites with a varying proportion of larger shell fragments.

At various levels clay sized material occurs as marl seams and partings. Close to the surface the upper few metres are invariably discoloured brown, due to leaching from the overlying strata. The interface with any overlying stratum is invariably extremely irregular as a result of localised weathering and general solution. Weathering by frost action may extend to a depth of several metres.

Chalk is a weak rock and as such it should be noted that the drilling, excavating and sampling process is detrimental to its fabric and structure. Chalk samples that have been machine sampled will therefore appear to be of a lower descriptive grade, as given in CIRIA C574, than the in-situ chalk. Soil sampling and visual observations from open excavations i.e. trial pits would allow chalk description and classification in accordance with CIRIA 574 including commenting for any aperture and discontinuities in the chalk structure.

Occasional erosional features, such as pipes, swallow holes and solution cavities, usually in-filled with drift deposits, are found in the chalk. The features sometimes manifest themselves at the surface as shallow circular depressions. Solution features may be reactivated by the concentrated ingress of water from leaking drains or soakaways. Reactivation may lead to surface collapse.

1.6 Limitations and Disclaimers

This Soil Resource Plan relates to the site located at Land west of Fontwell Avenue, Eastergate, Chichester, West Sussex PO20 3RX and was prepared for the sole benefit of Reside Developments (The “Client”). The report was prepared solely for the brief described in Section 1.1 of this report.

Soils Limited disclaims any responsibility to the Client and others in respect of any matters outside the scope of the above.

This report has been prepared by Soils Limited, with all reasonable skill, care and diligence within the terms of the Contract with the Client, incorporation of our General Conditions of Contract of Business and taking into account the resources devoted to us by agreement with the Client.

The report is personal and confidential to the Client and Soils Limited accept no responsibility of whatever nature to third parties to whom this report, or any part thereof, is made known. Any such party relies on the report wholly at its own risk.

The Client may not assign the benefit of the report or any part to any third party without the written consent of Soils Limited.

The ground is a product of continuing natural and artificial processes. As a result, the ground will exhibit a variety of characteristics that vary from place to place across a site, and also with time. Whilst a ground investigation will mitigate to a greater or lesser degree against the resulting risk from variation, the risks cannot be eliminated.

The investigation, interpretations, and recommendations given in this report were prepared for the sole benefit of the client in accordance with their brief. As such these do not necessarily address all aspects of ground behaviour at the site.

Current regulations and good practice were used in the preparation of this report. An appropriately qualified person must review the recommendations given in this report at the time of preparation of the scheme design to ensure that any recommendations given remain valid in light of changes in regulation and practice, or additional information obtained regarding the site.

It should be noted that a detailed survey of the possible presence or absence of invasive species, such as Japanese Knotweed, is outside of the scope of investigation.

Ownership of copyright of all printed material including reports, laboratory test results, trial pit and borehole log sheets, including drillers log sheets remains with Soils Limited. License is for the sole use of the client and may not be assigned, transferred or given to a third party.

Section 2 Site Investigation Works

2.1 Intrusive Works

It is understood that intrusive investigation works have been undertaken on the site on three occasions previously. Soils Limited have undertaken two investigations, reported in 16695/LR, dated June 2018 and 18158/LR1.02, dated February 2020. Additional works were undertaken by Reading Agricultural Consultants, as reported in 'Agricultural Land Classification and Soil Resources', dated April 2020.

A brief summary of the investigations previously undertaken is provided.

2.1.1 16695/LR, June 2018

On 24th November 2017, three windowless sampler boreholes (WS01 to WS03) were all drilled to a depth of 5.00m below ground level (bgl) using a dual purpose windowless sampler and dynamic probe drilling rig.

2.1.2 18158/FLR Rev 1.02, dated February 2020

Intrusive infiltration testing (BRE DG365) was undertaken on 3rd February 2020 and comprised the machine excavation of three trial pits (SA01 – SA03), using 5 tonne tracked 360 excavator, to depths ranging between 2.10m and 3.00m bgl, at locations selected by the client.

2.1.3 'Agricultural Land Classification and Soil Resources', dated April 2020

A shallow investigation was undertaken in April 2020 by Reading Agricultural Consultants, comprising two hand auger observation pits (HA01 and HA02) to a depth of 0.30m bgl and one hand dug trial pit (HDTP01) to a depth of 0.60m bgl.

All trial hole locations have been presented in Figure 6. The engineer logs are included with Appendix B.

The maximum depths of trial holes have been included in Table 2.1.

Table 2.1 Final Depth of Trial Holes

Trial Hole	Depth (m bgl)	Trial Hole	Depth (m bgl)
WS01	5.00	SA03	3.00
WS02	5.00	HA01 ^{1, 2}	0.30
WS03	5.00	HA02 ^{1, 2}	0.30
SA01	2.10	HDTP01 ¹	0.60
SA02	2.70		

Note: ¹ Trial hole not undertaken by Soils Limited. No Engineer log provided. ² Final depth unknown

2.2 Ground Conditions

The sequence of strata encountered during the previous investigations undertaken by Soils Limited is presented below and ground conditions are detailed in Table 2.2.

Topsoil (TS) Inc. upper sub-soil Head (HEAD)

Lambeth Group (LMBE, not encountered)

Undifferentiated Lewes Nodular, Seaford and Newhaven Chalk Formation (WHCK)

Table 2.2 Ground Conditions

Strata	Epoch	Depth Encountered (m bgl)		Typical Description
		Top	Bottom	
TS	Anthropocene	0.00	0.30 – 0.60 ¹	Turf over dark brown slightly gravelly silty CLAY with frequent roots and rootlets.
HEAD	Holocene	0.30 – 0.60	2.10 – 3.00	Orange and brown slightly sandy gravelly CLAY over light grey and orange brown gravelly highly calcareous CLAY. Gravel was fine to medium angular to subangular clasts of flint and chalk.
LMBE	Paleocene	Not encountered		
WHCK	L. Cretaceous	2.10 – 3.00	2.50 ¹	Off white and brownish white weathered structureless CHALK recovered as fine gravel sized intact blocks of chalk within a sandy SILT calcareous matrix, with frequent fine to coarse gravel sized clasts of subrounded to angular flint.

Notes: Soil description recorded from Soils Limited site investigations to BS5930 soil logging standards. ¹Depth and description of topsoil and upper subsoil.

It should be noted that the Soils Limited engineer logs do not note the change in strata between the topsoil and the upper subsoil as is made within the Reading Agricultural Consultants report. The two profiles are referred to as “Topsoil” within Table 2.2 and Appendix B.

Section 3 Site Soil Resources

3.1 Soil Types

This report is concerned with the Topsoil and underlying subsoil and their use as resource in the proposed development of the site. At the time of the investigations (November 2017 and February to April 2020) these soils were encountered in-situ and considered to be undisturbed. Based on the findings of the previous intrusive works and subsequent laboratory testing, it is believed that soil constituents are generally uniform across the site with variations in profile depths noted locally.

The main characteristics of the soils are discussed below, based on the investigations undertaken by Reading Agricultural Consultants (Report ref: 'Agricultural Land Classification and Soil Resources', dated April 2020), with accompanying photographs presented in Figure 7.

3.1.1 Topsoil – Profile 1

Topsoil depth was noted to vary locally across the site from ground level to typical depth of 0.30m bgl.

The Topsoil typically comprised brown medium clayey silty loam with frequent roots and rootlets. The Topsoil was moderately stony at 27% by volume: the stone was flint and was variable in size with 17% over 2cm. Structure was coarse granular to fine subangular, with a friable consistency.

Laboratory testing notes the Topsoil as being slightly acidic with a recorded pH value of 5.7. Organic matter was recorded as 5.7% by weight, classifying the Topsoil as a mineral soil (RAC, 2020).

3.1.2 Upper Subsoil – Profile 2

The upper subsoil had a similar texture and colour to the Topsoil, and extended to a depths ranging between 0.46m and 0.60m bgl.

Stone content within this horizon was slightly lower than the Topsoil at 17%. Structure was coarse granular with a friable consistency. The lower subsoil comprised brown (10YR5/3) medium silty clay loam to depth. Stone content was approximately 30% increasing with depth. Structure was fine subangular blocky and friable. No information on the pH or the organic content was available for this profile.

3.1.3 Subsoil (Head) – Profile 3

Subsoils described as Head were encountered underlying the Topsoil and upper subsoil. These soils persisted to depths ranging between 1.35m and 2.50m bgl.

The Head typically comprised dark becoming light brown gravelly CLAY. Gravel was fine to coarse subangular to angular flint. The gravel content was observed to increase with depth. Structure was fine to coarse subangular blocky and friable. No information on the pH or the organic content is available for this profile.

Section 4 Soil Management Strategy

4.1 General

This Soil Management Strategy highlights the sequence of treatments, storage and recovery methods as outlined in the DEFRA Construction Code of Practice for the Sustainable Use of Soils on Construction Sites (2009).

The contractor responsible for undertaking groundworks at this site and therefore under this Soil Management Plan must prepare a site-specific Method Statement for all operations (e.g. handling, stockpiling, setting out, spreading, cultivations, amelioration,). Each Method Statement is to include details of the methods of working, proposed site machinery and tillage equipment, materials, manpower and Health & Safety requirements.

4.2 Existing Vegetation

In line with DEFRA Construction Code of Practice for the Sustainable Use of Soils on Construction Sites (2009), it is good practice to remove any unwanted vegetation prior to any groundworks in order to avoid any build-up of gases produced by decomposing material.

The site had dense vegetated walls, bushes and trees on all boundaries. It is understood that these are to remain in-place for the final development. However, should works be undertaken to clear or thin these tree and hedge lines, then it is important to remove any cuttings or wood chipping in order to minimise any potential anaerobic digestion during soil storage.

The site covering is known (as of February 2020) to comprise grassland / pastureland. This should be closely mown to a length less than 100mm and the cutting collected and removed from site, and disposed of at a suitable green-waste recycling facility, prior to the site strip to avoid introducing vegetation into the stockpile soils.

4.3 General Site Soil Handling

It is important to avoid soil physical degradation during all phases of soil handling including stripping, storage, re-spreading and planting. Soil handling operations should be carried out when the soil is reasonably dry and non-plastic in consistency.

The Topsoil and upper subsoil, identified in Profiles 1 and 2 (Figure 7), should not be unnecessarily compacted by trafficking by site machinery or during construction staffs movements.

If the soil is structurally damaged and compacted during the course of the earthworks, it should be suitably cultivated to relieve the compaction and restore the structure prior to being utilised as a growing medium.

4.4 Topsoil Stripping

Topsoil (Soil Profile 1) should be stripped off separately to other soil profiles with each profile being stripped off in succession. Industry guidance suggests that the preferred method of Topsoil stripping is the 'loose tip method'.

The loose-tipping method involves the use of a tracked hydraulic excavator, fitted with a flat edged grading bucket to strip the Topsoil and load it into a dump truck. The dump truck, running along a pre-designated route where the Topsoil has already been removed, then transports the Topsoil to the desired stockpile location. As with any part of the process, responsibility lies with the groundworks contractor to ensure that this operation is monitored to ensure that the soil is recovered without the inclusion of other soils (subsoil), vegetation or building/construction waste. Cross contamination with other soil could significantly degrade the quality of the Topsoil and will impact its suitability as a growing medium.

During intrusive works the flint and chalk gravel was encountered in sizes ranging between 2mm to 20mm within the topsoil. Should gravel be encountered in excess of 75mm, it must be removed along with any waste or non-Topsoil materials.

4.5 Depth of Strip

The depth of the Topsoil and upper subsoil (Profiles 1 and 2) strip are noted below within Table 4.1. These depths will ensure that the soils are recovered without the inclusion of the significant amounts of subsoil (Head). Based on the subtle colour differences between the Topsoil, upper subsoil (light greyish brown) and subsoil (orange and brown) the Topsoil strip should be reviewed by the machine operator or an assisting groundworker on a continuous basis to ensure that soil recovery is accurate. The depths given are typical for the horizon, but are likely to vary locally.

Table 4.1 Depth of Strip

Profile	Depth (m bgl)
1	0.30
2	0.45

4.6 Stockpiling of Topsoil

The main objective when stockpiling Topsoil is to maintain soil quality and minimise damage to the soil's physical (structural) condition so that it can be easily reinstated once re-spread.

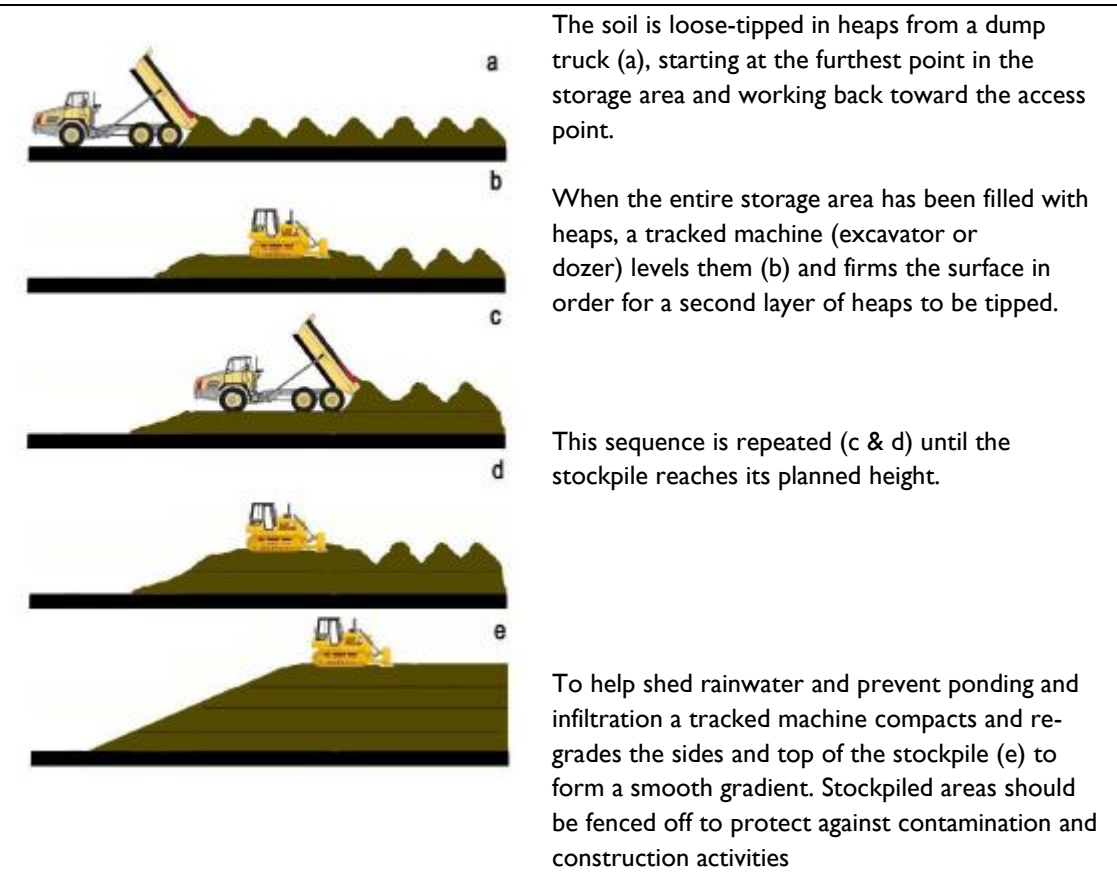
Soils that are to be temporarily stored onsite should be piled separately from another. Reusable soils are to be kept separate from the other materials or building waste on the site. Stockpiling of materials should be undertaken using the methodology appropriate to the conditions onsite and depending on the moisture content and plasticity of the soils at the time of excavation.

Stockpiles should not be constructed in areas of tree root or crown growth, or adjacent to retaining wall, ditches, or water courses. Side angles should not exceed 40 degrees. If the stockpiles are to be seeded and thus maintained, side angles should not exceed 25 degrees to allow for safer access. If stockpiles are to remain onsite for longer than six months surface seeding should be undertaken in order to minimise erosion.

4.6.1 Dry Soil Stockpiling

Dry soils stockpiling should be applied to soil that is in a dry and non-plastic state. The aim is to create a large core of dry soil, and to restrict the amount of water that can get into the stockpile during the storage period. Dry soil that is stored in this manner can remain so for a period of years and it is re-useable within days of re-spreading (DEFRA, 2009). The process is presented within Figure 1.

Figure 1 – Dry Stockpiling Method

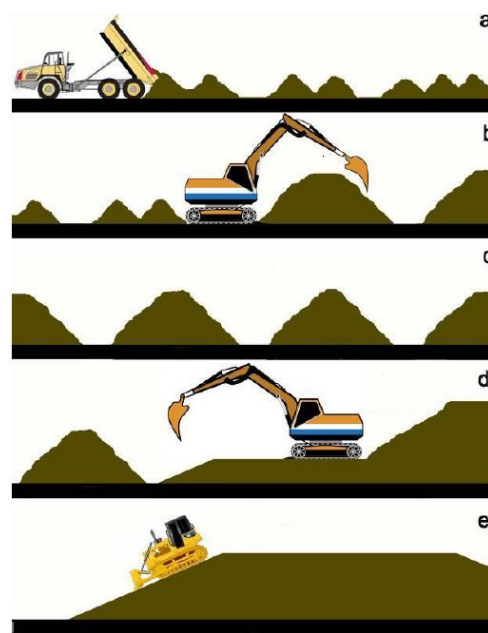


Note: Addapted from (DEFRA, 2009)

4.6.2 Wet Stockpiling

Wet soils stockpiling should be applied to soil that is in a wet / plastic in consistency. The process has been developed to minimise compaction of the lower levels by those layers at the top of the stockpile, as well as maximising the drying area of the stockpile. It is always recommended that this operation is undertaken during the summer months to allow the Topsoil to dry out effectively. The wet stockpiling method is presented within Figure 2.

Figure 2 – Wet Stockpiling Method



The soil is tipped in a line of heaps to form a 'windrow', starting at the furthest point in the storage area and working back toward the access point (a).

Any additional windrows are spaced sufficiently apart to allow tracked plant to gain access between them so that the soil can be heaped up to a maximum height of 2m (b).

To avoid compaction, no machinery, even tracked plant, is to traverse the windrow.

Once the soil has dried out and is non-plastic in consistency (this usually requires several weeks of dry and windy or warm weather), the windrows are combined to form larger stockpiles, using a tracked excavator (d).

The surface of the stockpile is then regraded and compacted (e) by a tracked machine (dozer or excavator) to reduce rainwater infiltration.

Note: Adapted from (DEFRA, 2009)

4.7 Subsoil Preparation

Grading and re-layering of subsoil should be undertaken as specified by the engineers requirements, those of any cut and fill operations, and in line with a Materials Management Plan (MMP). Over time and through the course of construction (including vehicle movements and storage of materials) the subsoils will become compacted. These will require decompaction before the relaying of the Topsoil.

The subsoil should be de-compacted to a minimum depth of 0.30m bgl in areas of general use, and to 0.50m bgl in areas of tree planting. Suitable methods of decompaction include a tractor or dozer mounted subsoiler in larger open areas, or via a single ridge tine mounted to a tracked excavator in tighter, harder to reach areas including road verges and existed planted areas.

4.8 Soil Replacement

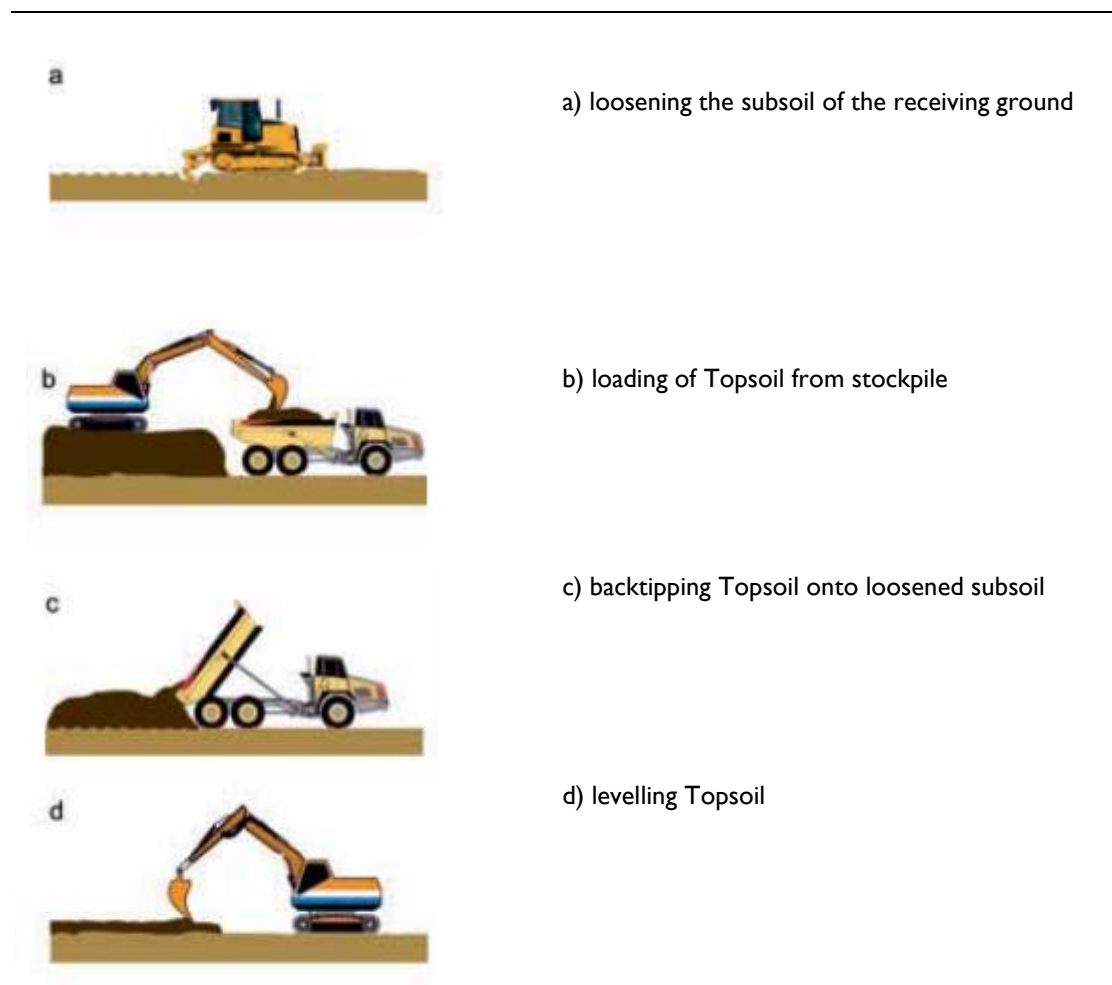
Prior to soil replacement, stockpiles should be treated with a non-residual herbicide and any unwanted green growth should be removed. For the development of new landscapes, gardens and planted areas it is essential to provide a structured, uncompacted and well-aerated soil profile for the successful establishment and subsequent growth of plants and grass.

Construction equipment should not manoeuvre over de-compacted subsoil or newly laid Topsoil. Excess compaction of newly laid Topsoil can lead to the future water logging or surface ponding of the site and the unsuccessful establishment of grasses and planting.

It is important to remember that Topsoil should only be spread in a dry or moist state with little plasticity. Wet, high plasticity soils should be left to dry before re-spreading.

The Topsoil is lifted onto the subsoil without the excavator travelling on the newly placed subsoil. Only when the strip has been completed is the next one started. (DEFRA, 2009). The methodology for re-spreading is include in Figure 3.

Figure 3 – Soil Re-spreading



Note: Adapted from (DEFRA, 2009)

A hydraulic excavator, fitted with a toothed-bucket, should be used to load the soil materials from the source area or stockpile into a dump truck which then discharges them onto the receiving surface. An excavator stands next to the newly dropped soil and spreads this to the required thickness. If there is to be more than one soil layer (i.e. if both Topsoil and subsoil are being replaced) then the whole length of the strip is restored with subsoil before the process is repeated with Topsoil.

Following completion of re-spreading, soils should undergo cultivation to the full depth of the re-spread layer to ensure that no large clumps or lumps are present and that the soils are suitably aerated. Fertilisers can be used during cultivation in order to replenish nutrient levels that may have been lost during the stock piling process.

Section 5 Site Soil Inspections

5.1 General

An appropriately experienced and qualified soil scientist should be appointed to inspect the implementation of the soil management plan and should be consulted and liaise along with the landscape architect, site engineer, and groundworks contractor during the below phases:

- Soil stripping and storage.
- Topsoil placement and preparation.
- Soil profile decompaction.
- Soil cultivation
- Limited soil testing to confirm fertility status and horticultural properties.
- Tree pit construction.

5.2 Reporting

Records for each site inspection should be kept ensuring the works are satisfactory and compliant with the Soils Resource Plan and specification. Following the conclusion of all landscaping works at the site, a completion report should be prepared confirming that suitable soil quality has been achieved and that the soils are compliant with the specification and fit for the landscape scheme.

List of Figures

Figure 1 – Dry Stockpiling Method	12
Figure 2 – Wet Stockpiling Method	13
Figure 3 – Soil Re-spreading	14
Figure 4 – Site Location Map	18
Figure 5 – Aerial Photograph	19
Figure 6 – Trial Hole Plan	20
Figure 7 – Typical Soil Profile	21
Figure 8 – Example Soil Management Plan	22

List of Appendices

Appendix A Information Provided by the Client

Appendix B Engineer Logs

Appendix C Bibliography

Figure 4 – Site Location Map

Job Number
18570

Project

Land west of Fontwell Avenue, Eastergate,
Chichester, West Sussex PO20 3RX

Client
Reside Developments

Date
October 2020

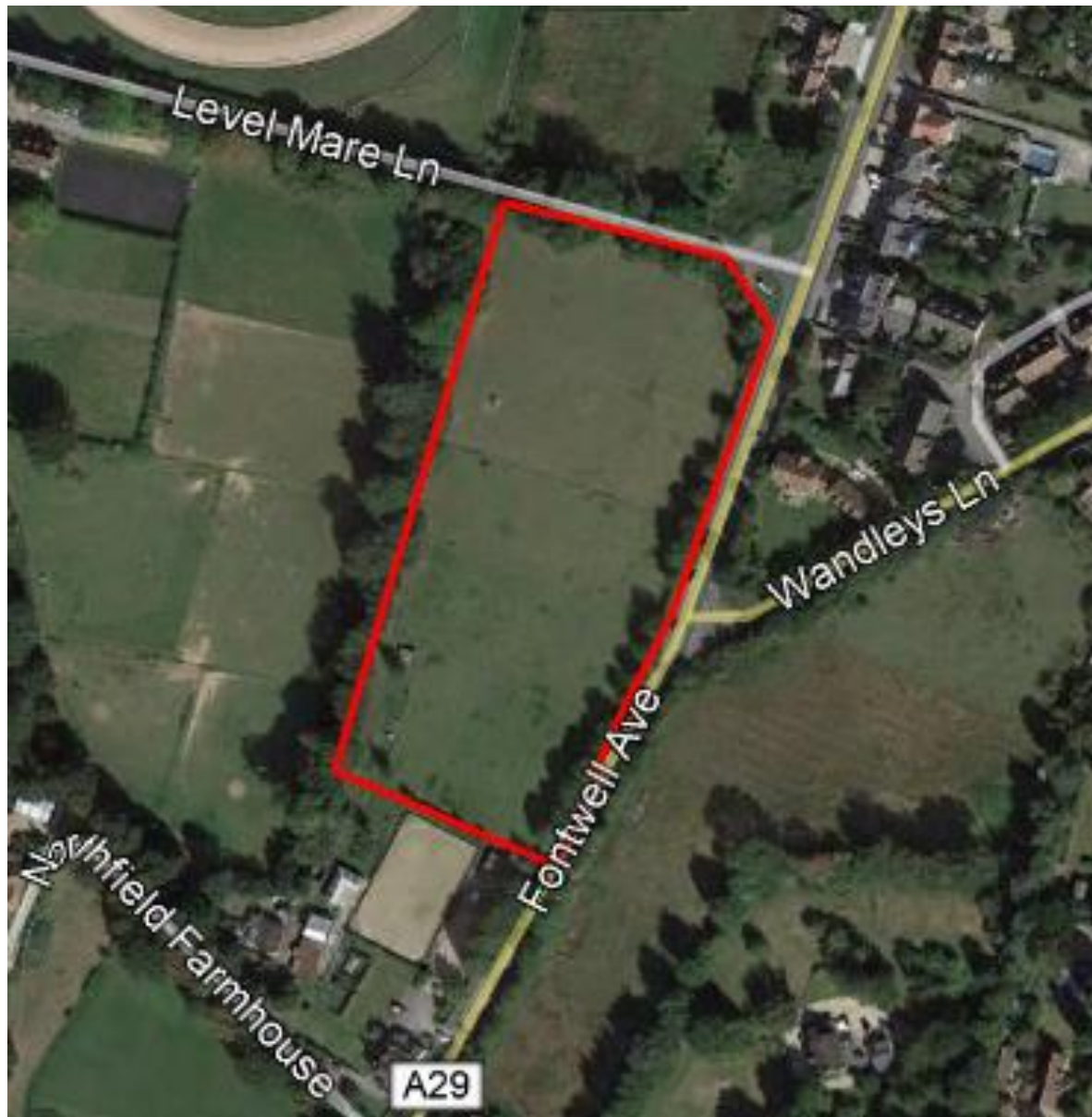


Figure 5 – Aerial Photograph

Project

Land west of Fontwell Avenue,
Eastergate, Chichester, West
Sussex PO20 3RX

Client

Reside Developments

Date

October 2020

Job Number

18570



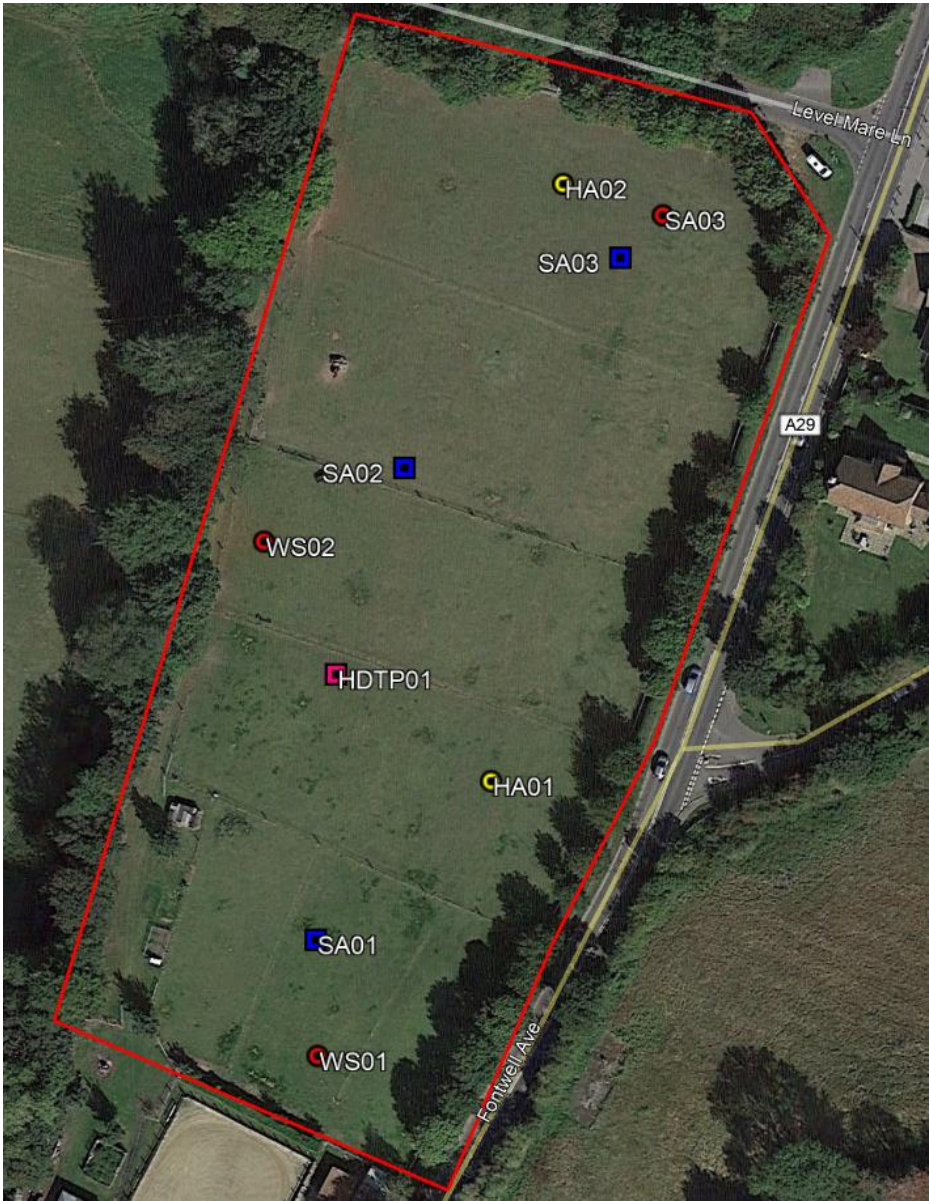


Figure 6 – Trial Hole Plan

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Figure 7 – Typical Soil Profile

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Job Number
18570

Note: Image adapted from (RAC, 2020)

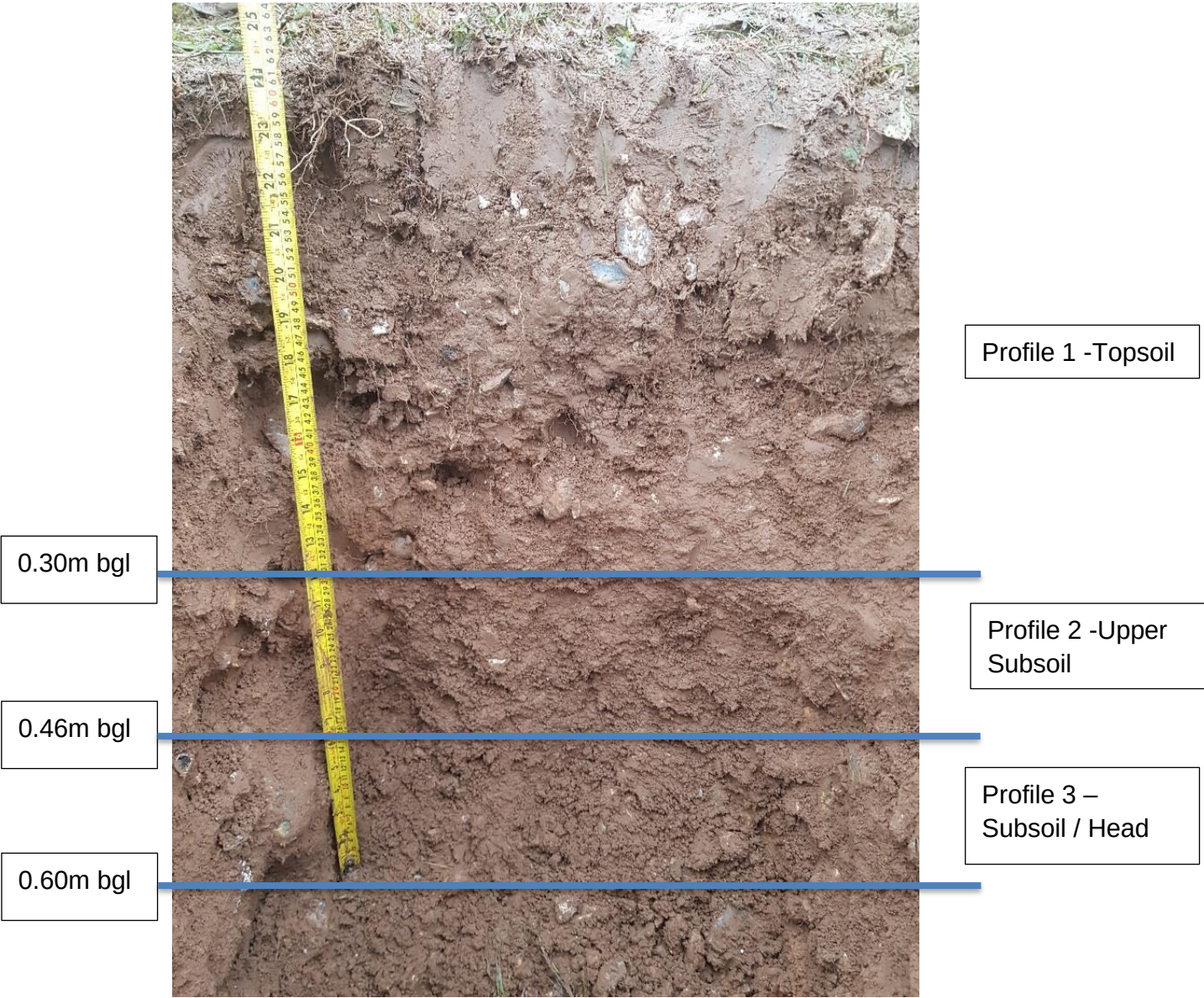




Figure 8 – Example Soil Man

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Land west of Fontwell Avenue,
Eastergate, Chichester, West
Sussex PO20 3RX

Client
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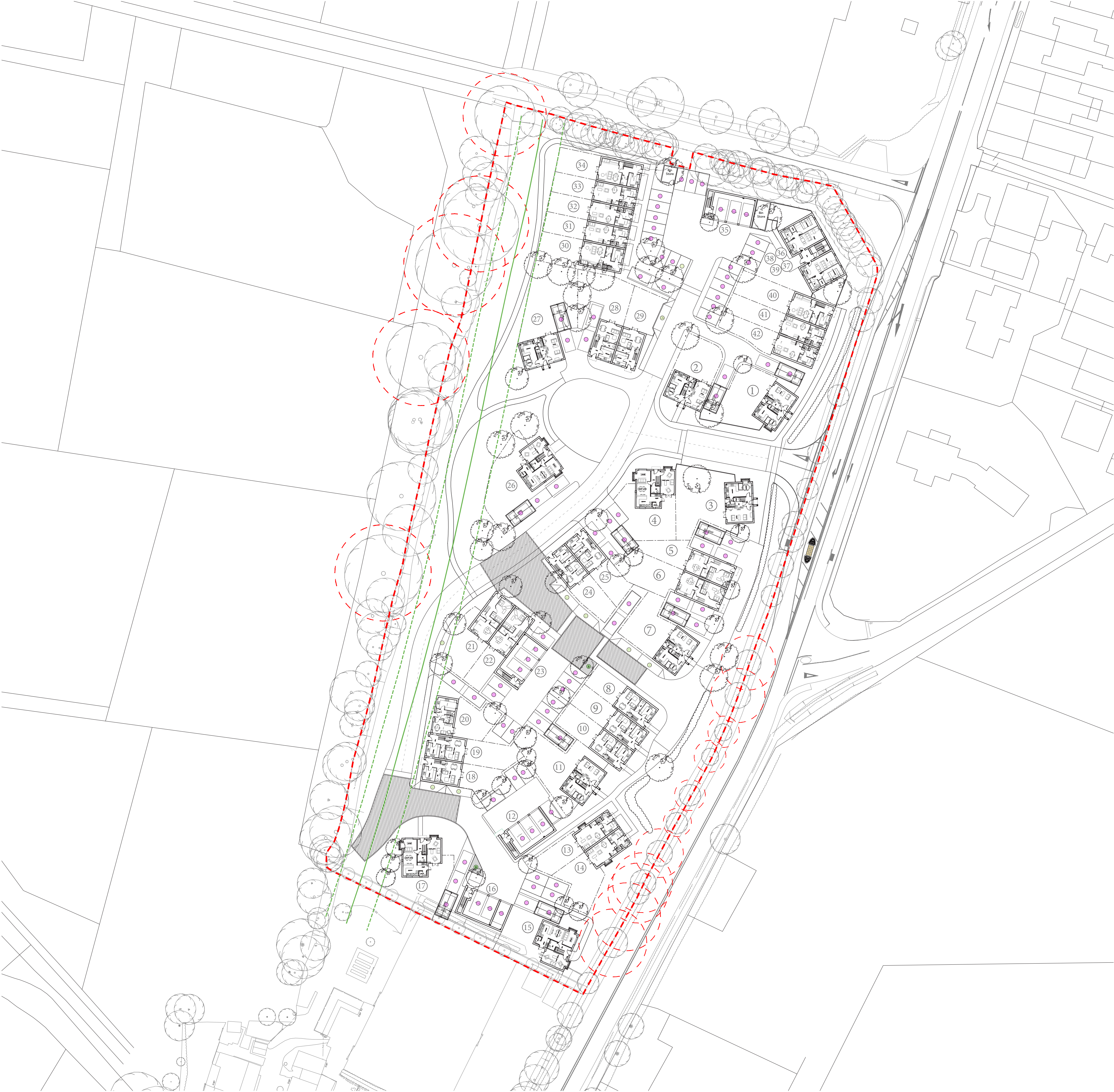
Date
October 2020

Job Number
18570

Key
■ Topsoil Profile 1



Appendix A Information Provided by the Client



NOTES:

Do Not Scale.

Report all discrepancies, errors and omissions.

Verify all dimensions on site before commencing any work on site or preparing shop drawings.

All materials, components and workmanship are to comply with the relevant British Standards, Codes of Practice, and appropriate manufacturers recommendations that from time to time shall apply.

For all specialist work, see relevant drawings.

This drawing and design are copyright of Clague LLP
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Rev	Date	Description	
Schedule of accommodation			
Private Plots			
1 Bed	2 Bed	3 Bed	4 Bed
	12,13,14,16,20,23	1,2,3,5,6,7,8,9,10,11,18,19,21,22,24,25,27,28,29	4,15,17,26
Affordable Plots			
1 Bed	2 Bed	3 Bed	4 Bed
36,37,38,39	31,32,33,35,41,42	30,34,40	
Private 29 units Affordable 13 units Total: 42 Units			

- Trees To Be Removed
- Root Protection Zones
- 5m Water main easement
- Parking space
- Visitors Parking space
- Bin Collection Point
- Site Boundary

Project Title

Proposed Residential Development
Fontwell Avenue
West Sussex

Drawing Description

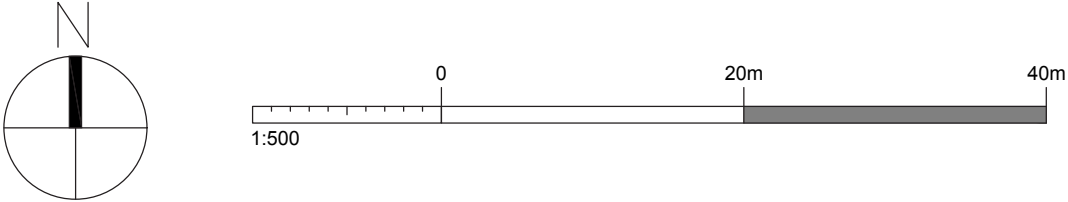
Site Block Plan

Scale	Drawn by
1:500 @ A1	AS
Date	Checked by
March 2020	CSS

CLAGUE ARCHITECTS

62 Burgate, Canterbury Kent CT1 2BH	01227 762060	
1 Kinsbourne Court, Luton Road, Harpenden, Hertfordshire AL5 3BL	01582 765102	
8, Disney Street London SE1 1JF	0203 597 6112	
CANTERBURY	LONDON	HARPENDEN

Drawing Number	Revision
29662A_100	P



Appendix B Engineer Logs

Project Name: 1 Northfields Cottages

Project No.: 16695

Co-ords:

 Hole Type
WS

Location: Fontwell Avenue, Eastergate, Chichester, West Sussex PO20 3RX

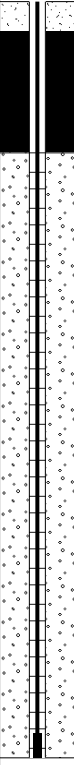
Level:

 Scale
1:50

Client: BVL Developments Ltd.

Dates: 21-12-2017

 Logged By
AP

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.20	D		0.30			Turf over dark brown slightly gravelly silty CLAY with frequent roots and rootlets. Gravel is fine to medium subangular clasts of flint. TOPSOIL	
		0.80	D					Light brown gravelly CLAY. Gravel was fine to coarse subangular clasts of flint. HEAD	
								Percentage gravel increasing with depth	1
		1.50	D		1.35			Light yellow and light brown weathered structureless CHALK recovered as fine gravel sized fragments of intact chalk within a sandy SILT calcareous matrix. WHITE CHALK SUBGROUP	2
		2.50	D					Off white weathered structureless CHALK recovered as fine to medium gravel sized fragments intact chalk within a clayey SILT comminuted calcareous matrix. WHITE CHALK SUBGROUP	3
		3.50	D		4.10			Off white weathered structureless CHALK recovered as fine to medium gravel sized fragments intact chalk within a clayey SILT comminuted calcareous matrix. WHITE CHALK SUBGROUP	4
		4.50	D		5.00			End of Borehole at 5.00m	5
									6
									7
									8
									9
									10

General Remarks:

Roots to 1.20m bgl. No groundwater encountered.

Groundwater Remarks:
Borehole Type

 CP: Cable Percussive
 WS: Windowless Sampler
 RC: Rotary Cored

Sample Types

 D: Disturbed
 B: Bulk
 J: Jar
 W: Water
 U: Undisturbed

In-Situ Testing

 SPT: Split spoon - Standard Penetration Test
 CPT: Cone - Standard Penetration Test

Project Name: 1 Northfields Cottages

Project No.: 16695

Co-ords:

 Hole Type
WS

Location: Fontwell Avenue, Eastergate, Chichester, West Sussex PO20 3RX

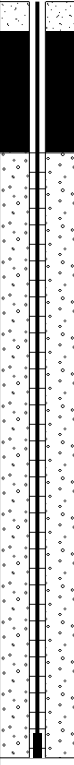
Level:

 Scale
1:50

Client: BVL Developments Ltd.

Dates: 21-12-2017

 Logged By
AP

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.20	D					Turf over dark brown slightly gravelly silty CLAY with frequent roots and rootlets. Gravel is fine to medium subangular clasts of flint. TOPSOIL	
					0.50			Soft light brown gravelly CLAY. Gravel is fine to medium sub-angular clasts of flint. HEAD	
		0.80	D					Dark brown very gravelly CLAY. Gravel is fine to coarse angular clasts of flint. HEAD	1
		1.50	D						2
		2.50	D		2.50			Light brown and off white weathered structureless CHALK recovered as fine gravel sized fragments of intact chalk within a sandy SILT calcareous matrix. WHITE CHALK SUBGROUP	3
		3.50	D						4
		4.50	D						5
					5.00			End of Borehole at 5.00m	6
									7
									8
									9
									10

General Remarks:

Roots to 0.50m bgl. No groundwater encountered.

Groundwater Remarks:
Borehole Type

 CP: Cable Percussive
 WS: Windowless Sampler
 RC: Rotary Cored

Sample Types

 D: Disturbed
 B: Bulk
 J: Jar
 W: Water
 U: Undisturbed

In-Situ Testing

 SPT: Split spoon - Standard Penetration Test
 CPT: Cone - Standard Penetration Test

Project Name: 1 Northfields Cottages

Project No.: 16695

Co-ords:

 Hole Type
WS

Location: Fontwell Avenue, Eastergate, Chichester, West Sussex PO20 3RX

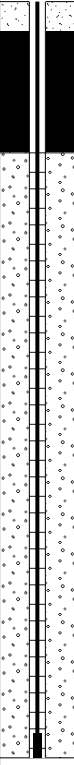
Level:

 Scale
1:50

Client: BVL Developments Ltd.

Dates: 21-12-2017

 Logged By
AP

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.20	D		0.60			Turf over dark brown slightly gravelly silty CLAY with frequent roots and rootlets. Gravel is fine to medium subangular clasts of flint. TOPSOIL	1
		0.80	D					Light brown becoming light brown very gravelly CLAY. Gravel is fine to coarse angular clasts of flint. HEAD Percentage gravel increasing with depth	
		1.50	D		1.90			light brown and off white weathered structureless CHALK recovered as fine gravel sized fragments of intact chalk within a sandy SILT calcareous matrix. WHITE CHALK SUBGROUP	2
		2.50	D						
		3.50	D		4.50				3
		4.50	D						
					5.00			End of Borehole at 5.00m	5
									6
									7
									8
									9
									10

General Remarks:

Roots to 0.60m bgl. No groundwater encountered.

Groundwater Remarks:
Borehole Type

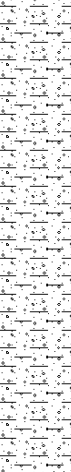
 CP: Cable Percussive
 WS: Windowless Sampler
 RC: Rotary Cored

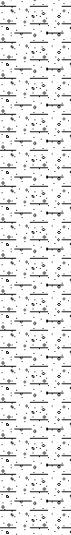
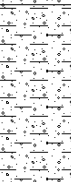
Sample Types

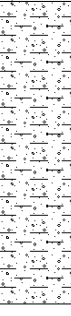
 D: Disturbed
 B: Bulk
 J: Jar
 W: Water
 U: Undisturbed

In-Situ Testing

 SPT: Split spoon - Standard Penetration Test
 CPT: Cone - Standard Penetration Test

		Soils Limited Newton House, Cross Road, Tadworth KT20 5SR Tel: 01737 814221 Email: admin@soilslimited.co.uk			Trial Pit Log		Trial Pit No. SA1 Sheet 1 of 1	
Project Name: Northfield Cottages				Project No.: 18158		Method:		Hole Type TP
Location: Fontwell Avenue, Eastergate, Chichester, West Sussex, PO20 3RX						Plant: 5t		
Client: Reside Developments Ltd				Trial Pit Length: m		Trial Pit Width: m		Scale 1:25
Dates: 03-02-2020			Level:		Co-ords:		Logged By GB	
Water Strike	Samples & In Situ Testing			Depth (m)	Level (mAOD)	Legend	Stratum Description	
	Depth	Type	Results					
	0.20	D		0.30			Turf over light grey and brown slightly gravelly CLAY with frequent rootlets. Gravel is fine to medium subangular clasts of flint.	
	0.50	D					Orange and brown slightly sandy gravelly CLAY. Gravel is fine to medium angular to subangular clasts of flint.	
	1.00	D		1.90				
	1.50	D						
	2.00	D		2.10			Light grey and orange brown gravelly calcareous CLAY. Gravel is fine to medium angular to subangular clasts of flint and chalk.	
						End of Pit at 2.100m		
General Remarks: Pit collapsed, infiltration testing not possible								Sample Type D: Disturbed B: Bulk J: Jar W: Water
Groundwater Remarks:								

		Soils Limited Newton House, Cross Road, Tadworth KT20 5SR Tel: 01737 814221 Email: admin@soilslimited.co.uk			Trial Pit Log		Trial Pit No. SA2 Sheet 1 of 1	
Project Name: Northfield Cottages				Project No.: 18158		Method:		Hole Type TP
Location: Fontwell Avenue, Eastergate, Chichester, West Sussex, PO20 3RX						Plant: 5t		
Client: Reside Developments Ltd				Trial Pit Length: 1.80m		Trial Pit Width: 0.60m		Scale 1:25
Dates: 03-02-2020				Level:		Co-ords:		Logged By GB
Water Strike	Samples & In Situ Testing			Depth (m)	Level (mAOD)	Legend	Stratum Description	
	Depth	Type	Results					
	0.20	D		0.30			Turf over light grey and brown slightly gravelly CLAY with frequent rootlets. Gravel is fine to medium subangular clasts of flint.	
	0.50	D						Orange and brown slightly sandy gravelly CLAY. Gravel is fine to medium angular to subangular clasts of flint.
	1.00	D		2.10		Light grey and orange brown gravelly calcareous CLAY. Gravel is fine to medium angular to subangular clasts of flint and chalk.		
	1.50	D				2.70		End of Pit at 2.700m
	2.00	D						
	2.50	D						
General Remarks: Pit walls unstable								Sample Type D: Disturbed B: Bulk J: Jar W: Water
Groundwater Remarks:								

		Soils Limited Newton House, Cross Road, Tadworth KT20 5SR Tel: 01737 814221 Email: admin@soilslimited.co.uk			Trial Pit Log		Trial Pit No. SA3 Sheet 1 of 1	
Project Name: Northfield Cottages				Project No.: 18158		Method:		Hole Type TP
Location: Fontwell Avenue, Eastergate, Chichester, West Sussex, PO20 3RX						Plant: 5t		
Client: Reside Developments Ltd				Trial Pit Length: 2.50m		Trial Pit Width: 0.60m		Scale 1:25
Dates: 03-02-2020				Level:		Co-ords:		Logged By GB
Water Strike	Samples & In Situ Testing			Depth (m)	Level (mAOD)	Legend	Stratum Description	
	Depth	Type	Results					
	0.20	D		0.30			Turf over light grey and brown slightly gravelly CLAY with frequent rootlets. Gravel is fine to medium subangular clasts of flint.	
	0.50	D					Orange and brown slightly sandy gravelly CLAY. Gravel is fine to medium angular to subangular clasts of flint.	
	1.00	D						
	1.50	D						
	2.00	D		2.00			Light grey and orange brown gravelly calcareous CLAY. Gravel is fine to medium angular to subangular clasts of flint and chalk.	
	2.50	D						
	3.00	D		3.00			End of Pit at 3.000m	
General Remarks: Pit walls unstable								Sample Type D: Disturbed B: Bulk J: Jar W: Water
Groundwater Remarks:								

Appendix C Bibliography

DEFRA, 2009. *Construction Code of Practice for the Sustainable Use of Soils on Construction Sites* , s.l.: DEFRA.

RAC, 2020. *Agricultural Land Classification and Soil Resources*, s.l.: Reading Agricultural Consultants.

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