Rosefield Solar Farm

Environmental Statement

Volume 4
Appendix 12.1: Agricultural Land Classification Report
(Clean)

EN010158/APP/6.4.2
Revision 2
Deadline 2
April 2026
Rosefield EnergyFarm Ltd

APFP Regulation 5(2)(a)

Planning Act 2008

Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009

Table of Contents

1. Introduction

1.1.1. This document has been updated at Deadline 2 in response to the Examining Authority's First Written Question Q1.18.17 in relation to the extent of unsurveyed areas. The document references have not been updated from the original submission. Please refer to the **Guide to the Application [EN010158/APP/1.2.7]** for the list of current versions of documents.

1.1.2. This Agricultural Land Classification Report has been prepared on behalf of Rosefield Energyfarm Limited ('the Applicant'). This report provides information on the soils and agricultural land quality of 675.05ha of land east and south east of Calvert, Buckinghamshire. The report is based on three surveys of the land which were undertaken in January and June 2023, June 2024 and March 2025 by ADAS and surveys in October 2022 and January 2023 by LRA. The surveys were carried out in strict accordance with the MAFF (1988) guidelines[1] and were based on observations at alternate intersects of a 100m grid, giving a density of one observation per two hectares this semi-detailed approach for non BMV land was agreed through consultation with Natural England. This approach was deemed appropriate following a desk study which showed the bedrock geology across the entire Site to be mudstone, with minor areas of superficial deposits.

1.1.3. In the UK, Agricultural Land Classification (ALC) is a system used to assess the quality of farmland based on factors like soil, climate, and topography. It grades land from Grade 1 (excellent) to Grade 5 (very poor). Best and Most Versatile (BMV) land refers to Grades 1, 2, and 3a, which are considered the most productive and valuable for agriculture. Protecting BMV land is a key planning consideration in land development decisions.

1.1.4. Annex associated with this document:

- **Annex 1: Agricultural Land Classification Map**;
- **Annex 2: Soil Association Map**;
- **Annex 3a: Auger and Pit Location Maps (ADAS)**;
- **Annex 3b: Auger and Pit Location Maps (LRA)**;
- **Annex 4a: Auger Logs (ADAS)**;
- **Annex 4b: Auger Logs (LRA)**;

[1] MAFF, (1988). Agricultural Land Classification for England and Wales: Revised Guidelines and Criteria for Grading the Quality of Agricultural Land.

- **Annex 5a: Soil Pit Descriptions**;
- **Annex 5b: LRA Pit Descriptions**;
- **Annex 6: Laboratory Analysis**; and
- **Annex 7: Description of ALC Grades**.

1.2. Site Environment

1.2.1. The location of the Proposed Development is shown on **ES Volume 3, Figure 1.1: Location Plan [EN010158/APP/6.3]**. The Proposed Development will be located within the Order Limits as illustrated in **ES Volume 3, Figure 1.2: Order Limits [EN010158/APP/6.3]**. The surveyed area comprises a total of 114 agricultural fields.

1.2.2. The Site comprises four parcels of land (Parcel 1, 1a, 2 and 3), the Interconnecting Cable Corridor, the Grid Connection Cable Corridor, the National Grid East Claydon Substation, and associated access. These parcels and Interconnecting Cable Corridors are outlined in **ES Volume 3, Figure 1.2: Order Limits [EN010158/APP/6.3]**.

1.2.3. Rosefield Solar Farm is located within the administrative boundary of Buckinghamshire Council. The settlements of Calvert, Middle Claydon, Botolph Claydon, East Claydon and Hogshaw lie within 1.5km of parts of the Order Limits. Further afield (within 3km of the Order Limits) lie the settlements of Steeple Claydon, Edgecott, Shipton Lee, Quainton, Granborough and Winslow.

1.2.4. National Grid East Claydon Substation is the closest major infrastructure, located within Parcel 3. Traversing from this substation are three overhead power lines (400 Kilovolt (kV) transmission line), carried by pylon structures, which run across Parcel 3 to the east and south.

1.2.5. Parcels 1 and 1a are gently undulating with the highest point being Knowl Hill at around 116m above ordnance datum (AOD) as shown on **ES Volume 3, Figure 2.3: Topography Plan [EN010158/APP/6.3]**. The rest of Parcel 1 is at an elevation of 80-90m AOD and Parcel 1a at an elevation of 79-84m AOD. Parcel 2 is located on a low ridge crest at 136m AOD and Parcel 3 is located on relatively flat ground at 90-94m AOD on the north east of the ridge. **ES Volume 3, Figure 2.3: Topography Plan [EN010158/APP/6.3]** provides further detail on the topography of the Internal Access Corridors, Interconnecting Cable Corridors and Grid Connection Cable Corridor.

1.3. Agricultural Use

1.3.1. The entire area supported a mix of arable crops and grassland in 2022, 2023, 2024 and 2025. The Site is predominantly arable cereal crop rotation and permanent grassland supporting livestock (sheep, cattle and horses).

1.4. Published Information

Geology

1.4.1. 1:50,000 scale BGS information[2] records the basal geology of the Site as follows:

- Stewartby Member mudstone is found in the western part of the area up to Home Wood. This is sedimentary bedrock formed between 166.1 and 163.5 million years ago during the Jurassic period.
- West Walton Formation mudstone is found in the eastern parts, as well as in a central strip just south of Botolph Claydon. This is sedimentary bedrock formed between 163.5 and 157.3 million years ago during the Jurassic period.
- Weymouth Member mudstone is the predominant bedrock geology throughout the rest of the Site and is located on top of Knowl Hill, between the central and western parts and throughout much of the eastern parts, as well as in the area furthest south. This is sedimentary bedrock formed between 163.5 and 157.3 million years ago during the Jurassic period.
- Peterborough Member mudstone (often rick in fossils) is located in a small area in the north western corner of Parcel 1.

1.4.2. The superficial geology of the Site is recorded as follows:

- Glacial Deposits, clay, silt and sand, are recorded on summit areas, such as Knowl Hill and south of Muxwell Farm. These are sedimentary superficial deposit formed between 2.588 million and 11.8 thousand years ago during the Quaternary period.
- Glaciofluvial deposits, sand and gravel are recorded north-east of Muxwell Farm. These are sedimentary superficial deposit formed between 860 and 116 thousand years ago during the Quaternary period.
- Till, Diamicton, is found on the summit east from Greatsea Wood, as well as south of Coppice Lowhill Farm. Sedimentary superficial deposit formed between 860 and 116 thousand years ago during the Quaternary period.
- Alluvium, clay, silt, sand and gravel is found around watercourses throughout the area. These are sedimentary superficial deposit formed between 11.8 thousand years ago and the present during the Quaternary period.

[2] British Geological Survey, 2019. *Geology of Britain viewer*. Online resource: http://www.bgs.ac.uk/discoveringGeology/geologyOfBritain/viewer.html

- Man made, artificial material is present as a result of human development to the north of Parcel 3 (associated with National Grid East Claydon Substation) as well as on the western side of the railway line that is to the west of Parcels 1 and 1a.

Soils Information

1.4.3. The National Soils Map, published at 1:250,000 scale, records soils at the Site as belonging to the Denchworth, Evesham 2, Ragdale, Wickham 2, and Fladbury 1 soil associations. These soils are all described as typically slowly permeable. They are mapped at respectively 64%, 22%, 12%, 1%, and <1% of the total survey areas respectively – see **Annex 2 Soil Association Map**.

- The Denchworth soil association is described as slowly permeable, seasonally waterlogged clayey soils with some similar fine loamy over clayey soils.
- The Evesham 2 soil association is described as slowly permeable calcareous clayey soils.
- The Ragdale soil association is described as slowly permeable, seasonally waterlogged clayey and fine loamy over clayey soils.
- The Wickham 2 soil association is described as slowly permeable seasonally waterlogged fine loamy over clayey, fine silty over clayey and clayey soils.
- The Fladbury 1 soil association is described as stoneless clayey soils, in places calcareous and variably affected by groundwater.

Parcel 1 Soils

1.4.4. The majority of the Site is a dark greyish brown inorganic clay topsoil over a gleyed light brown poorly structured slowly permeable clay subsoil. (Gleying occurs when soils are waterlogged and is visible as a mottled discoloration).

Parcel 1a Soils

1.4.5. The majority of the Site is a dark greyish brown inorganic clay topsoil over a gleyed light brown poorly structured slowly permeable clay subsoil.

Parcel 2 Soils

1.4.6. The soils in Parcel 2 are as described for Parcels 1 and 1a, with the exception of a variation in the soils recorded to the immediate south of Botolph Claydon, in Field D2. These soils are described as a dark grey clay, clay loam or sandy clay loam topsoil over a dark greyish brown or grey porous sandy clay loam upper subsoils and slowly permeable sandy clay loam lower subsoils.

Parcel 3 Soils

1.4.7. The soils in Parcel 3 are the same as described in Parcels 1 and 1a, with no local variations observed.

1.5. Previous Agricultural Land Classification

1.5.1. No detailed post-1988 Agricultural Land Classification is publicly available for this Site. An ALC survey was completed in 1996 to the south west of Winslow, approx. 2km north east of the north eastern corner of the Site. The south western part of the area surveyed is at similar altitude to the east of Calvert (approx. 100m) and is mapped by the National Soils Map as belonging to the Denchworth soil association. The 1996 survey reported the area as being of Subgrade 3b land quality.

1.5.2. The provisional ALC map, published at 1:250,000 scale, records the land as being of Grade 3, 4, and 5 quality[3].

[3] Defra, 2020. *Interactive map of Great Britain*. Online resource: https://magic.defra.gov.uk/MagicMap.aspx

2. Methodology

2.1.1. In order to maintain consistency, the methodology used in 2022/23 by a separate company was utilised for this survey, undertaken as part of the same project. In total 620.6 hectares (ha) of the entire 675.05ha Site was surveyed at a minimum density of one observation per two hectares.

2.1.2. The survey points were distributed evenly across the Site, at an approximate survey density of one point per hectare as per standard methodology and guidance. Soils were mapped on an approximate 100m grid with precise sample points adapted in the field to best capture data for locations where geomorphological, biological or land use features indicated a likely change in soil type; and avoiding features such as hedgerows and tracks.

2.1.3. The surveys were completed in October 2022, January & June 2023, June 2024 and March 2025. During the surveys soils were examined via a combination of auger borings and soil description pits to a maximum depth of 1.2m. The logs of the details of each observation point are provided as **Annex 4a and 4b.** Maps showing the location of each observation point are provided as **Annex 3**.

2.1.4. Nine soil description pits were dug at the Site. A soil sample representative of the top 25cm was collected from three pits and submitted to NRM laboratories for particle size distribution analysis by the pipette methodology to confirm Site findings. The results of this analysis are given in **Section 3** and in **Annex 6**.

3. Desk Based Study

3.1.1. There is a total of 54.45ha within the Order Limits that was not able to be surveyed due to access restrictions as shown on **Annex 1**.

3.1.2. The soil association map in **Annex 2** shows that the soil associations in the unsurveyed areas are Evesham 2, Wickham 2, Denchworth and a small section of Ragdale closest to East Claydon.

3.1.3. These soils are all slowly permeable clayey soils with similar fine loamy over clayey soils with seasonal waterlogging. The field capacity days are the same within the unsurveyed area as they are for the surveyed area.

3.1.4. These soil associations have been mapped throughout the Site and the survey indicated that the soil types found follow closely to the predicted soil types on the soil association map. The unsurveyed area are neighbouring areas which have been surveyed and are expected to be of the same soil type.

3.1.5. The provision ALC map predicts the unsurveyed area to be either Grade 3 or Grade 4. The majority of the Site that is provisional Grades 3 and 4 and Grade 3b has been found across all these areas. As the soil type is homogeneous throughout the Site it is therefore reasonable to assume the portion of the unsurveyed area on agricultural land will also be Grade 3b. This accounts for 42.45ha of the total unsurveyed area.

3.1.6. The remaining 12ha of unsurveyed land is in the area covered by the National Grid East Claydon Substation. This land has therefore been classified as Non-agricultural land.

4. Soils

4.1. Soil Types

4.1.1. The soils vary little in characteristics across this Site. Almost all soil profiles are clayey, with gleyed[4] and poorly structured, slowly permeable clayey subsoil recorded within 15-45cm of the soil surface – directly below the topsoil. Pit Descriptions can also be found in **Annex 5**.

Fine loamy/clayey over clay soil

4.1.2. These soils have either a heavy clay loam or clay topsoil overlying gleyed, poorly structured, slowly permeable clayey upper subsoil and lower subsoil. The topsoil is very slightly stony (0-5%), with a few small, rounded stones. The upper and lower subsoil is very slightly (0-5%) stony.

4.1.3. Four example soil profiles are described below from the pits at observation A, B, 73, and 145 - see **Annex 3**.

Pit A

0-28cm Dark brown (10YR 3/3) heavy clay loam; non calcareous; firm, moderately developed medium angular blocky structure; 1% medium rounded and angular hard stones; porous (>0.5% biopores >0.5mm); common very fine fibrous roots; smooth clear boundary to:

28-61cm Light olive brown (2.5Y 5/3) and grey (2.5Y 6/1) clay with common strong brown (7.5YR 5/6) mottles and black ferrimanganiferous concretions; very firm, strongly developed medium angular blocky structure; non-calcareous; 5% medium rounded and angular hard stones; few very fine fibrous roots; nonporous (<0.5% biopores >0.5mm); indistinct boundary to:

61-120cm Light olive grey (5Y 6/2) clay with many strong brown (7.5YR 5/8) mottles; calcareous, 5% medium rounded hard stones and crushed chalk; few very fine fibrous roots; very firm, moderately developed coarse prismatic to massive structure; nonporous (<0.5% biopores >0.5mm).

Pit B

0-27cm Dark greyish brown (10YR 4/2) clay; non-calcareous; firm, moderately developed medium angular blocky structure; 1% medium rounded and angular hard stones; porous (>0.5%

[4] Gleying is a soil colouring indicative of periodic or permanent waterlogging.

biopores > 0.5mm diameter); many very fine fibrous roots; smooth wavy boundary to:

27-46cm Light olive brown (2.5Y 5/3) and grey (5YR 5/1) clay with many strong brown (7.5YR 5/8) mottles and black ferrimanganiferous concretions; non-calcareous; very firm, moderately developed medium prismatic structure; 1% medium rounded hard stones (flints); few very fine fibrous roots; nonporous (<0.5% biopores > 0.5mm diameter); indistinct boundary to:

46-120cm Grey (10YR 5/1) clay with many strong brown (7.5YR 5/8) mottles; very firm, weakly developed coarse prismatic to massive structure; non-calcareous; 1% small and medium rounded hard stones; few very fine fibrous roots; nonporous (<0.5% biopores > 0.5mm diameter).

Pit 73

0-26cm Dark greyish brown (10YR 4/2) clay; 1-2% small sub-angular flints; weakly developed very coarse sub-angular blocky structure; firm; non-calcareous; smooth gradual boundary to:

26-69cm Grey (10YR 5/1) clay with 20% distinct fine and medium yellowish brown (10YR 5/8) mottles; stoneless; weakly developed very coarse angular blocky structure; very firm; nonporous (<0.5% biopores > 0.5mm diameter); non-calcareous; smooth gradual boundary to:

69-120cm Blueish grey (5B 6/1) clay with 15% distinct fine yellowish brown (10YR 5/8) mottles; stoneless; structureless (massive); very firm; nonporous (<0.5% biopores > 0.5mm diameter); calcareous.

Pit 145

0-30cm Dark greyish brown (10YR 4/2) clay slightly 2-5% small and medium hard subangular stones and flints; weakly developed medium to coarse angular blocky structure; firm; 2% pores; few fine fibrous roots; non calcareous; smooth gradual boundary to:

30-54cm Grey (10YR 5/1) clay with common 10% medium yellowish brown (10YR 5/8) mottles; stoneless; weakly developed very coarse prismatic structure; very firm; few roots; nonporous (<0.5% biopores > 0.5mm diameter); non calcareous; smooth gradual boundary to:

54-120cm Light grey (10YR 6/1) clay with 5% fine brownish yellow (10YR 6/8) mottles; common small chalk stones; weakly developed very coarse prismatic structure to massive (structureless); nonporous (<0.5% biopores > 0.5mm diameter); very firm; very calcareous.

4.1.4. These soils are slowly permeable and imperfectly or poorly drained belonging to Wetness Class (WC) III & IV depending on depth to a slowly permeable layer. The pit profile described above is WC IV.

Loamy over clayey soil

4.1.5. These soils occur on the top of Knowl Hill in the south of Three Points Lane, where a cover of sandier drift overlies the basal clay. They comprise a sandy loam or sandy clay loam topsoil and permeable upper subsoil, overlying a dense clay at depth. The subsoils are gleyed (greyish and pale colours with ochreous mottles), indicating the land suffers seasonal waterlogging.

4.1.6. An example soil profile is described below from the pit at observation 43 - see **Annex 3**.

0-30 cm Dark brown (7.5YR 3/3) medium sandy loam; 5-10% small and medium rounded hard stones; moderately developed medium angular blocky structure; friable; porous (>0.5% biopores > 0.5mm diameter); few fine friable roots; smooth clear boundary to:

30-54 cm Light brown (7.5YR 6/3) sandy clay loam with 15% large reddish yellow (7.5YR 6/8) and grey (7.5YR 7/1) mottles; stoneless; medium subangular blocky structure; friable; porous (>0.5% biopores > 0.5mm diameter); smooth diffuse boundary to:

54-120 cm Greyish brown (10YR 6/3) clay with large prominent grey (7.5YR 6/1) and reddish yellow (7.5YR 6/8) mottles and black (7.5YR 2.4/1) ferrimanganiferous concretions; stoneless; weakly developed coarse angular blocky structure; firm; nonporous (<0.5% biopores > 0.5mm diameter).

4.1.7. These soils are imperfectly to moderately freely draining depending on the depth to the slowly permeable layer (Soil Wetness Class II/III).

4.2. Laboratory analysis

4.2.1. Samples representative of the top 25cm of the soil profile were taken from observations at the soil pits A, B, and C. These soils were submitted to NRM Laboratories for particle size distribution (PSD) analysis. The

laboratory report is given in **Annex 6**. The textures are confirmed in the **Table 3.1** below.

Table 3.1: PSD analysis results

Observation	PSD Analysis
Pit A	Clay
Pit B	Clay
Pit C	Organic Clay

5. Agricultural Land Classification

5.1.1. The Agricultural Land Classification (ALC) system provides a framework for classifying land according to the extent to which its physical or chemical characteristics impose long-term limitations on agricultural use for food production. The limitations can operate in one or more of four principal ways; they may affect the range of crops which can be grown, the level of crop yield, the consistency of crop yield, and the cost of obtaining a crop.

5.1.2. The classification system gives considerable weight to flexibility of cropping, whether actual or potential, however the ability of some land to produce consistently high yields of a narrower range of crops is also taken into account.

5.1.3. The ALC system classifies land into five grades numbered 1 to 5, with Grade 3 divided into two subgrades (3a and 3b). The system was devised and introduced by the then Ministry of Agriculture, Fisheries and Food (MAFF) in the 1960s and revised in 1988. A description of the grades used in the ALC system is attached to this report as **Annex 7**.

5.2. Climate

5.2.1. The agricultural climate is an important factor in assessing the agricultural quality of land, and the agricultural climate of the Site has been calculated using the Climatological Data for Agricultural Land Classification[5]. The range of relevant Site data found within the survey area are given below in **Table 4.1**.

Table 4.1: Agro-climatic variables

Average Annual Rainfall (AAR)	643 - 684mm
January-June Accumulated Temperature (AT0)	1348 - 1398 day °C
Field Capacity Days (FCD)	136 – 142
Field Capacity Period	Early Nov – mid Apr
Moisture Deficit Wheat (MDW)	100 - 106mm
Moisture Deficit Potatoes (MWP)	90 - 97mm

[5] Meteorological Office, (1989). *Climatological Data for Agricultural Land Classification*.

Climate (upper grade limit)	1

5.2.2. The Site is located in lowland England and there is no agro-climatic limitation to agriculture.

5.3. Results

5.3.1. The results of the soil survey described in **Section 3** were used in conjunction with the agro-climatic data above to classify the land according to the revised guidelines for ALC issued in 1988 by the Ministry of Agriculture, Fisheries and Food (now Defra).

5.3.2. This report has identified agricultural land of Grade 2. Subgrade 3a, and Subgrade 3b quality. The principal limitation to agricultural use of the land is soil wetness.

Grade 1

5.3.3. No land of this quality has been mapped.

Grade 2

5.3.4. Land of this quality is found across 3.01ha (0.44%) of the Site area. This land comprises the imperfectly-draining land (Wetness Class III) with coarse loamy topsoils and moderately-freely (Wetness Class II) draining soils with medium loamy topsoils found at Knowl Hill. These combinations mean that wetness is likely to present some limitations to land access by machinery in the winter. These soils are equally limited by slight droughtiness, as the poorly structured lower subsoils store sub-optimal water for crop uptake in dry years under the local climate.

Subgrade 3a

5.3.5. Land of this quality is found across 7.19ha (1.07%) of the Site area. This subgrade comprises imperfectly-draining (Wetness Class III) soils with medium loamy topsoils found at Knowl Hill. The combination of moderately high topsoil clay content and impeded drainage means that land access by machinery will be restricted in winter and early spring in most years, although late spring (and autumn) sowings are usually possible.

Subgrade 3b

5.3.6. Land of this quality is found across 594.91ha (88.13%) of the Site area and an additional 42.45ha (6.29%) of unsurveyed area was predicted to be 3b. These soils have a topsoil of either heavy clay loam, clay or less frequently medium clay loam overlying clay subsoil at a depth of 15-45cm with evidence of gleying within 40cm of the soil surface. These soils are poorly structured and slowly permeable within 40cm depth. They have impeded drainage and belong to Wetness Class IV (or occasionally Wetness Class III).

5.3.7. On such land the principal limitation to agriculture is soil wetness. For arable cropping the land is best suited to autumn sown crops.

Grade 4

5.3.8. No land of this quality has been mapped.

Grade 5

5.3.9. No land of this quality has been mapped.

Non-agricultural

5.3.10. Non-agricultural land has been identified at the East Claydon Substation and surrounding area as well as roads and infrastructure. The total area of non-agricultural land is 27.48ha (4.07%), including 12ha of unsurveyed land which is assumed to be Non-agricultural.

Urban

5.3.11. No land of this quality has been mapped.

5.4. Summary of grade areas

5.4.1. The boundaries between the different grades of land are shown in **Annex 1**. The area occupied by each grade is shown in **Table 4.2** below.

Table 4.2: Grade areas

Grade/subgrade	Area (ha)	Area (%)
Grade 1	-	-
Grade 2	3.01	0.44
Subgrade 3a	7.19	1.07
Subgrade 3b	594.91	88.13
Grade 4	-	-
Grade 5	-	-
Non-agricultural	15.48	2.29
Unsurveyed area (3b)	42.45	6.29
Unsurveyed area (Non-agricultural)	12	1.78
Total	**675.05**	**100**

6. Conclusions

6.1.1. The survey has identified mainly heavy clay loam or clay topsoils over clay subsoils with impeded drainage across almost the entire Site. These soils form agricultural land of Subgrade 3b (637.36ha, 94.42%) quality. The principal limitation to the agricultural use of the land is soil wetness.

6.1.2. The rest of the Site has been identified as having loamy topsoils over clay subsoils with impeded drainage. These soils form agricultural land of Grade 2 (3.01ha, 0.44%) and Subgrade 3a (7.19ha, 1.07%) quality.

Annex 1 – Agricultural Classification Map

LEGEND:

Order Limits

ALC Grades

- 2
- 3a
- 3b
- Non agric

CRS: EPSG:27700
Projection: Transverse Mercator
Ellipsoid: EPSG:7001
Units: meters

Rev	Date	Description	Drn	Chk	App
01	05/06/2025	Second Draft	JR		

Rosefield Solar Farm

Rosefield Solar Farm

Document: Annex 1

Agricultural Land Classification Map

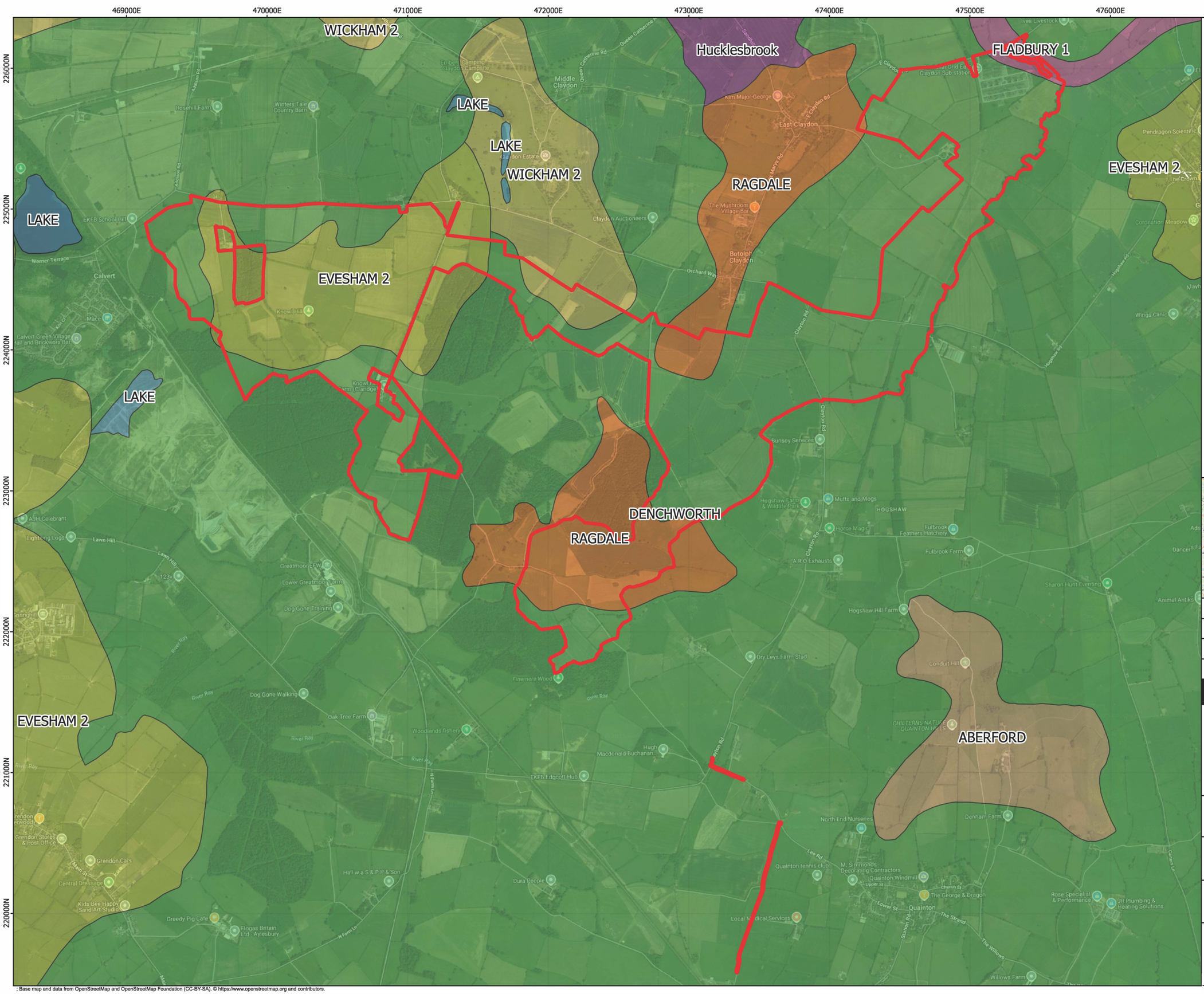
PINS REFERENCE NUMBER: EN010158/APP/6.4

0 0.5 1
Kilometers

Scale: 1:25000 @A3

REV 00

Annex 2 – Soil Association Map



LEGEND:

Order Limits

Soil Associations

- ABERFORD
- DENCHWORTH
- FLADBURY 1
- Hucklesbrook
- LAKE
- RAGDALE
- WICKHAM 2

CRS: EPSG:27700
Projection: Transverse Mercator
Ellipsoid: EPSG:7001
Units: meters

Rev	Date	Description	Drn	Chk	App
01	05/06/2025	Second Draft	JR		

Rosefield Solar Farm

Rosefield Solar Farm

Document: Annex 2

Soil Association Map

PINS REFERENCE NUMBER: EN010158/APP/6.4

0 0.5 1
Kilometers

Scale: 1:25000 @A 3

REV 00

Annex 3a – Auger and Pit Location Map (ADAS)

469000E 470000E 471000E 472000E 473000E 474000E 475000E 476000E

226000N 225000N 224000N 223000N 222000N 221000N 220000N

LEGEND:

- Order Limits
- Already surveyed
- Auger Locations
- Red line boundary
- Soil pits
- Unsurveyed Area
- Surveyed Area

CRS: EPSG:27700
Projection: Transverse Mercator
Ellipsoid: EPSG:7001
Units: meters

Rev	Date	Description	Drn	Chk	App
01	05/06/2025	Second Draft	JR		

Rosefield Solar Farm

Rosefield Solar Farm

Document: Annex 3

Auger & Pit Location Map

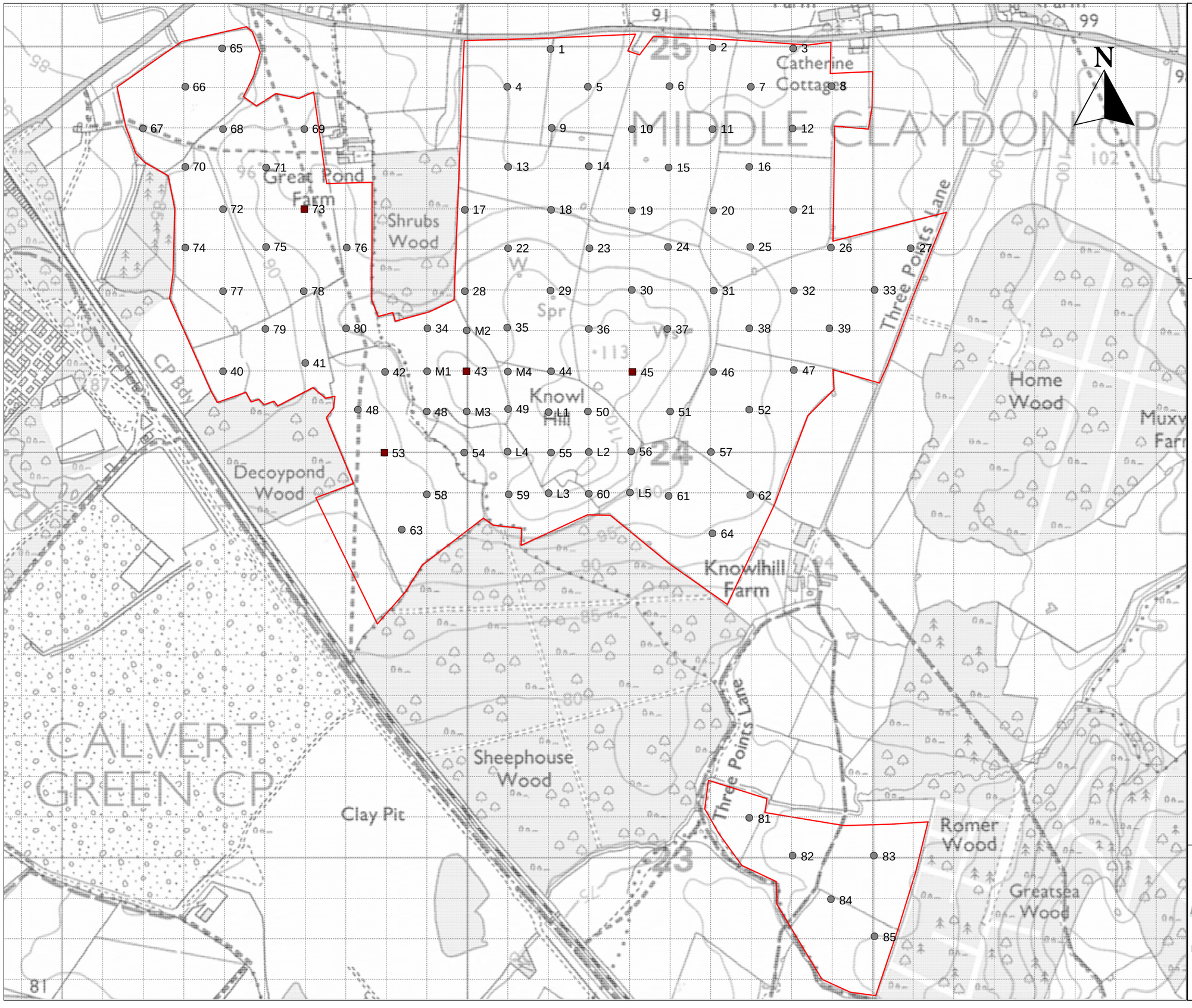
PINS REFERENCE NUMBER:
EN010158/APP/6.4

0 0.5 1
Kilometers
Scale: 1:25000 @A3

REV 00

; Base map and data from OpenStreetMap and OpenStreetMap Foundation (CC-BY-SA). © https://www.openstreetmap.org and contributors.

Annex 3b – Auger and Pit Location Map (LRA)



KEY

- Auger observation
- Soil/land grade description pit
- Survey area

Site:

Land south of Middle Claydon

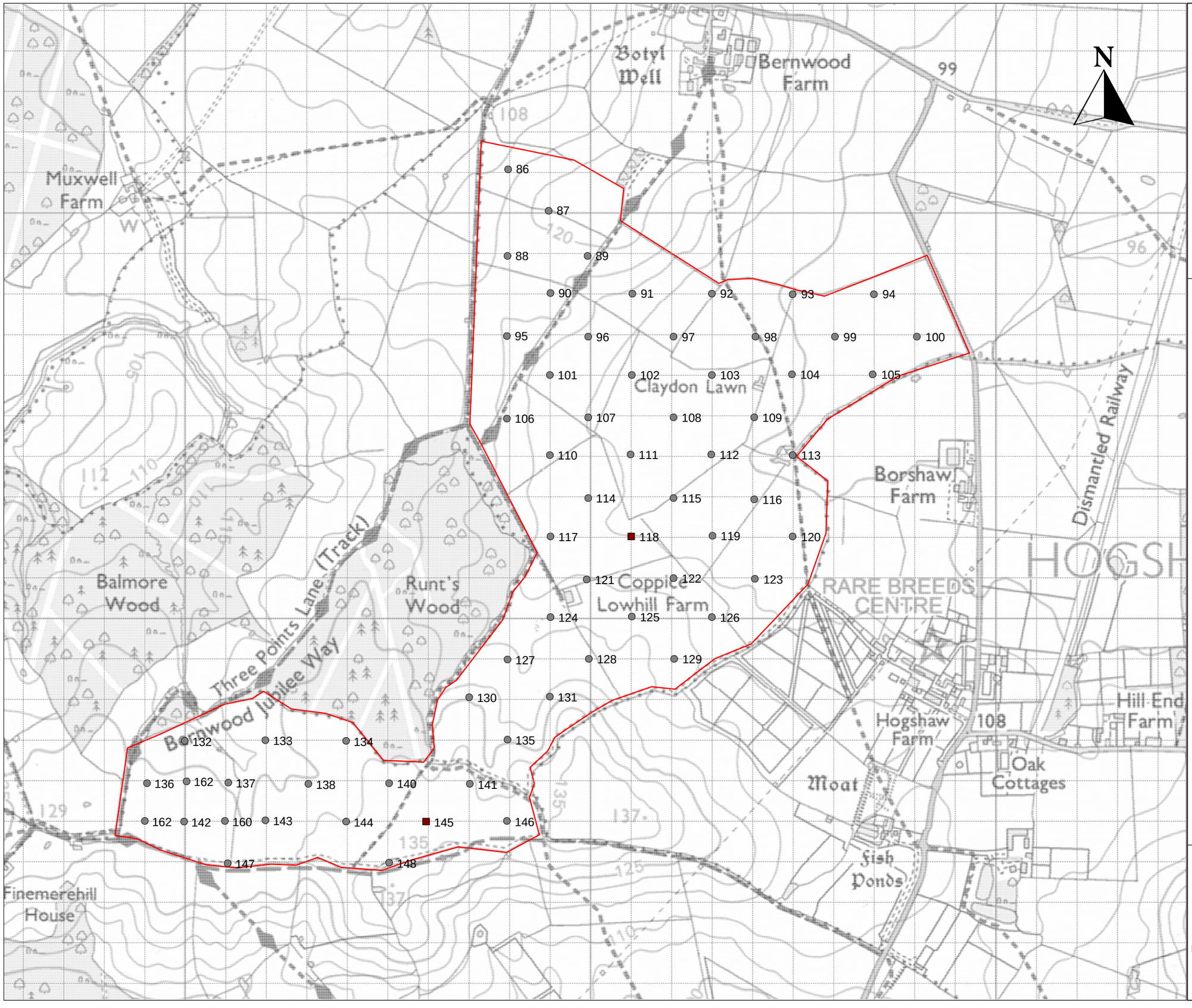
Map title:

Map 1A
Survey observations

Land Research Associates
Lockington Hall
Lockington
Derby DE74 2RH
01509 670570

Scale: 1:9,000

Date: 10/02/2023



KEY

- Auger observation
- Soil/land grade description pit
- Survey area

Site:

Land south of Middle Claydon

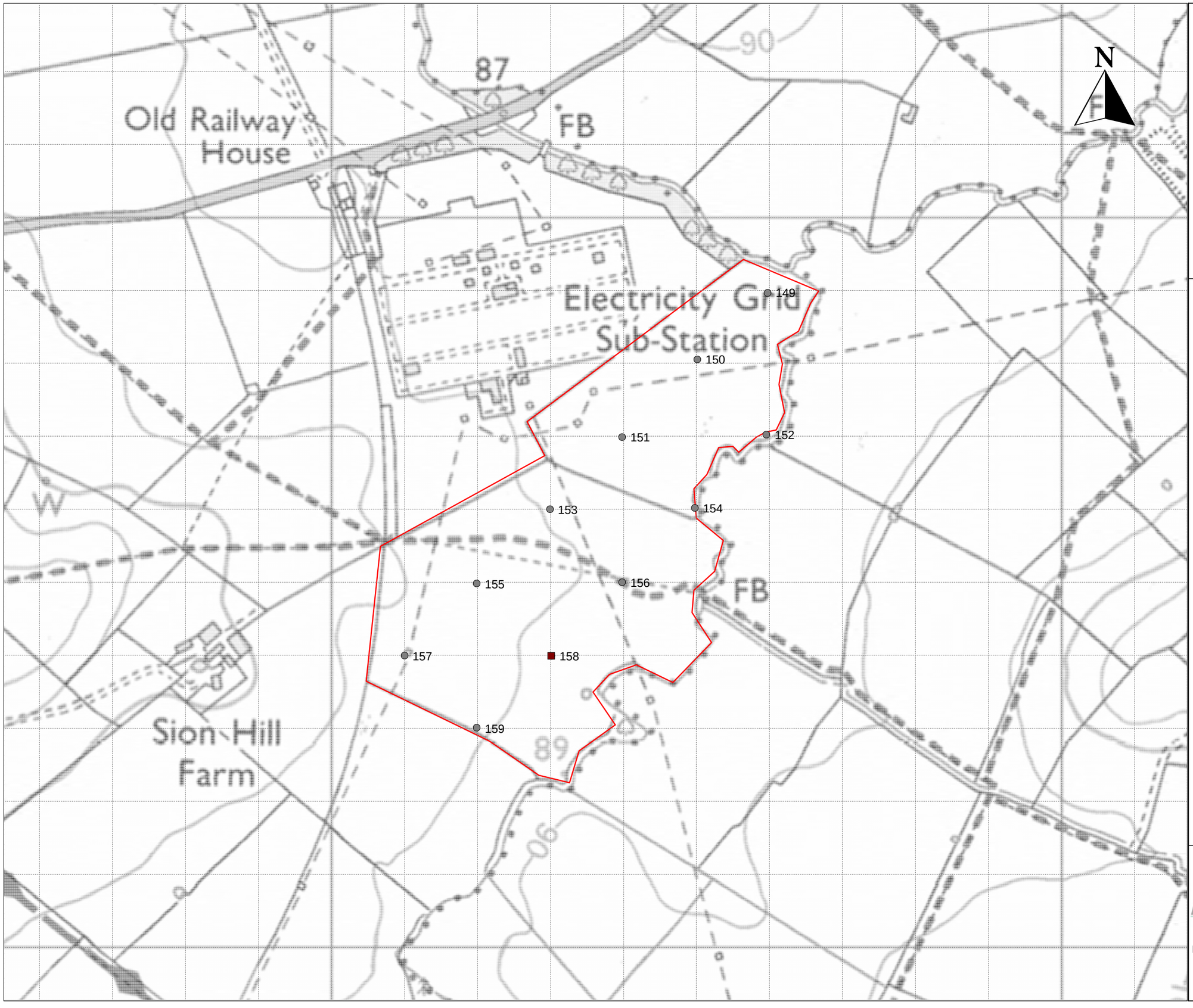
Map title:

Map 1B
Survey observations

Land Research Associates
Lockington Hall
Lockington
Derby DE74 2RH
01509 670570

Scale: 1:9,000

Date: 10/02/2023



KEY

- Auger observation
- Soil/land grade description pit
- Survey area

Site:

Land south of Middle Claydon

Map title:

Map 1C
Survey observations

Land Research Associates
Lockington Hall
Lockington
Derby DE74 2RH
01509 670570

Scale: 1:5,000

Date: 10/02/2023

Annex 4a – Auger Logs (ADAS)

Key to auger record:

Colour	Texture	Texture suffixes
Bk - black	C - clay	Calcareous:
Br - brown	ZC - silty clay	v sl ca - very slightly calcareous
Dk - dark	SC - sandy clay	sl ca - slightly calcareous
Gr - grey	CL - clay loam (H-heavy, M-medium)	ca - calcareous
Li - light	ZCL - silty clay loam (H-heavy, M-medium)	v ca - calcareous
Ol - olive	SCL - sandy clay loam	
Pi - pink	SZL - sandy silt loam (F-fine, M-medium, C-coarse)	Stoniness (by volume):
Pl - pale	ZL - silt loam	v sl st - very slightly stony (1-5%)
Rd - red	SL - sandy loam (F-fine, M-medium, C-coarse)	sl st - slightly stony (6-15%)
St - strong	LS - loamy sand (F-fine, M-medium, C-coarse)	m st - moderately stony (16-35%)
v - very	S - sand (F-fine, M-medium, C-coarse)	v st - very stony (36-70%)
Wk - weak	Org - organic (S-sand, L-loam, C-clay)	ex st - extremely stony (>70%)
Yl – yellow	Pty - peaty (S-sand, L-loam)	
Y – Yellow hue	Pt - peat (S-sandy, L-loamy, H-humified, SF-semi-fibrous, F-fibrous)	Other:
YR – Yellow-red hue	R - bedrock	fm – ferrimanganiferous concentrations

Mottle intensity	Limitations
o – unmottled.	CL - climate
	DE - depth
x – a few to common rusty root channel mottles (topsoil) or a few ochreous mottles (subsoil).	DR - droughtiness
	ER - erosion
	FL - flooding
xx – common to many ochreous mottles and/or dull structure faces.	GR - gradient
	MR - microrelief

xxx – greyish or pale colours dominant in matrix or ped faces and common to many ochreous mottles (gleyed horizon).

xxxx – dominantly grey, often with some ochreous mottles (gleyed horizon).

ST - stoniness
TX - texture
WE - wetness/workability

Auger	Depth (cm)	Colours	Munsell Colours		Texture	Mottling	SPL	CaCO3	Stones				Slope	WC	WE Grade	DR Grade	Overall Grade	Limit(s)
			1	2					Total	>2cm	>6cm	Litho						
1	21	V Dk Gr Br	2.5Y 3/2		HCL		-		1			1	2	IV	3b	2	**3b**	WE
	65	Li Ol Br + Gr	2.5Y 5/3	2.5Y 6/1	C	xxx	yes		0			1						
2	34	Dk Gr Br	2.5Y 4/2		HCL		-	v sl ca	1			1	1	IV	3b	2	**3b**	WE
	70	Li Ol Br + Gr	2.5Y 5/3	2.5Y 6/1	C	xxx	yes		0			1						
3	27	Dk Gr Br	2.5Y 4/2		HCL		-		1			1	1	IV	3b	2	**3b**	WE
	45	Li Ol Br + Gr	2.5Y 5/3	2.5Y 6/1	C	xxx	yes		5			1						
	75	Gr Br + Li Ol Br	2.5Y 5/2	2.5Y 5/3	C	xxx	yes		0									
4	21	V Dk Gr Br	2.5Y 3/2		HCL		-		1			1	1	IV	3b	2	**3b**	WE
	65	Li Ol Br + Gr	2.5Y 5/3	2.5Y 6/1	C	xxx	yes		0			1						
5	25	Dk Gr Br	2.5Y 4/2		HCL		-		2			1	1	IV	3b	2	**3b**	WE
	70	Li Ol Br + Gr	2.5Y 5/3	2.5Y 6/1	C	xxx	yes		1			1						
	100	Gr	2.5Y 5/1		C	xxx	yes		0									
6	27	Br	10YR 4/3		HCL		-		2			1	1	IV	3b	2	**3b**	WE
	45	Gr Br	2.5Y 5/2		C	xxx	yes		2			1						
	56	Gr	2.5Y 5/1		C	xxx	yes		5			1						
					Impenetrable due to stones													
7	28	Br	10YR 4/3		HCL		-		1			1	2	III	3b	2	**3b**	WE
	39	Gr Br + Li Ol Br	2.5Y 5/2	2.5Y 5/3	C	xxx	no		3			1						
	75	Li Ol Br + Gr	2.5Y 5/3	2.5Y 5/1	C	xxx	yes		3			7						
8	25	Br	10YR 4/3		HCL		-		2			1	2	IV	3b	2	**3b**	WE
	53	Gr Br	10YR 5/2		C	xxx	yes		3			1						
					Impenetrable due to stones													
9	26	Br	10YR 4/3		HCL		-		1			1	2	IV	3b	2	**3b**	WE
	75	Li Ol Br + Gr Br	2.5Y 5/3	2.5Y 5/2	C	xxx	yes		1			1						
10	25	Br	10YR 4/3		HCL		-		1			1	2	IV	3b	2	**3b**	WE
	41	Gr Br + Gr	2.5Y 5/2	2.5Y 5/1	C	xxx	yes		3			1						
	61	Rd Br + Gr	2.5YR53	10YR 5/1	C	xxx	no	ca	20			4						

Auger	Depth (cm)	Colours	Munsell Colours		Texture	Mottling	SPL	CaCO3	Stones				Slope	WC	WE Grade	DR Grade	Overall Grade	Limit(s)
			1	2					Total	>2cm	>6cm	Litho						
11	27	Br	10YR 4/3		HCL		-		3			1	2	III	3b	2	**3b**	WE
	44	Li Ol Br + Gr Br	2.5Y 5/3	2.5Y 5/2	C	xxx	no		10			1						
12	28	Dk Br	10YR 3/3		HCL		-		1			1	1	II	3a	2	**3a**	WE
	50	St Br + Gr	7.5YR 4/6	10YR 6/1	HCL	xxx	no		40			1						
					Impenetrable due to stones													
13	29	Dk Gr Br	10YR 4/2		HCL		-		1			1	2	IV	3b	2	**3b**	WE
	55	Li Ol Br	2.5Y 5/3		C	xxx	yes		1			1						
	75	Li Yl Br	2.5Y 6/3		C	xxx	no	ca	5			7						
14	25	Dk Ol Br	2.5Y 3/3		HCL		-		1			1	1	IV	3b	2	**3b**	WE
	45	Li Ol Br + Gr	2.5Y 5/3	2.5Y 6/1	C	xxx	yes		1			1						
	60	Ol Gr	5y52		C	xxx	yes		1			7						
15	26	Ol Br	2.5Y 4/3		HCL		-		1			1	1	IV	3b	2	**3b**	WE
	65	Ol Br + Gr	2.5Y 4/4	2.5Y 6/1	C	xxx	yes		0			1						
16	21	V Dk Gr Br	2.5Y 3/2		HCL		-		5			1	1	IV	3b	2	**3b**	WE
	45	Ol Br + Gr	2.5Y 4/4	2.5Y 6/1	C	xxx	yes	ca	5			4						
	72	Li Ol Br + Gr	2.5Y 5/4	2.5Y 6/1	C	xxx	yes	ca	10			4						
17	28	V Dk Gr Br	2.5Y 3/2		HCL		-		1			1	1	IV	3b	2	**3b**	WE
	55	Ol Br + Gr	2.5Y 4/4	2.5Y 6/1	C	xxx	yes	ca	5			4						
	110	Ol Br + Gr	2.5Y 4/3	2.5Y 6/1	C	xxx	yes	ca	1			4						
18	31	Ol Br	2.5Y 4/3		HCL		-		1			1	2	IV	3b	2	**3b**	WE
	65	Li Yl Br + Gr	2.5Y 6/3	2.5Y 6/1	C	xxx	yes		0			1						
19	26	Ol Br	2.5Y 4/3		HCL		-		1			1	1	IV	3b	2	**3b**	WE
	50	Li Ol Br + Gr	2.5Y 5/3	2.5Y 6/1	C	xxx	yes		0			1						
20	25	V Dk Gr Br	10YR 3/2		HCL		-	sl ca	1			4	2	IV	3b	2	**3b**	WE
	75	Gr Br	2.5Y 5/2		C	xxx	yes	ca	2			4						

Auger	Depth (cm)	Colours	Munsell Colours		Texture	Mottling	SPL	CaCO3	Stones				Slope	WC	WE Grade	DR Grade	Overall Grade	Limit(s)
			1	2					Total	>2cm	>6cm	Litho						
21	31	V Dk Gr Br	10YR 3/2		C		-		1			1	4	IV	3b	2	**3b**	WE
	75	Gr Br + Li Ol Br	2.5Y 5/2	2.5Y 5/3	C	xxx	yes	ca	5			4						
22	29	Ol Br	2.5Y 4/3		HCL		-		1			1	1	IV	3b	2	**3b**	WE
	70	Ol Br + Gr	2.5Y 4/4	2.5Y 6/1	C	xxx	yes		0			1						
23	25	Ol Br	2.5Y 4/3		HCL		-		1			1	1	IV	3b	2	**3b**	WE
	65	Li Yl Br + Gr	2.5Y 6/3	2.5Y 6/1	C	xxx	yes		0			1						
24	24	Dk Gr Br	10YR 4/2		C		-		1			1	3	IV	3b	2	**3b**	WE
	48	Gr Br	2.5Y 5/2		C	xxx	yes	ca	1			1						
	75	Dk Gr + Li Ol Br	5Y 4/1	2.5Y 5/3	C	xxx	yes		1			1						
25	27	Dk Gr Br	10YR 4/2		HCL		-		1			1	2	IV	3b	2	**3b**	WE
	60	Gr Br + Gr	2.5Y 5/2	10YR 5/1	C	xxx	yes	ca	1			1						
26	26	Dk Gr Br	10YR 4/2		C		-		1			1	2	IV	3b	2	**3b**	WE
	45	Li Ol Br + Dk Gr	2.5Y 5/3	2.5Y 4/1	C	xxx	yes		1			1						
	75	Gr Br + Li Ol Br	2.5Y 5/2	2.5Y 5/3	C	xxx	yes		1			1						
27	30	Dk Gr Br	10YR 4/2		C		-		1			1	1	IV	3b	2	**3b**	WE
	75	Gr Br + Li Ol Br	2.5Y 5/2	2.5Y 5/3	C	xxx	yes		1			1						
28	24	Dk Gr Br	10YR 4/2		C		-		1			1	5	IV	3b	2	**3b**	WE
	75	Gr Br + Gr	2.5Y 5/2	10YR 5/1	C	xxx	yes	ca	1			1						
29	25	Dk Gr Br	10YR 4/2		C		-		1			1	2	IV	3b	2	**3b**	WE
	45	Li Ol Br + Dk Gr	2.5Y 5/3	2.5Y 4/1	C	xxx	yes		3			1						
	75	Gr Br + Gr	2.5Y 5/2	2.5Y 5/1	C	xxx	yes	ca	3			7						
30	26	Dk Gr Br	10YR 4/2		C		-		1			1	1	IV	3b	2	**3b**	WE
	48	Li Ol Br + Gr Br	2.5Y 5/3	2.5Y 5/2	C	xxx	yes		5			1						
	75	Ol Gr + Gr	5Y 42	2.5Y 5/1	C	xxx	yes	ca	1			7						

Auger	Depth (cm)	Colours	Munsell Colours		Texture	Mottling	SPL	CaCO3	Stones				Slope	WC	WE Grade	DR Grade	Overall Grade	Limit(s)
			1	2					Total	>2cm	>6cm	Litho						
31	15	Dk Gr Br + Gr	10YR 4/2	10YR 5/1	HCL		-		1			1	1	IV	3b	2	**3b**	WE
	36	Br + Gr Br	10YR 5/3	10YR 5/2	C	xxx	yes		3			1						
	75	Gr Br	2.5Y 5/2		C	xxx	yes		1			1						
32	25	Dk Gr Br + Gr	10YR 4/2	10YR 5/1	HCL		-		1			1	1	IV	3b	2	**3b**	WE
	50	Gr Br	2.5Y 5/2		C	xxx	yes		1			1						
	75	Gr Br + Li Ol Br	2.5Y 5/2	2.5Y 5/4	C	xxx	yes	ca	5			1						
33	26	Dk Gr Br	10YR 4/2		HCL		-		8			1	1	III	3b	2	**3b**	WE
	34	Br + Gr Br	10YR 4/3	10YR 5/2	C	xxx	no	sl ca	20			1						
34	34	Dk Gr Br + Gr	10YR 4/2	10YR 5/1	HCL		-		1			1	1	IV	3b	2	**3b**	WE
	75	Gr Br	2.5Y 5/2		C	xxx	yes		1			1						
35	28	Dk Gr Br	10YR 4/2		HCL		-		10			1	1	III	3b	2	**3b**	WE
	36	Br + Gr Br	10YR 4/3	10YR 5/2	HCL	xxx	no	sl ca	20			1						
					Impenetrable due to stones													
36	28	Dk Gr Br	10YR 4/2		MCL		-		3			1	1	III	3a	1	**3a**	WE
	57	Gr Br	10YR 5/2		HCL	xxx	no	sl ca	3			1						
	90	Gr Br + Gr	2.5Y 5/2	10YR 5/1	C	xxx	yes		1			1						
37	23	Dk Br	10YR 3/3		HCL		-		8			1	1	III	3b	1	**3b**	WE
	40	Ol Br	2.5Y 4/3		HCL	xx	no		10			1						
					Impenetrable due to stones													
38	22	Dk Gr Br	10YR 4/2		HCL		-		5			1	1	IV	3b	2	**3b**	WE
	39	Gr Br + Br	10YR 5/2	10YR 4/3	HCL	xxx	yes	sl ca	10			1						
	52	Gr Br + Gr	10YR 5/2	10YR 5/1	C	xxx	no		5			1						
39	17	Dk Gr Br	10YR 4/2		HCL		-		1			1	1	IV	3b	2	**3b**	WE
	35	Dk Gr	10YR 4/1		C	xxx	yes		1			1						
	75	Gr Br + Gr	2.5Y 5/2	10YR 5/1	C	xxx	yes		1			1						
40	35	Dk Br	10YR 3/3		HCL		-		2			1	1	IV	3b	2	**3b**	WE
	70	Gr Br + Li Br Gr	10YR 5/2	10YR 6/2	C	xxx	yes	ca	1			4						

Auger	Depth (cm)	Colours	Munsell Colours		Texture	Mottling	SPL	CaCO3	Stones				Slope	WC	WE Grade	DR Grade	Overall Grade	Limit(s)
			1	2					Total	>2cm	>6cm	Litho						
41	25	Li Ol Br	2.5Y 5/4		HCL		-		5			1	1	III	3b	2	**3b**	WE
	37	Ol Br	2.5Y 4/3		C	xx	no		5			1						
							Impenetrable due to stones											
42	32	Dk Gr Br	10YR 4/2		C		-		1			1	1	IV	3b	2	**3b**	WE
	75	Gr Br	2.5Y 5/2		C	xxx	yes		1			1						
43	36	Ol Br	2.5Y 4/3		HCL		-		1			1	1	IV	3b	2	**3b**	WE
	75	Gr Br + Li Br Gr	10YR 5/2	10YR 6/2	C	xxx	yes		1			1						
44	30	Br	10YR 4/3		HCL		-		1			1	1	IV	3b	2	**3b**	WE
	50	Ol Br	2.5Y 4/3	10YR 6/2	C	xxx	yes		1			1						
	75	Ol Br + Gr	2.5Y 4/3	10YR 6/1	C	xxx	yes		1			1						
45	26	Dk Br	10YR 3/3		HCL		-		1			1	1	IV	3b	2	**3b**	WE
	75	Gr Br + Gr	10YR 5/2	10YR 6/1	C	xxx	yes		1			1						
46	24	Dk Br	10YR 3/3		HCL		-		1			1	1	IV	3b	2	**3b**	WE
	75	Gr Br	10YR 5/2		C	xxx	yes		1			1						
47	25	Dk Br	10YR 3/3		HZCL		-		1			1	1	IV	3b	2	**3b**	WE
	75	Gr Br	10YR 5/2		C	xxx	yes		1			1						
48	32	Dk Br	10YR 3/3		C		-		1			1	1	IV	3b	2	**3b**	WE
	59	Gr Br + Gr	10YR 5/2	10YR 6/1	C	xxx	yes		1			1						
49	22	V Dk Gr Br	10YR 3/2		HCL		-		2			1	4	IV	3b	2	**3b**	WE
	60	Li Ol Br + Gr	2.5Y 5/3	10YR 6/1	C	xxx	yes		1			1						
50	23	Br	10YR 4/3		MCL		-		4			1	1	IV	3b	2	**3b**	WE
	70	Ol Br + Gr	2.5Y 4/3	2.5Y 6/1	C	xxx	yes		2			1						

Auger	Depth (cm)	Colours	Munsell Colours		Texture	Mottling	SPL	CaCO3	Stones				Slope	WC	WE Grade	DR Grade	Overall Grade	Limit(s)
			1	2					Total	>2cm	>6cm	Litho						
51	28	Br	10YR 4/3		MCL		-		4			1	4	III	3a	2	**3a**	WE
	45	Ol Br	2.5Y 4/3		HCL	xx	no		5			1						
	65	Li Ol Br + Gr	2.5Y 5/4	2.5Y 6/1	C	xxx	yes		1			7						
52	30	Dk Ol Gr	5Y 3/2		C		-		1			1	4	IV	3b	2	**3b**	WE
	50	Gr Br + Gr	2.5Y 5/2	10YR 6/1	C	xxx	yes		0									
53	32	V Dk Gr Br	10YR 3/2		HCL		-		3			1	4	IV	3b	2	**3b**	WE
	60	Li Ol Br + Gr	2.5Y 5/3	10YR 6/1	C	xxx	yes		1			1						
54	27	Br	10YR 4/3		HCL		-		4			1	8	III	3b	2	**3b**	WE
	45	Dk Yl Br	10YR 4/4		C	xx	no		10			1						
	65	Dk Yl Br + Gr	10YR 4/4	10YR 6/1	C	xxx	yes		1			1						
55	28	Br	10YR 4/3		MCL		-		4			1	9	IV	3b	2	**3b**	WE
	70	Ol Br + Gr	2.5Y 4/3	2.5Y 6/1	C	xxx	yes		2			7						
56	26	Dk Gr Br	10YR 4/2		C		-		1			1	2	IV	3b	2	**3b**	WE
	33	Gr Br + Gr Br	2.5Y 5/2	2.5Y 5/2	C	xxx	yes		1			1						
	75	Dk Gr	2.5Y 4/1		C	xxx	yes		1			1						
57	29	V Dk Gr Br	10YR 3/2		HCL		-		1			1	4	IV	3b	2	**3b**	WE
	65	Li Ol Br + Gr	2.5Y 5/3	10YR 6/1	C	xxx	yes		0									
58	25	Dk Br	10YR 3/3		MCL		-		2			1	5	IV	3b	2	**3b**	WE
	65	Ol Br + Gr	2.5Y 4/4	2.5Y 6/1	C	xxx	yes		2			7						
59	26	Br	10YR 4/3		MCL		-		2			1	6	IV	3b	2	**3b**	WE
	70	Ol Br + Gr	2.5Y 4/3	2.5Y 6/1	C	xxx	yes		2			7						
60	28	Dk Gr Br	10YR 4/2		C		-		1			1	5	IV	3b	2	**3b**	WE
	75	Gr + Li Ol Br	10YR 5/1	2.5Y 5/3	C	xxx	yes		1			1						

Auger	Depth (cm)	Colours	Munsell Colours		Texture	Mottling	SPL	CaCO3	Stones				Slope	WC	WE Grade	DR Grade	Overall Grade	Limit(s)
			1	2					Total	>2cm	>6cm	Litho						
61	28	Dk Gr Br	10YR 4/2		C		-		1			1	3	IV	3b	2	**3b**	WE
	41	Li Ol Br + Gr	2.5Y 5/3	5YR 5/1	C	xxx	yes		1			1						
	75	Dk Gr	2.5Y 4/1		C	xxx	yes		1			1						
62	20	Dk Gr Br	10YR 4/2		HCL		-		1			1	4	IV	3b	2	**3b**	WE
	43	Gr + Li Ol Br	10YR 5/1	2.5Y 5/3	C	xxx	yes		1			1						
	75	Dk Gr	5Y 4/1		C	xxx	yes		1			1						
63	17	Dk Br	10YR 3/3		Org L		-		1			1	6	IV	3b	1	**3b**	WE,MR
	75	Li Ol Br + Gr Br	2.5Y 5/3	2.5Y 5/2	C	xxx	yes		1			1						
64	31	Dk Gr Br	10YR 4/2		C		-		1			1	3	IV	3b	2	**3b**	WE
	75	Li Ol Br + Gr Br	2.5Y 5/3	2.5Y 5/2	C	xxx	yes		1			1						
65	27	Dk Gr Br	10YR 4/2		C		-		1			1	3	IV	3b	2	**3b**	WE
	75	Li Ol Br + Gr	2.5Y 5/3	2.5Y 5/1	C	xxx	yes		1			1						
66	16	Dk Gr Br	10YR 4/2		HCL		-		1			1	1	IV	3b	2	**3b**	WE
	75	Gr	10YR 5/1		C	xxx	yes		1			1						
67	26	Dk Gr Br	10YR 4/2		C		-		1			1	3	IV	3b	2	**3b**	WE
	75	Li Ol Br + Gr Br	2.5Y 5/3	2.5Y 5/2	C	xxx	yes		1			1						
68	26	Dk Gr	10YR 4/1		C		-		1			1	4	IV	3b	2	**3b**	WE
	75	Gr	10YR 5/1		C	xxx	yes		1			1						
69	26	Dk Gr Br	10YR 4/2		C		-		1			1	4	IV	3b	2	**3b**	WE
	75	Gr	10YR 5/1		C	xxx	yes		1			1						
70	26	Dk Gr Br	10YR 4/2		C		-		1			1	1	IV	3b	2	**3b**	WE
	75	Li Ol Br	2.5Y 5/3		C	xxx	yes		1			1						

Auger	Depth (cm)	Colours	Munsell Colours		Texture	Mottling	SPL	CaCO3	Stones				Slope	WC	WE Grade	DR Grade	Overall Grade	Limit(s)
			1	2					Total	>2cm	>6cm	Litho						
71	21 75	Dk Br Br + Gr Br	75yr32 10yr53	 10yr52	MCL HCL	 xxx	- yes		2 1			1 1	1	IV	3b	0	**3b**	WE
72	20 75	Dk Br Gr Br + Gr	75yr32 10yr52	 10yr61	HCL C	 xxx	- yes		2 1			1 1	1	IV	3b	0	**3b**	WE
73	30 75	Br Gr Br	75yr42 10yr52		MCL HCL	 xxx	- yes		2 1			1 1	1	IV	3b	0	**3b**	WE
74	31 75	Dk Gr Br Gr Br + Ol Gr	10yr42 10yr52	 5y52	HCL C	 xxx	- yes		2 1			1 1	1	IV	3b	0	**3b**	WE
75	39 45	Br Br	75yr42 75yr52		HCL HCL	 xxx	- yes		2 1			1 1	1	III	3b	0	**3b**	WE
76	24 75	Dk Gr Br Gr Br + Li Br Gr	10yr42 10yr52	 10yr62	HCL C	 xxx	- yes		2 1 0			1 1	1	IV	3b	0	**3b**	WE
77	32 75	V Dk Gr Br Gr Br + Gr	10yr32 10yr52	 25y61	HCL C	 xxx	- yes		2 1			1 1	1	IV	3b	0	**3b**	WE
78	40 120	Br Rd Gr	75yr42 5yr52		SCL SCL	 xxx	- no		2 0			1	1	II	2	0	**2**	WE
79	40 60	Br Gr Br	75yr42 10yr52		SCL SCL	 xxx	- no		2 5			1 1	1	II	2	0	**2**	WE
80	30 100	Dk Gr Br Li Br Gr	10yr42 10yr62		SCL C	 xxx	- yes		0 2			 1	2	IV	3b	0	**3b**	WE

Auger	Depth (cm)	Colours	Munsell Colours		Texture	Mottling	SPL	CaCO3	Stones				Slope	WC	WE Grade	DR Grade	Overall Grade	Limit(s)
			1	2					Total	>2cm	>6cm	Litho						
81	32 60	V Dk Gr Br Gr Br + Ol Gr	10yr32 10yr52	 5y52	HCL C	 xxx	- yes		2 0 0			1	1	IV	3b	0	**3b**	WE
82	31 50	Br Pl Br	10yr43 10yr63		SCL SCL-SC	 xxx	- yes		1 7			1 1	2	IV	3b	0	**3b**	WE
83	40 60 90	Br Gr Br Gr Br	75yr42 10yr52 10yr52		MCL SCL SC	 xxx xxx	- no yes		2 5 1			1 1 1	1	II	2	0	**2**	WE
84	30 100	Br Pl Br	10yr43 10yr63		HCL C	 xxx	- yes		2 2			1 1	2	IV	3b	0	**3b**	WE
85	32 65	V Dk Gr Br Gr Br	10yr32 10yr52		HCL C	 xxx	- yes		2 0			1	1	IV	3b	0	**3b**	WE
86	26 65	V Dk Gr Br Gr Br	10yr32 10yr52		HCL C	 xxx	- yes		2 1			1 1	1	IV	3b	0	**3b**	WE
87	28 100	Br Li Yl Br	10yr43 10yr64		SCL SC	 xxx	- yes		2 2			1 1	2	IV	3b	0	**3b**	WE
88	31 40 100	Br Li Br Gr Pl Br	10yr43 10yr62 10yr63		HCL SCL-SC C	 xxx xxx	- no yes		2 7 2			1 1 1	2	IV	3b	0	**3b**	WE
89	25 100	Br Pl Br	10yr43 10yr63		HCL SC	 xxx	- yes		2 7			1 1	2	IV	3b	0	**3b**	WE
90	29 100	Dk Gr Br Yl Br + Br	10yr42 10yr56	 10yr53	HCL C	 xxx	- yes		1 0			1	2	IV	3b	0	**3b**	WE

Auger	Depth (cm)	Colours	Munsell Colours		Texture	Mottling	SPL	CaCO3	Stones				Slope	WC	WE Grade	DR Grade	Overall Grade	Limit(s)
			1	2					Total	>2cm	>6cm	Litho						
91	33 100	Dk Gr Br Li Yl Br	10yr42 10yr64		MCL C	xxx	- yes		3 0			1	1	IV	3b	0	**3b**	WE
92	26 100	Br Li Br Gr	10yr43 10yr62		HCL C	xxx	- yes		2 7			1 1	2	IV	3b	0	**3b**	WE
93	36 100	Dk Gr Br Gr	10yr42 10yr51		HCL C	xxx	- yes		1 5			1 1	2	IV	3b	0	**3b**	WE
94	37 100	Dk Gr Br Li Yl Br	10yr42 10yr64		HCL C	xxx	- yes		3 5			1 8	1	III	3b	0	**3b**	WE
95	25 100	Dk Gr Br Rd Yl + Br	10yr42 75yr66	10yr53	MCL SCL	xxx	- borderline		3 0			1	3	II	2	0	**2**	WE
96	30 100	Dk Gr Br Gr	10yr42 10yr51		HCL C	xxx	- yes		2 3			1 1	2	IV	3b	0	**3b**	WE
97	33 70	Dk Gr Br Gr Br + Gr	10yr42 10yr52	25y51	HCL C	xxxx	- yes		1 0			1	1	IV	3b	0	**3b**	WE
98	18 100	Dk Gr Br Li Yl Br	10yr42 10yr64		HCL C	xxx	- yes		3 5			1 8	1	IV	3b	0	**3b**	WE
99	32 100	Dk Gr Br Li Yl Br	10yr42 10yr64		HCL C	xxx	- yes		3 5			1 8	4	IV	3b	0	**3b**	WE
100	33 100	Dk Gr Br Gr	10yr42 10yr51		HCL C	xxx	- yes		1 2			1 1	2	IV	3b	0	**3b**	WE

Auger	Depth (cm)	Colours	Munsell Colours		Texture	Mottling	SPL	CaCO3	Stones				Slope	WC	WE Grade	DR Grade	Overall Grade	Limit(s)
			1	2					Total	>2cm	>6cm	Litho						
101	31 70	Dk Gr Br Br + Gr Br	10yr42 10yr53	 10yr52	HCL C	 xxxx	- yes		1 1			1 1	1	IV	3b	0	**3b**	WE
102	27 100	Dk Gr Br Li Yl Br	10yr42 10yr64		MCL C	 xxx	- yes		3 5			1 8	4	IV	3b	0	**3b**	WE
103	35 70	Dk Gr Br Br + Gr Br	10yr42 10yr53	 10yr52	HCL C	 xxxx	- yes		1 1			1 1	0	IV	3b	0	**3b**	WE
104	33 70	Dk Gr Br Gr Br + Ol Gr	10yr42 10yr52	 5y52	HCL C	 xxxx	- yes		5 2			1 1	1	IV	3b	0	**3b**	WE
105	29 70	Dk Gr Br Gr Br + Gr	10yr42 10yr52	 25y51	HCL C	 xxxx	- yes		1 1			1 1	2	IV	3b	0	**3b**	WE
106	31 70	Dk Gr Br Gr Br + Gr	10yr42 10yr52	 25y51	C C	 xxxx	- yes		1 1			1 1	0	IV	3b	0	**3b**	WE
107	45 70	Dk Gr Br Gr Br + Gr	10yr42 10yr52	 25y51	HCL C	 xxxx	- yes		1 1			1 1	5	III	3b	0	**3b**	WE
108	22 70	Dk Gr Br Gr Br + Gr	10yr42 10yr52	 25y51	MCL C	 xxxx	- yes		1 1			1 1	0	IV	3b	0	**3b**	WE
109	23 100	Dk Gr Br Li Br Gr	10yr42 10yr62		HCL C	 xxx	- yes		0 0 0				0	IV	3b	0	**3b**	WE
110	29 120	Br Br	75yr43 75yr53		HCL C	 xxx	- yes		0 0				2	IV	3b	0	**3b**	WE

Auger	Depth (cm)	Colours	Munsell Colours		Texture	Mottling	SPL	CaCO3	Stones				Slope	WC	WE Grade	DR Grade	Overall Grade	Limit(s)
			1	2					Total	>2cm	>6cm	Litho						
111	32 120	Br Br	75yr43 75yr53		HCL C	xxx	- yes		0 0				1	IV	3b	0	**3b**	WE
112	34 120	Br Br	75yr43 75yr53		HCL C	xxx	- yes		0 0				1	IV	3b	0	**3b**	WE
113	28 120	Br Br	75yr43 75yr53		HCL C	xxx	- yes		0 0				1	IV	3b	0	**3b**	WE
114	27 120	Br Br	75yr43 75yr53		HCL C	xxx	- yes		0 0				1	IV	3b	0	**3b**	WE
115	33 120	Br Br	75yr43 75yr53		HCL C	xxx	- yes		0 0				1	IV	3b	0	**3b**	WE
116	34 120	Br Br	75yr43 75yr53		HCL C	xxx	- yes		0 0				1	IV	3b	0	**3b**	WE
117	29 120	Br Br	75yr43 75yr53		HCL C	xxx	- yes		0 0				1	IV	3b	0	**3b**	WE
118	31 120	Br Br	75yr43 75yr53		HCL C	xxx	- yes		0 0				1	IV	3b	0	**3b**	WE
119	33 100	Dk Gr Br Gr	10yr42 10yr51		HCL C	xxx	- yes		1 1			1 1	0	IV	3b	0	**3b**	WE
120	26 67 100	Dk Gr Br Gr Li Br Gr	10yr42 10yr51 10yr62		MCL C SC	 xxx xxxx	- yes yes		0 0 1			 1	0	IV	3b	0	**3b**	WE

Auger	Depth (cm)	Colours	Munsell Colours		Texture	Mottling	SPL	CaCO3	Stones				Slope	WC	WE Grade	DR Grade	Overall Grade	Limit(s)
			1	2					Total	>2cm	>6cm	Litho						
121	37 120	Br Br	75yr43 75yr53		HCL C	xxx	- yes		0 0				1	III	3b	0	**3b**	WE
122	30 67	Dk Gr Br Gr	10yr42 10yr51		HCL ZC	xxx	- yes		0 0 0				1	IV	3b	0	**3b**	WE
123	33 100	Dk Gr Br Gr	10yr42 10yr51		HCL ZC	xxx	- yes		0 0				0	IV	3b	0	**3b**	WE
124	30 120	Br Br	75yr43 75yr53		HCL C	xxx	- yes		0 0				1	IV	3b	0	**3b**	WE
125	35 120	Br Br	75yr43 75yr53		HCL C	xxx	- yes		0 0				1	IV	3b	0	**3b**	WE
126	33 120	Br Br	75yr43 75yr53		HCL C	xxx	- yes		2 0			8	1	IV	3b	0	**3b**	WE
127	28 100	Dk Gr Br Li Gr	10yr42 10yr72		MCL SC	xxx	- yes		0 0				0	IV	3b	0	**3b**	WE
128	27 120	Br Br	75yr43 75yr53		HCL C	xxx	- yes		0 0				1	IV	3b	0	**3b**	WE
129	28 120	Br Br	75yr43 75yr53		HCL C	xxx	- yes		0 0				1	IV	3b	0	**3b**	WE
130	27 120	Br Br	75yr43 75yr53		HCL C	xxx	- yes		0 0				1	IV	3b	0	**3b**	WE

Auger	Depth (cm)	Colours	Munsell Colours		Texture	Mottling	SPL	CaCO3	Stones				Slope	WC	WE Grade	DR Grade	Overall Grade	Limit(s)
			1	2					Total	>2cm	>6cm	Litho						
131	22 100	Dk Gr Br Gr	10yr42 10yr51		MCL MCL	xxx	- yes		2 1			1 1	0	IV	3b	0	**3b**	WE
132	30 67	Dk Gr Br Li Br Gr	10yr42 10yr62		MCL SC	xxx	- yes		1 1			1 1	0	IV	3b	0	**3b**	WE
133	28 120	Br Br	75yr43 75yr53		HCL C	xxx	- yes		0 0				1	IV	3b	0	**3b**	WE
134	24 120	Br Br	75yr43 75yr53		HCL C	xxx	- yes		0 0				1	IV	3b	0	**3b**	WE
135	27 100	Dk Gr Br Li Br Gr	10yr42 10yr62		MCL SC	xxx	- yes		0 2			1	0	IV	3b	0	**3b**	WE
136	25 120	Br Br	75yr43 75yr53		HCL C	xxx	- yes		0 0				1	IV	3b	0	**3b**	WE
137	20 120	Br Br	75yr43 75yr53		HCL C	xxx	- yes		0 0				1	IV	3b	0	**3b**	WE
138	20 100	Gr Gr	10yr51 10yr51		MCL C	xxx	- yes		0 1			1	0	IV	3b	0	**3b**	WE
139	35 100	V Dk Gr Br Li Br Gr	10yr32 10yr62		HCL C	xxx	- yes		0 2			1	0	IV	3b	0	**3b**	WE
140	39 65 75	Br Br + Gr Br Dk Gr	75yr42 10yr53 25y41	10yr52	HCL HZCL C	xxx xxxx	- yes yes		2 1			1 1	1	III	3b	0	**3b**	WE

Auger	Depth (cm)	Colours	Munsell Colours		Texture	Mottling	SPL	CaCO3	Stones				Slope	WC	WE Grade	DR Grade	Overall Grade	Limit(s)
			1	2					Total	>2cm	>6cm	Litho						
141	35	Br	75yr42		HZCL		-		2			1	1	IV	3b	0	**3b**	WE
	90	Br + Gr Br	10yr53	10yr52	ZC	xxx	yes		1			1						
142	28	Br	10yr43		C	None	-	-	1			1	3	II	3b	0	**3b**	WE
	69	Gr Br	10yr52		C	Common	Unsure	-	0									
	90	Gr Br	10yr52		C	Many	Yes	-	1			1						
143	27	Br	10yr43		HCL	None	-	-	0				3	III	3b	0	**3b**	WE
	39	Gr Br	10yr52		C	Common	Unsure	-	0									
	90	Br + Gr Br	75yr52	10yr52	C	Common	Yes	-	2			1						
144	27	Dk Gr Br	10yr42		HCL	None	-	-	1			1	1	IV	3b	0	**3b**	WE
	52	Gr Br	25y52		C	Common	Yes	-	5			1						
	73	St Br + Gr Br	75yr58	10yr52	C	Many	Unsure	-	10			1						
	100	Dk Gr + Gr	25y41	10yr51	C	Common	Yes	-	1			1						
145	25	Dk Gr Br	10yr42		C	Few	-	-	1			1	1	IV	3b	0	**3b**	WE
	40	Gr Br + Br	10yr52	10yr53	C	Common	Yes	-	1			1						
	90	Lt Br Gr + Gr	25y62	10yr51	C	Common	Yes	-	5			1						
146	29	Dk Gr Br	10yr42		HCL	None	-	-	1			1	3	II	3a	0	**3a**	WE
	53	Br	75yr42		HCL	Few	No	-	0									
	90	Gr Br	10yr52		C	Common	Yes	-	1			1						
147	26	Dk Gr Br	10yr42		C	None	-	-	1			1	3	IV	3b	0	**3b**	WE
	53	Gr Br	10yr52		C	Common	Yes	-	3			1						
	90	Gr Br	25y52		C	Common	Yes	-	3			1						
148	30	Br	10yr43		HCL	None	-	-	2			1	1	IV	3b	0	**3b**	WE
	39	Dk Gr	10yr41		C	Common	Unsure	-	1			1						
	65	Gr Br	25y52		C	Common	Yes	-	1			1						
	90	Gr	10yr51		C	Common	Yes	-	5			1						
149	35	Dk Gr Br + Dk Gr	10yr42	10yr41	HCL	None	-	-	2			1	3	IV	3b	0	**3b**	WE
	75	Gr Br	10yr52		C	Common	Yes	-	1			1						
150	28	Dk Gr	10yr41		C	None	-	-	2			7	3	IV	3b	0	**3b**	WE
	58	Gr Br + Dk Gr Br	25y52	25y42	C	Common	Yes	-	1			7						
	100	Dk Gr	10yr41		C	Common	Yes	-	1			7						

Auger	Depth (cm)	Colours	Munsell Colours		Texture	Mottling	SPL	CaCO3	Stones				Slope	WC	WE Grade	DR Grade	Overall Grade	Limit(s)
			1	2					Total	>2cm	>6cm	Litho						
151	27	Dk Gr Br	10yr42		C	None	-	-	2			1	1	IV	3b	0	**3b**	WE
	43	Gr Br	25y52		C	Many	Yes	-	0									
	90	Gr	10yr51		C	Common	Yes	-	1			1						
152	28	Dk Gr Br	10yr42		C	None	-	-	1			1	1	IV	3b	0	**3b**	WE
	63	Gr Br	25y52		C	Common	Yes	-	0									
	90	Lt Br Gr + Gr	25y62	10yr51	C	Common	Yes	-	3			1						
153	28	Dk Gr Br	10yr42	10yr41	HCL	Few	-	-	2			7	1	IV	3b	0	**3b**	WE
	75	Gr Br + Gr	10yr52	10yr51	C	Common	Yes	-	1			7						
154	28	Dk Gr Br	10yr42		C	None	-	-	1			1	1	IV	3b	0	**3b**	WE
	53	Gr Br	25y52		C	Common	Yes	-	0									
	90	Lt Br Gr	25y62		C	Common	Yes	-	5			1						
155	27	Dk Gr Br + Dk Gr	10yr42	10yr41	C	Few	-	-	2			1	1	IV	3b	0	**3b**	WE
	80	Gr Br	10yr52		C	Common	Yes	-	1			1						
	100	Gr Br + Gr	10yr52	10yr51	C	Common	Yes	-	1			7						
156	36	Dk Gr Br	10yr42		HCL	Few	-	-	2			1	3	IV	3b	0	**3b**	WE
	75	Gr Br + Gr	10yr52	10yr51	C	Common	Yes	-	1			1						
	100	Gr	10yr51		C	Many	Yes	-	1			1						
157	37	Dk Gr Br + Br	10yr42	10yr43	HCL	None	-	-	2			1	1	IV	3b	0	**3b**	WE
	62	Gr Br	10yr52		C	Common	Yes	-	1			1						
	90	Gr Br	10yr52		SC	Many	Yes	-	1			1						
158	28	Dk Gr Br	10yr42		C	None	-	-	2			7	1	IV	3b	0	**3b**	WE
	64	Gr Br	10yr52		C	Common	Yes	-	1			7						
	100	Gr + Gr Br	10yr51	10yr52	C	Common	Yes	-	1			7						
159	28	Dk Gr Br + Gr Br	10yr42	10yr52	C	Few	-	-	2			1	1	IV	3b	0	**3b**	WE
	65	Gr Br	10yr52		C	Common	Yes	-	1			1						
	90	Gr Br + Gr	10yr52	10yr51	C	Many	Yes	-	1			1						
160	17	V Dk Gr Br	10yr32		HZCL	None	-	-	2			1	1	IV	3b	0	**3b**	WE
	56	Dk Gr Br + Gr Br	10yr42	10yr52	C	Common	Yes	-	1			1						
	100	Gr + Gr Br	10yr51	10yr52	C	Many	Yes	-	1			1						

Auger	Depth (cm)	Colours	Munsell Colours		Texture	Mottling	SPL	CaCO3	Stones				Slope	WC	WE Grade	DR Grade	Overall Grade	Limit(s)
			1	2					Total	>2cm	>6cm	Litho						
161	11	V Dk Gr Br	10yr32		C	None	-	-	0				1	IV	3b	0	**3b**	WE
	36	Gr Br	25y52		C	Many	Yes	-	5			1						
	90	Gr	25y51		C	Many	Yes	-	0									
162	17	V Dk Gr Br	10yr32		C	None	-	-	0				1	IV	3b	0	**3b**	WE
	30	Dk Gr Br	25y42		C	Few	No	-	0									
	90	Gr Br	25y52		C	Common	Yes	-	0									
163	13	Dk Gr Br	10yr42		HCL	None	-	-	0				1	IV	3b	0	**3b**	WE
	32	Gr Br	10yr52		C	Common	No	-	0									
	51	Gr Br	25y52		C	Common	Yes	-	0									
	90	Gr Br + Gr	25y52	10yr51	C	Many	Yes	-	3			1						
164	28	Dk Gr Br	10yr42		C	None	-	-	1			1	1	IV	3b	0	**3b**	WE
	75	Gr + Gr Br	10yr51	10yr52	C	Common	Yes	-	1			1						
165	34	Dk Gr Br + Gr Br	10yr42	10yr52	HCL	Few	-	-	2			1	1	IV	3b	0	**3b**	WE
	56	Gr Br + Br	10yr52	10yr53	C	Common	Yes	-	5			1						

Annex 4b – Auger Logs (LRA)

Key to auger record:

Colour	Texture	Texture suffixes
Bk - black	C - clay	Calcareous:
Br - brown	ZC - silty clay	v sl ca - very slightly calcareous
Dk - dark	SC - sandy clay	sl ca - slightly calcareous
Gr - grey	CL - clay loam (H-heavy, M-medium)	ca - calcareous
Li - light	ZCL - silty clay loam (H-heavy, M-medium)	v ca - calcareous
Ol - olive	SCL - sandy clay loam	
Pi - pink	SZL - sandy silt loam (F-fine, M-medium, C-coarse)	Stoniness (by volume):
Pl - pale	ZL - silt loam	v sl st - very slightly stony (1-5%)
Rd - red	SL - sandy loam (F-fine, M-medium, C-coarse)	sl st - slightly stony (6-15%)
St - strong	LS - loamy sand (F-fine, M-medium, C-coarse)	m st - moderately stony (16-35%)
v - very	S - sand (F-fine, M-medium, C-coarse)	v st - very stony (36-70%)
Wk - weak	Org - organic (S-sand, L-loam, C-clay)	ex st - extremely stony (>70%)
Yl – yellow	Pty - peaty (S-sand, L-loam)	
Y – Yellow hue	Pt - peat (S-sandy, L-loamy, H-humified, SF-semi-fibrous, F-fibrous)	Other:
YR – Yellow-red hue	R - bedrock	fm – ferrimanganiferous concentrations

Mottle intensity	Limitations
o – unmottled.	CL - climate
	DE - depth
x – a few to common rusty root channel mottles (topsoil) or a few ochreous mottles (subsoil).	DR - droughtiness
	ER - erosion
	FL - flooding
xx – common to many ochreous mottles and/or dull structure faces.	GR - gradient
	MR - microrelief

xxx – greyish or pale colours dominant in matrix or ped faces and common to many ochreous mottles (gleyed horizon).

xxxx – dominantly grey, often with some ochreous mottles (gleyed horizon).

ST - stoniness
TX - texture
WE - wetness/workability

Land south of Middle Claydon: Soils and ALC survey – Details of observations at each sampling point

Obs	Topsoil			Upper subsoil			Lower subsoil			Slope	Wetness	Agricultural quality	
No	Depth (cm)	Texture	Stones >20 mm (%)	Depth (cm)	Texture	Mottling	Depth (cm)	Texture	Mottling	(°)	Class	Grade	Main limitation
1	0-30	HCL	<5	30-100+	C	xxx				0	IV	3b	W
2	0-29	HCL	<5	29-100+	C	xxx				1	IV	3b	W
3	0-30	C	<5	30-100+	C	xxx				1	IV	3b	W
4	0-28	C	<5	28-90+	C	xxx				1	IV	3b	W
5	0-29	HCL	<5	29-95+	C	xxx				0	IV	3b	W
6	0-30	HCL	<5	30-80+	C	xxx				0	IV	3b	W
7	0-30	HCL	<5	30-90+	C	xxx				1	IV	3b	W
8	0-27	C	<5	27-90+	C	xxx				1	IV	3b	W
9	Hedge												
10	0-31	C	<5	31-87+	C	xxx				1	IV	3b	W
11	0-32	C	<5	32-90+	C	xxx				1	IV	3b	W
12	0-29	HCL	<5	29-90+	C	xxx				0	IV	3b	W
13	0-30	HCL	<5	30-100+	C	xxx				0	IV	3b	W
14	0-31	HCL	<5	31-80+	C	xxx				1	IV	3b	W
15	0-30	HCL	<5	30-90+	C	xxx				1	IV	3b	W
16	0-29	C	<5	29-90+	C	xxx				1	IV	3b	W
17	0-32	C	<5	32-90+	C	xxx				0	IV	3b	W
18	Hedge												
19	0-28	C	<5	28-100+	C	xxx				1	IV	3b	W
20	0-29	C	<5	29-100+	C	xxx				1	IV	3b	W
21	0-27	HCL	<5	27-90+	C	xxx				1	IV	3b	W
22	0-26	C	<5	26-90+	C	xxx				3	IV	3b	W
23	0-30	HCL	<5	30-90+	C	xxx				2	IV	3b	W
24	0-30	C	<5	30-100+	C	xxx				0	IV	3b	W
25	0-31	C	<5	31-100+	C	xxx				1	IV	3b	W
26	0-31	HCL	<5	31-80+	C	xxx				1	IV	3b	W
27	0-28	HCL	<5	28-90+	C	xxx				1	IV	3b	W
28	0-24	C	<5	24-56	C	xxx	56-70+	Cca	xxx	2	IV	3b	W
29	0-23	HCL	<5	23-51	HCL	xxx	58-90+	C	xxx	2	IV	3b	W
30	0-31	HCL	<5	31-37	HCL	xxx	37-100+	C	xxx	3	IV	3b	W
31	0-29	HCL	<5	29-100+	C	xxx				1	IV	3b	W
32	0-28	HCL	<5	28-90+	C	xxx				1	IV	3b	W
33	0-30	C	<5	30-100+	C	xxx				1	IV	3b	W
34	0-28	C	<5	28-61	C	xxx	61-90+	Cca	xxx	2	IV	3b	W

Obs	Topsoil			Upper subsoil			Lower subsoil			Slope	Wetness	Agricultural quality	
No	Depth (cm)	Texture	Stones >20 mm (%)	Depth (cm)	Texture	Mottling	Depth (cm)	Texture	Mottling	(°)	Class	Grade	Main limitation
35	0-27	HCL	<5	27-58	C	xxx	58-90+	Cca	xxx	1	IV	3b	W
36	0-26	C	<5	26-95+	C	xxx				3	IV	3b	W
37	0-30	HCL	<5	30-60+	C	xxx				0	IV	3b	W
38	0-30	HCL	<5	30-80+	C	xxx				1	IV	3b	W
39	0-30	HCL	<5	30-90+	C	xxx				0	IV	3b	W
40	Not accessible (HS2 works)												
41	0-23	C(org)	<5	23-85	C	xxx	85-90+	Cca	xxx	2	IV	3b/4	W
42	0-21	HCL(org)	<5	21-51	C	xxx	57-90+	Cca	xxx	2	IV	3b	W
43	0-28	MSL	<5	28-44	MCL	xxx	44-60 60-80+	HCL C	xxx xxx	3	III	2	W/D
44	0-20	HCL	<5	20-30	HCL	xxx	30-60+	C	xxx	1	IV	3b	W
45	0-30	HCL	<5	30-90+	C	xxx				1	IV	3b	W
46	0-28	C	<5	28-60+	C	xxx				0	IV	3b	W
47	0-30	C	<5	30-90+	C ch	xxx				0	IV	3b	W
48	0-24	HCL	<5	24-90+	C	xxx				5	IV	3b	W
48A	0-21	HCL	<5	21-32	HCL	xxx	32--90+	C	xxx	4	IV	3b	W
49	0-25	MCL	<5	25-40	HCL/MCL	xxx	40-60+	C	xxx	2	III	3a	W
50	0-30	HCL	<5	30-100+	C	xxx				1	IV	3b	W
51	Not recorded – spring pipe												
52	0-31	C	<5	31-50+	C	xxx	50+	Flint/drain		1	IV	3b	W
53	0-24	C(org)	<5	24-90+	C	xxx				1	IV	3b/4	W
54	0-18	C	<5	18-56	C	xxx	56-90+	Cca	xxx	2	IV	3b	W
55	0-30	MCL	<5	30-49	H/SCL	xxx	49-100+	C	xxx	2	III	3a	W
56	0-30	SCL	<5	30-50+	C	xxx				5	IV	3b	W4
57	0-30	C	<5	30-100+	C	xxx				0	IV	3b	W
58	0-10	C(org)	<5	10-90+	C	xxx				2	IV	3b/4	W
59	0-30	C(org)	<5	30-62	C	xxx	62-90+	Cca	xxx	2	IV	3b/4	W
60	0-30	M/SCL	5-10	30-70	HCL	xxx	70-100+	C	xxx	0	II	2	W
61	0-30	HCL/C	<5	30-80+	C	xxx				2	IV	3b	W
62	Not recorded – spring pipe												
63	0-24	HCL(org)	<5	24-90+	C	xxx				1	IV	3b	W
64	0-33	C	<5	33-95+	C	xxx				3	IV	3b	W
65	0-21	HCL	<5	21-90+	C	xxx				0	IV	3b	W
66	0-11	C(org)	<5	11-90+	C	xxx				0	IV	3b/4	W
67	0-26	C	<5	26-37	C	xxx	37-70+	C	xxx	1	IV/III	3b	W
68	0-34	C	<5	34-90+	C	xxx				3	IV	3b	W
69	0-23	HCL/C	<5	23-80+	C	xxx				3	IV	3b	W

Obs	Topsoil			Upper subsoil			Lower subsoil			Slope	Wetness	Agricultural quality	
No	Depth (cm)	Texture	Stones >20 mm (%)	Depth (cm)	Texture	Mottling	Depth (cm)	Texture	Mottling	(°)	Class	Grade	Main limitation
70	0-43	C	<5	43-90+	C	xxx				2	IV	3b	W
71	0-29	C	<5	29-67	C	xxx	67-90+	Cca	xxx	1	IV	3b	W
72	0-29	C	<5	29-90+	C	xxx				3	IV	3b	W
73	0-26	C	<5	26-69	C	xxx	69-90+	Cca	xxx	1	IV	3b	W
74	0-31	C	<5	31-90+	C	xxx				1	IV	3b	W
75	0-19	C	<5	19-72	C	xxx	72-90+	Cca	xxx	1	IV	3b	W
76	0-23	HCL	<5	23-68	C	xxx	68-90+	Cca	xxx	2	IV	3b	W
77	0-28	C	<5	28-90+	C	xxx				1	IV	3b	W
78	0-30	C	<5	30-90+	C	xxx				4	IV	3b	W
79	0-23	C(org)	<5	23-90+	C	xxx				0	IV	3b/4	W
80	0-29	C(org)	<5	29-65	C	xxx	65-90+	Cca	xxx	3	IV	3b/4	W
81	0-30	C	<5	30-100+	C	xxx				0	IV	3b	W
82	0-30	C	<5	30-40	C	xxx	40-100+	C	xxx	1	IV	3b	W
83	0-30	C	<5	30-80+	C	xxx				0	IV	3b	W
84	0-31	C	<5	31-60	C	xxx	60-100+	C	xxx	0	IV	3b	W
85	0-25	C/HCL	<5	25-50+	C	xxx				1	IV	3b	W
86	0-25	HCL	<5	25-10	C	xxx				3	IV	3b	W
87	0-30	HCL	<5	30-90+	C	xxx				2	IV	3b	W
88	0-30	C	<5	30-50	C	xxx	50-100+	C grey	xxx	2	IV	3b	W
89	0-31	C	<5	31-100+	C	xxx				2	IV	3b	W
90	0-31	C	<5	31-65+	SC	xxx				1	IV	3b	W
91	0-23	C	<5	23-45	C	xxx	45-70+	C ca	xxx	4	IV	3b	W
92	0-22	C	0	22-74	C	xxx	74-90+	C ca	xxx	0	IV	3b	W
93	0-26	C	<5	26-38	C	xxx	38-64 64-90+	SC C ca	xxx xxx	0	IV	3b	W
94	0-24	C	<5	24-61+	C	xxx				0	IV	3b	W
95	0-24	C	<5	24-90+	C	xxx				2	IV	3b	W
96	0-30	C	<5	30-100+	C	xxx				1	IV	3b	W
97	0-26	C	0	26-52	C	xxx	52-80+	C ca	xxx	0	IV	3b	W
98	0-27	C	<5	27-90+	C	xxx				0	IV	3b	W
99	0-24	C	<5	24-80+	C	xxx				0	IV	3b	W
100	0-19	C	<5	19-73	C	xxx	73-75+	CLS ca flinty	xxx	1	IV	3b	W
101	0-32	C	<5	32-90+	C	xxx				1	IV	3b	W
102	0-17	C	<5	17-90+	C	xxx				0	IV	3b	W
103	0-29	HCL	<5	29-52	C	xxx	52-90+	SC	xxx	1	IV	3b	W
104	0-26	HCL	<5	26-33	C	xxx	33-90+	C	xxx	1	IV	3b	W
105	0-26	C	<5	26-50	C	xxx	50-80+	SC mod st	xxx	0	IV	3b	W

Obs	Topsoil			Upper subsoil			Lower subsoil			Slope	Wetness	Agricultural quality	
No	Depth (cm)	Texture	Stones >20 mm (%)	Depth (cm)	Texture	Mottling	Depth (cm)	Texture	Mottling	(°)	Class	Grade	Main limitation
106	0-29	HCL/C	<5	29-100+	C	xxx				1	IV	3b	W
107	0-29	C	<5	29-100+	C	xxx				2	IV	3b	W
108	0-22	C	<5	22-80+	C	xxx				0	IV	3b	W
109	0-30	HCL	<5	30-70	C	xxx	70+	Stopped on stones		1	IV	3b	W
110	0-30	HCL	<5	30-90+	C	xxx				0	IV	3b	W
111	0-25	C	<5	25-52	C	xxx	52+	Stopped on stones		0	IV	3b	W
112	0-29	slstHCL	<5	29-57	slstHCL	xxx	57-90+	C	xxx	1	III	3b	W
113	Pond												
114	0-21	HCL	<5	21-90+	C	xxx				1	IV	3b	W
115	0-31	C	<5	31-71	C	xxx	71-90+	Cca	xxx	0	IV	3b	W
116	0-19	C	<5	19-61	C	xxx	61-80+	Cca	xxx	1	IV	3b	W
117	0-24	HCL	<5	24-90+	C	xxx				2	IV	3b	W
118	0-30	C	<5	30-65	C	xxx				1	IV	3b	W
119	0-25	HCL	<5	25-46	C	xxx	46+	Stopped on stones		2	IV	3b	W
120	0-27	C	<5	27-72	C	xxx	72-90+	Cca	xxx	2	IV	3b	W
121	0-25	C	<5	25-90+	C	xxx				3	IV	3b	W
122	0-24	C	<5	22-80+	C	xxx				2	IV	3b	W
123	0-22	C	<5	22-90+	C	xxx				2	IV	3b	W
124	0-27	C	<5	27-100+	C	xxx				2	IV	3b	W
125	0-25	C	<5	25-67	C	xxx	67-80+	C	xxx	3	IV	3b	W
126	0-32	C	<5	32-80+	C	xxx				2	IV	3b	W
127	0-29	HCL	<5	29-100+	C	xxx				5	IV	3b	W
128	0-30	C	<5	30-72	C	xxx	72-100+	ZC	xxx	2	IV	3b	W
129	0-28	C	<5	28-80	C	xxx	80-90+	Cca	xxx	3	IV	3b	W
130	0-30	HCL	<5	30-100+	C	xxx				3	IV	3b	W
131	0-28	C	<5	28-90+	C	xxx				5	IV	3b	W
132	0-20	HCL	<5	20-50	C	xxx	50-100+	Cgrey	xxx	2	IV	3b	W
133	0-28	HCL	<5	28-61	C	xxx	61-100+	C	xxx	3	IV	3b	W
134	0-32	C	5-10	32-100+	C	xxx				2	IV	3b	W
135	0-27	HCL	<5	27-90+	C	xxx				5	IV	3b	W
136	0-25	HCL	<5	25-45	C	xxx	45-100+	C grey	xxx	0	IV	3b	W
137	0-24	HCL	<5	24-51	C	xxx	51-100+	Cxxx		1	IV	3b	W
138	0-29	SCL	5-10	30-100+	C	xxx				2	IV	3b	W
140	0-28	HCL	5-10	28-100+	C	xxx				1	IV	3b	W
141	0-30	C/HCL	<5	30-40+	C	xxx	40+	Stopped on stone		1	IV	3b	W
142	0-24	MCL	<5	24-50	SCL gravelly	xxx	50+	Flints		0	II	2	W
143	0-30	HCL	5-10	30-100+	C	xxx				2	IV	3b	W

Obs	Topsoil			Upper subsoil			Lower subsoil			Slope	Wetness	Agricultural quality	
No	Depth (cm)	Texture	Stones >20 mm (%)	Depth (cm)	Texture	Mottling	Depth (cm)	Texture	Mottling	(°)	Class	Grade	Main limitation
144	0-29	HCL	<5	29-54	C	xxx	54-100+	C	xxx	0	IV	3b	W
145	0-33	HCL	<5	33-61	C	xxx	61-100+	Cch	xxx	0	IV	3b	W
146	0-28	HCL	<5	28-60	C	xxx	60-80+	SC	xxx	1	IV	3b	W
147	Track												
148	Track												
149	0-24	HCL	<5	24-100+	C	xxx				0	IV	3b	W
150	0-23	HCL	<5	23-50+	C/SC wet	xxx	50+	Stopped on stone		0	IV	3b	W
151	0-20	HCL	<5	20-60+	C/SC	xxx				0	IV	3b	W
152	River bank												
153	0-25	HCL	<5	25-90+	C	xxx				1	IV	3b	W
154	0-25	HCL	<5	25-90+	C	xxx				0	IV	3b	W
155	0-20	MCL/HCL	<5	20-100+	C	xxx				0	IV	3b	W
156	0-27	HCL	<5	27-100+	C	xxx				0	IV	3b	W
157	0-25	HCL	<5	25-05+	C	xxx				0	IV	3b	W
158	0-25	HCL	<5	25-50	C	xxx	50-90+	C ca ch	xxx	0	IV	3b	W
159	0-20	HCL	<5	20-90+	C	xxx				0	IV	3b	W
160	0-25	M/HCL	<5	25-34	HCL	xxx	34-100+	C	xxx	0	IV	3b	W
161	0-20	HCL	<5	20-100+	C	xxx				3	IV	3b	W
162	0-20	HCL	<5	20-60+	C	xxx				1	IV	3b	W
M1	0-28	MCL/HCL	<5	28-70+	C	xxx				4	IV	3b	W
M2	0-19	C	<5	19-60+	C	xxx				2	IV	3b	W
M3	0-23	MCL	<5	23-50	MCL	o	50-70+	C	xxx	4	II	2	W/D
M4	0-33	MCL	<5	33-53	MCL	xxx	53-90+	C	xxx	2	III	3a	W
L1	0-30	M/SCL	<5	30-40	HCL	xx	40-100+	C	xxx	0	III	3a	W
L2	0-30	C	15-20	30-90+	C	xxx				0	IV	3b	W
L3	0-20	SCL	<5	20-44	S/HCL	xxx	44-90+	C	xxx	0	III	3a	W
L4	0-20	HCL	<5	20-100+	C	xxx				0	IV	3b	W
L5	0-30	H/MCL	<5	30-38	HCL	xxx	38-100+	C	xxx	6	III/IV	3a/b	W

Survey log key

Gley indicators[1]

o	unmottled
x	1-2% ochreous mottles and brownish matrix (or a few to common root mottles (topsoils))[3]
xx	>2% ochreous mottles and brownish matrix and/or dull structure faces (slightly gleyed horizon)
xxx	>2% ochreous mottles and greyish or pale matrix (gleyed horizon) or reddish matrix and >2% greyish, brownish or ochreous mottles and pale ped faces mottles or f-m concentrations (gleyed horizon)
xxxx	dominantly blueish matrix often with some ochreous mottles (gleyed horizon)

Slowly permeable layers[4]

a depth underlined (e.g. 50) indicates the top of a slowly permeable layer
A wavy underline (e.g. 50 indicates the top of a layer borderline to slowly permeable

Texture[2]

C - clay
ZC - silty clay
SC - sandy clay
CL - clay loam (H-heavy, M-medium)
ZCL - silty clay loam (H-heavy, M-medium)
SZL - sandy silt loam (F-fine, M-medium,C-coarse)
LS - loamy sand (F-fine, M-medium, C-coarse)
SL - sandy loam (F-fine, M-medium, C-coarse)
S - sand (F-fine, M-medium, C-coarse)
SCL - sandy clay loam
P - peat (H-humified, SF-semi-fibrous, F-fibrous)
LP - loamy peat; PL - peaty loam

Wetness Class[5]

I (freely drained) to VI (very poorly drained)

Limitations:

W - wetness/workability
D - droughtiness
De - depth
F - flooding
St – stoniness
Sl – slope
T – topography/microrelief

Suffixes & prefixes:

r-reddish, gn – greenish
o - organic
(m, v, x)st – (moderately, very, extremely) stony

(vsl, sl, m, v, x)(very slightly, slightly, moderately very, extremely) calcareous

Other abbreviations

fmn - ferri-manganiferous concentrations
dist - disturbed soil layer;
R – bedrock (CH – chalk, SST – sandstone
LST – limestone, MST – Mudstone)

[1]Gley indicators in accordance with Hodgson, J.M., 1997. Soil Survey Field Handbook (third edition). Soil survey technical monograph No. 5

[2]Texture in accordance with particle size classes in Hodgson (1997)
[3] Occasionally recorded in the texture box
[4]Permeability is estimated for auger borings and must be confirmed by full pit observations in accordance with the definitions in:
Revised Guidelines for grading the quality of Agricultural Land (Maff 1988)
[5]Soil Wetness Classes are defined in Hodgson (1997)
[6]stoniness classes as defined in Hodgson (1997)
[7]calcareous classes as defined in Hodgson (1997)
Grades given as borderline e.g. 3a/3b are close to grade boundaries. The first grade (shown here in bold) indicates which side of the boundary the grade is judged to be

Annex 5a – Soil Pit Descriptions

Soil Pit Descriptions

Pit A (NGR 471110,224692)

0-28 cm Dark brown (10YR 3/3) heavy clay loam; non calcareous; firm, moderately developed medium angular blocky structure; 1% medium rounded and angular hard stones; porous (>0.5% biopores >0.5mm); common very fine fibrous roots; smooth clear boundary to:

28-61 cm Light olive brown (2.5Y 5/3) and grey (2.5Y 6/1) clay with common strong brown (7.5YR 5/6) mottles and black ferrimanganiferous concretions; very firm, strongly developed medium angular blocky structure; non-calcareous; 5% medium rounded and angular hard stones; few very fine fibrous roots; non-porous (<0.5% biopores >0.5mm); indistinct boundary to:

61-120 cm Light olive grey (5Y 6/2) clay with many strong brown (7.5YR 5/8) mottles; calcareous, 5% medium rounded hard stones and crushed chalk; few very fine fibrous roots; very firm, moderately developed coarse prismatic to massive structure; non porous (<0.5% biopores >0.5mm).

Pit B (NGR 47803,224804)

0-30 cm Dark greyish brown (10YR 4/2) heavy clay loam; non calcareous; 5% medium rounded and angular hard stones; very firm, moderately developed medium angular blocky structure; porous (>0.5% biopores >0.5mm); many very fine fibrous roots; smooth clear boundary to:

30-47 cm Light olive brown (2.5Y 5/3) and olive grey (5Y 5/2) clay, with light brownish grey (2.5Y 6/2) gleyed ped faces; common bright strong brown (7.5YR 4/6) mottles and black ferrimanganiferous concretions; 10% medium angular hard stones (flints); very few very fine fibrous roots; extremely firm, moderate medium prismatic structure; non-porous (<0.5% biopores >0.5mm); indistinct boundary to:

47-75+ cm Grey (2.5Y 5/1) clay with common strong brown (7.5YR 5/8) mottles; calcareous, 5% crushed limestone and medium flints; few very fine fibrous roots; very firm; non porous (<0.5% biopores >0.5mm).

(Too dry, firm & stony to dig or auger beyond 75cm).

Pit C (NGR 472376,222000)

0-27 cm Dark greyish brown (10YR 4/2) clay; non calcareous; firm, moderately developed medium angular blocky structure; 1% medium rounded and angular hard stones; porous (>0.5% biopores >0.5mm); many very fine fibrous roots; smooth wavy boundary to:

27-46 cm Light olive brown (2.5Y 5/3) and grey (5YR 5/1) clay with many strong brown (7.5YR 5/8) mottles and black ferrimanganiferous concretions; very firm, moderately developed medium prismatic structure; non-calcareous; 1% medium rounded hard stones (flints); few very fine fibrous roots; non-porous (<0.5% biopores >0.5mm); indistinct boundary to:

46-120 cm Grey (10YR 5/1) clay with many strong brown (7.5YR 5/8) mottles; very firm, weakly developed coarse prismatic to massive structure; non-calcareous; 1% small and medium rounded hard stones; few very fine fibrous roots; non porous (<0.5% biopores >0.5mm).

Annex 5b – LRA Pit Descriptions

Soil pit descriptions

Pit 43

0-30 cm	Dark brown (7.5YR 3/3) medium sandy loam; 5-10% small and medium rounded hard stones; moderately developed medium angular blocky structure; friable; 5% pores; few fine friable roots; smooth clear boundary to:
30-54 cm	Light brown (7.5YR 6/3) sandy clay loam with 15% large reddish yellow (7.5YR 6/8) and grey (7.5YR 7/1) mottles; stoneless; medium subangular blocky structure; friable; porous; smooth diffuse boundary to:
54-120 cm	Greyish brown (10YR 6/3) clay with large prominent grey (7.5YR 6/1) and reddish yellow (7.5YR 6/8) mottles and black (7.5YR 2.4/1) ferrimanganiferous concretions; stoneless; weakly developed coarse angular blocky structure; firm; no biopores.

Pit 45

0-30 cm	Dark greyish brown (10YR 4/2) heavy clay loam; slightly stony with medium flints; moderately developed coarse angular blocky structure; firm; 2-5% pores; smooth clear boundary to:
30-48 cm	Pale brown (10YR 6/3) clay with common 10% reddish yellow (7.5YR 6/8) mottles; 5-10% subangular hard stones; weakly developed coarse angular blocky structure; very firm; <0.5% biopores; smooth diffuse boundary to:
48-120 cm	Light brownish grey (10YR 6/2) clay with 5% reddish yellow (7.5YR 6/8) mottles; very slightly stony; massive (structureless); no biopores.

Pit 53

0-25 cm	Very dark greyish brown (10YR 3/2) clay/heavy clay loam; stoneless; moderately developed very coarse sub-angular blocky structure; firm; non-calcareous; common fine fibrous roots; smooth gradual boundary to:
25-48 cm	Grey (10YR 5/1) clay with 15% distinct fine strong brown (7.5YR 5/8) mottles; stoneless; moderately developed very coarse angular blocky structure; very firm; <0.5% macropores; non-calcareous; few fine fibrous roots; smooth gradual boundary to:
48-100 cm+	Blueish grey (5B 6/1) clay with 25% distinct fine strong brown (7.5YR 5/6) mottles; stoneless; weakly developed very coarse angular blocky structure to structureless (massive); very firm; no macropores; calcareous.

Pit 73

0-26 cm	Dark greyish brown (10YR 4/2) clay; 1-2% small sub-angular flints; weakly developed very coarse sub-angular blocky structure; firm; non-calcareous; smooth gradual boundary to:
26-69 cm	Grey (10YR 5/1) clay with 20% distinct fine and medium yellowish brown (10YR 5/8) mottles; stoneless; weakly developed very coarse angular blocky structure; very firm; no macropores; non-calcareous; smooth gradual boundary to:
69-120 cm	Blueish grey (5B 6/1) clay with 15% distinct fine yellowish brown (10YR 5/8) mottles; stoneless; structureless (massive); very firm; no macropores; calcareous.

Pit 118

0-26 cm	Dark greyish brown (10YR 4/2) clay; 2-3% small sub-angular flints; moderately developed very coarse sub-angular blocky structure; firm; non-calcareous; smooth gradual boundary to:
26-68 cm	Grey (10YR 5/1) clay with 20% prominent fine and medium strong brown (7.5YR 5/8) mottles; 5-10% flints; weakly developed coarse to very coarse angular blocky structure; firm; <0.5% macropores; high packing density; non-calcareous; smooth gradual boundary to:
68-120 cm	Blueish grey (5B 5/1) clay with 15% diffuse fine and medium yellowish brown (10YR 5/8) mottles; stoneless; structureless (massive); very firm; no macropores; calcareous.

Pit 145

0-30 cm	Dark greyish brown (10YR 4/2) clay slightly 2-5% small and medium hard subangular stones and flints; weakly developed medium to coarse angular blocky structure; firm; 2% pores; few fine fibrous roots; non calcareous; smooth gradual boundary to:
30-54 cm	Grey (10YR 5/1) clay with common 10% medium yellowish brown (10YR 5/8) mottles; stoneless; weakly developed very coarse prismatic structure; very firm; few roots; no biopores; non calcareous; smooth gradual boundary to:
54-120 cm	Light grey (10YR 6/1) clay with 5% fine brownish yellow (10YR 6/8) mottles; common small chalk stones; weakly developed very coarse prismatic structure to massive (structureless); very firm; very calcareous.

Pit 158

0-27 cm	Dark greyish brown (10YR 4/2) heavy clay loam; slightly stony small and medium subrounded hard stones; well developed fine subangular blocky structure; friable; 2-5% pores; many fine fibrous roots; smooth sharp boundary to:
27-100 cm	Light yellowish brown (10YR 6/4) clay with many yellowish brown (10YR 5/8) and light brownish grey (10YR 6/2); very slightly stony; weakly developed very coarse prismatic structure to massive (structureless); very firm.

Annex 6 – Laboratory Analyses

ANALYTICAL REPORT

Report Number	**78606-23**	**K474**	**SIMON MCMILLAN**	**Client SIMON MCMILLAN**	
Date Received	**06-JUL-2023**		**RSK ADAS LTD**		
Date Reported	**25-JUL-2023**		**26 HOLLY WALK**		
Project	**1011117 SOIL**		**STRATFORD-UPON-AVON**		
Reference	**SIMON MCMILLAN**		**WARWICKSHIRE**		
Order Number	**P69101SM03072023**		**CV37 9LR**		

Laboratory Reference		**SOIL634814**	**SOIL634815**	**SOIL634816**	**SOIL634817**
Sample Reference		**ROSE PIT 18 TS**	**ROSE PIT B TS**	**ROSE PIT C TS**	**ROSE PIT A TS**
Determinand	**Unit**	**SOIL**	**SOIL**	**SOIL**	**SOIL**
Sand 2.00-0.063mm	% w/w	41	31	6	17
Silt 0.063-0.002mm	% w/w	19	27	30	30
Clay <0.002mm	% w/w	40	42	64	53
Textural Class **		C	C	O-C	C

Notes

Analysis Notes

The sample submitted was of adequate size to complete all analysis requested.
The results as reported relate only to the item(s) submitted for testing.
The results are presented on a dry matter basis unless otherwise stipulated.

Document Control

** Please see the attached document for the definition of textural classes.

Reported by

Daniel Petty

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Annex 7 – Description of ALC Grades

Annex 7 – Description of ALC Grades

The ALC grades and subgrades are described below in terms of the types of limitation which can occur, typical cropping range and the expected level and consistency of yield. The *'best and most versatile agricultural land'* falls into grades 1, 2 and subgrade 3a – which collectively comprises about one-third of the agricultural land in England and Wales. About half the land in England and Wales is either of moderate quality (subgrade 3b) or poor quality (grade 4). Although less significant on a national scale, such land can be locally valuable to agriculture and the rural economy where poorer farmland predominates. The remainder is very poor quality land in grade 5, which mostly occurs in the uplands.

Grade 1 – excellent quality agricultural land

Land with no or very minor limitations to agricultural use. A very wide range of agricultural and horticultural crops can be grown and commonly includes top fruit, soft fruit, salad crops and winter harvested vegetables. Yields are high and less variable than on land of lower quality.

Grade 2 – very good quality agricultural land

Land with minor limitations which affect crop yield, cultivations or harvesting. A wide range of agricultural and horticultural crops can usually be grown but on some land in the grade there may be reduced flexibility due to difficulties with the production of the more demanding crops such as winter harvested vegetables and arable root crops. The level of yield is generally high but may be lower or more variable than Grade 1.

Grade 3 – good to moderate quality land

Land with moderate limitations which affect the choice of crops, timing and type of cultivation, harvesting or the level of yield. Where more demanding crops are grown yields are generally lower or more variable than on land in Grades 1 and 2.

Subgrade 3a – good quality agricultural land

Land capable of consistently producing moderate to high yields of a narrow range of arable crops, especially cereals, or moderate yields of a wide range of crops including cereals, grass, oilseed rape, potatoes, sugar beet and the less demanding horticultural crops.

Subgrade 3b – moderate quality agricultural land

Land capable of producing moderate yields of a narrow range of crops, principally cereals and grass or lower yields of a wider range of crops or high yields of grass which can be grazed or harvested over most of the year.

Grade 4 – poor quality agricultural land

Land with severe limitations which significantly restrict the range of crops and/or level of yields. It is mainly suited to grass with occasional arable crops (e.g. cereals

and forage crops) the yields of which are variable. In moist climates, yields of grass may be moderate to high but there may be difficulties in utilisation. The grade also includes very droughty arable land.

Grade 5 – very poor quality agriculture land

Land with very severe limitations which restrict use to permanent pasture or rough grazing, except for occasional pioneer forage crops.

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Application Document Ref: EN010158/APP/6.4.2
Planning Inspectorate Scheme Ref: EN010158