AGRICULTURAL LAND CLASSIFICATION
BELVOIR SOLAR FARM

CLIENT: JBM SOLAR PROJECTS 10 LTD
PROJECT: BELVOIR SOLAR FARM
DATE: 9TH JANUARY 2023 – ISSUE 9
ISSUED BY: JAMES FULTON MRICS FAAV

CONTENTS

1. EXECUTIVE SUMMARY

1.1 This report assesses the Agricultural Land Classification (ALC) grading of 161.3Ha, of agricultural land at Belvoir.

1.2 The limiting factor found to be soil wetness, a combination of the climatic regime, soil water regime and texture of the top 25cm of the soil on the majority of the site and droughtiness on a small area to the north of the site.

1.3 The land is graded as follows:

Grade 2:	7.0Ha
Grade 3a:	0.3Ha
Grade 3b:	154Ha

1.4 During the planning process the site has been substantially redesigned with the site area reduced to **99.95Ha**. Following these revisions to the scheme the site is graded as follows:

Grade 2:	**7.0Ha**
Grade 3a:	**0.3Ha**
Grade 3b:	**92.6Ha**

2. INTRODUCTION

2.1 Amet Property Ltd have been instructed by JBM Solar Projects 10 Ltd to produce an Agricultural Land Classification (ALC) report on a 161.3-hectare site on land to the southwest of Muston. The ALC report is being prepared to accompany a planning application to be submitted for a solar farm on 103.5 hectares of the site.

2.2 The report was originally drafted in 2020 and while updating to take account of the amended site area it is also being updated to take account of the requirements set out in the BSSS 2022 guidance[1].

2.3 The report's author is James Fulton BSc (Hons) MRICS FAAV who has worked as a chartered surveyor, agricultural valuer, and agricultural consultant since 2004, has a degree in agriculture which included modules on soils and over 10 years' experience in advising farmers on soil structure and cultivation methods and in producing agricultural land classification reports. Additional information on authors experience is found at ***appendix A***.

2.4 The report is based on a site visit conducted by James Fulton and 2 assistant surveyors on the 3rd January 2020 during which the conditions were overcast in the morning and sunny in the afternoon; a further site visit by James Fulton and one assistant surveyor on the 17th July 2020 when conditions were hot and sunny; and a final site visit by James Fulton on the 3rd October 2022 during which the conditions were dry and sunny to get samples for lab testing. Following a third party review of the report an additional visit was made by James Fulton and one assistant surveyor on the 5th January 2023 to check auger boring results and obtain photographs.

2.5 During the inspections three trial pits were dug to a depth of 120cm. In addition to the trial pits an augur was used to take approximately one sample per hectare on the proposed development site to a depth of 120cm with smaller trial pits at some of these locations to confirm soil structure and colour where it was not clear from the augur samples. A plan of augur points and trial pit locations can be found at ***appendix 1***. The trial pit locations were selected as they were representative of the soils found on site. Where subsoils were inspected with a spade, descriptions of structure have been recorded based on the soil survey field handbook[2]; where an augur has been used the structure is described as good, moderate or poor based on figure 9,10 and 11 in the MAFF[3] guidance. Colours are described using Munsell Colours[4].

2.6 Due to the amount of rain that had fallen in the weeks prior to the January 2020 site visit there were areas that were extremely wet. While there were some very

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[1] British Society of Soil Science (2022) – Guidance Document 1 – Working with Soil Guidance Note on Assessing Agricultural Land Classification Surveys in England and Wales.
[2] Hodgson, JM (1997) Soil Survey Field Handbook
[3] MAFF (1988) - *Agricultural Land Classification of England and Wales. Revised guidelines and criteria for grading the quality of agricultural land*. MAFF Publications
[4] Munsell Color (2009) Munsell Soil Color Charts

wet areas the site as a whole was dry enough to be surveyed. Prior to the site visit in July 2020 there had been very little rain and so the ground was extremely hard making it impenetrable in places. The areas outlined red on the plan at appendix 1 were surveyed in January 2020 and the areas outlined blue were surveyed in July 2020.

2.7 The soil conditions for the 2020 surveys had not been ideal and no lab tests had been conducted and so an additional visit was made in 2022 to check subsoil structures. For the October 2022 visit conditions were very good with soils moistening well and allowing structures to be easily identified. The trial pits at sample points 15, 85 and 126 were re-dug in October 2022 and the soil samples collected for lab testing.

2.8 The site is described in literature as likely to be calcareous and so hydrochloric acid was used to test in field for a reaction that would indicate calcareous soils.

2.9 The surveyed area extends to 161.3Ha of arable land spread cross 22 fields in an arable rotation. The land is to the West of Muston, South of the A52 and is approximately 2km from North to South and 1.6km West to East and has sample points with an elevation ranging from 36m to 50m above ordnance datum (AOD).

2.10 Further information has been obtained from the MAGIC website, the Soil Survey of England and Wales, the British Geological Survey, the Meteorological Office and 1:250,000 series Agricultural Land Classification maps.

2.11 The collected information has been judged against the Ministry of Agriculture Fisheries and Food Agricultural Land Classification of England and Wales revised guidelines and criteria for grading the quality of agricultural land.

2.12 The principal factors influencing agricultural production are climate, site and soil and the interaction between them MAFF (1988) & Natural England (2012)[5].

3. PUBLISHED INFORMATION

3.1 The British Geological Survey 1:50,000 scale map shows the bedrock geology across the majority of the site to be Beckingham Member – Limestone and Mudstone Interbedded; Stubton Limestones Bed – Limestone; and Foston Member – Mudstone and Limestone Interbedded. Superficial deposits are largely unrecorded with the exception of a small area in the northwest corner

[5] MAFF (1988) - *Agricultural Land Classification of England and Wales. Revised guidelines and criteria for grading the quality of agricultural land*. MAFF Publications

Natural England (2012) - *Technical Information Note 049 - Agricultural Land Classification: protecting the best and most versatile agricultural land*, Second Edition

of the site identified as River Terrace Deposits (undifferentiated) – Sand and Gravel.

3.2 The soils on the majority of the site are identified as being in the Evesham 2 Association described as slowly permeable calcareous clayey soils. An area to the south of the site is identified as being in the Denchworth Association described as slowly permeable seasonally waterlogged clayey soils with similar loamy over clayey soils. The area to the northwest of the site is identified as being in the Arrow Association described as course loamy soils affected by groundwater.

3.3 The 1:250,000 series Agricultural Land Classification maps show the land to be Grade 3. These plans are of strictly limited value, using an out-of-date methodology at a very small scale (low detail) level of survey. Further information on the limits of their use can be found in TIN049.

4. CLIMATE

4.1 Climate has a major, and in places overriding, influence on land quality affecting both the range of potential agricultural uses and the cost and level of production.

4.2 There is published agro-climatic data for England and Wales provided by the Meteorological Office, such data for the subject site is listed in the table below.

Agro-Climatic Data – Full details can be found at ***appendix 2***

Grid Reference	482180 337159
Altitude (ALT)	45.1
Average Annual Rainfall (AAR)	585
Accumulated Temperature - Jan to June (ATO)	1397
Duration of Field Capacity (FCD)	119
Moisture Deficit Wheat	113
Moisture Deficit Potatoes	106

4.3 The main parameters used in assessing the climatic limitation are average annual rainfall (AAR), as a measure of overall wetness; and accumulated temperature (ATO), as a measure of the relative warmth of a locality.

4.4 The AAR and ATO provide no climatic limitation to grade.

4.5 The site is shown to be in flood zone 1 – areas with a less than 1 in 1000 annual chance of flooding. There was no evidence of flooding seen during the site visit and it is considered that will not result in a limitation to land grade.

5. STONINESS

5.1 There were no notable stones found on site. Stoniness is not considered a limiting factor to land grading.

6. GRADIENT

6.1 The steepest areas of the site are only a gentle slope with gradient never representing the most limiting factor to land grade.

7. SOILS

7.1 The soils found on site largely follow the expectations set by the national soils map. Full information on the sample points along with trial pit descriptions and photographs and lab test results can be found at ***appendix 3***.

7.2 The Northwest corner of the site varied significantly from the rest or the site. This area is the area recorded by the British geological survey as having superficial deposits of River Terrace Deposits (undifferentiated) – Sand and Gravel and as being in the Arrow soil association with a typical sample point in this area described as follows:

Horizon 1: 0cm to 30cm Dark brown or very dark greyish brown sandy loam or sandy clay loam with a granular structure

Horizon 2: 30cm to 60cm Yellowish brown sandy clay loam, with a medium angular blocky structure

Horizon 3 60cm to 120cm Yellowish brown sand with a massive structure

7.3 The rest of the site (whether described in the literature as Denchworth or Evesham 2) was very consistent with a typical sample point described as follows:

Horizon 1: 0cm to 30cm Very dark greyish brown clay. Despite the literature suggesting that the soils are calcareous there was no visible reaction to the HCl test at any sample point except for occasionally where a small piece of lime/limestone was found in the sample. It is not considered that the soils on site are naturally calcareous.

Horizon 2: From between 30cm to 60cm Greyish brown, clay with a course angular blocky structure with many ochreous mottles

Horizon 2a (only found in 10 of the samples): 60cm to 90 cm Dark yellowish brown stony clay with a very course platy structure and many ochreous mottles

Horizon 3 (Not always present): From 60 cm to 120cm (or 90cm to 120cm where horizon 2a was present) Grey clay with a course prismatic structure many ochreous mottles

INTERACTIVE FACTORS

8. WETNESS

8.1 An assessment of the wetness class of each sample point was made based on the flow chart at Figure 6 in the MAFF guidance. The wetness class and topsoil texture were then assessed against Table 6 of the MAFF guidance to determine the ALC grade according to wetness. The wetness assessment can be found at ***appendix 4***.

8.2 The slowly permeable gleyed horizon from 30cm along with the FCD of 118.17 result in a wetness class of III based on Figure 7 in the MAFF guidance.

8.3 Table 6 with less than 126 FCD, wetness class III and clay topsoil results in a grade 3b limitation.

8.4 Wetness was found to be the limiting factor across the majority of the survey area.

9. DROUGHTINESS

9.1 Droughtiness limits are defined in terms of moisture balance for wheat and potatoes using the formula:

MB (Wheat) = AP (Wheat) - MD (Wheat)

and

MB (Potatoes) = AP (Potatoes) - MD (Potatoes)

Where:
MB = Moisture Balance
AP = Crop Adjusted available water capacity
MD = Moisture deficit

9.2 Moisture deficit for wheat and potatoes can be found in the agro-climatic data and are as follows:

MD (Wheat) = 113.21
MD (Potatoes) = 99.92

9.3 Crop adjusted available water is calculated by reference to the total available water and easily available water which is calculated by reference to soil texture and structural condition and the stone content. The moisture balance was calculated for the trial pit locations and locations where droughtiness was considered to be a potential limiting factor. This assessment can be found at ***appendix 4***.

10. AGRICULTURAL LAND CLASSIFICATION

10.1 The Agricultural Land Classification provides a framework for classifying land according to which its physical or chemical characteristics impose long-term limitations on agricultural use. The limitations can operate in one or more of four principle ways: they may affect the range of crops that can be grown, the level of yield, the consistency of yield and the cost of obtaining it.

10.2 The principle physical factors influencing agricultural production are climate, site and soil and the interactions between them which together form the basis for classifying land into one of 5 grades; grade 1 being of excellent quality and grade 5 being land of very poor quality. Grade 3 land, which constitutes approximately half of all agricultural land in the United Kingdom is divided into 2 subgrades – 3a and 3b. A full definition of all of the grades can be found at ***appendix 5.***

10.3 This assessment sets out that the site is limited by both wetness and droughtiness.

10.4 The breakdown of land by classification is:

Grade 2:	7.0Ha
Grade 3a:	0.3Ha
Grade 3b:	154Ha

10.5 A plan of the land grading can be found at ***appendix 6***.

Appendix A – Details of the Authors Experience

James Fulton

Professional Education and Qualifications

BSc (Hons) Agriculture, University of Nottingham (2004)

Member of the Royal Institution of Chartered Surveyors (MRICS) (2008)

Fellow of the Central Association of Agricultural Valuers (FAAV) (2009)

Relevant Work Experience

While working for a regional firm from 2004 until 2016 as part of my work I provided advice to farmers on soils, cultivation techniques and cropping and was involved in field trials which assessed cropping and cultivation techniques and how they impacted soil structure. At the same time I worked alongside an experienced surveyor who produced Agricultural Land Classification reports and I received training in field survey techniques and the ALC process to the point where I was able to produce ALC reports.

In 2016 I left my employer and formed Amet Property Ltd providing development consultancy and other rural practice surveying services. Of all of the services that we provide Agricultural Land Classification reports is the single largest area of work accounting for approximately 70% of all of my working time.

While I am not a member of the BSSS I meet the minimum competencies set out by the BSSS in Document 1 *Foundation skills in field soil investigation, description and interpretation* and Document 2 *Agricultural Land Classification (England and Wales)*

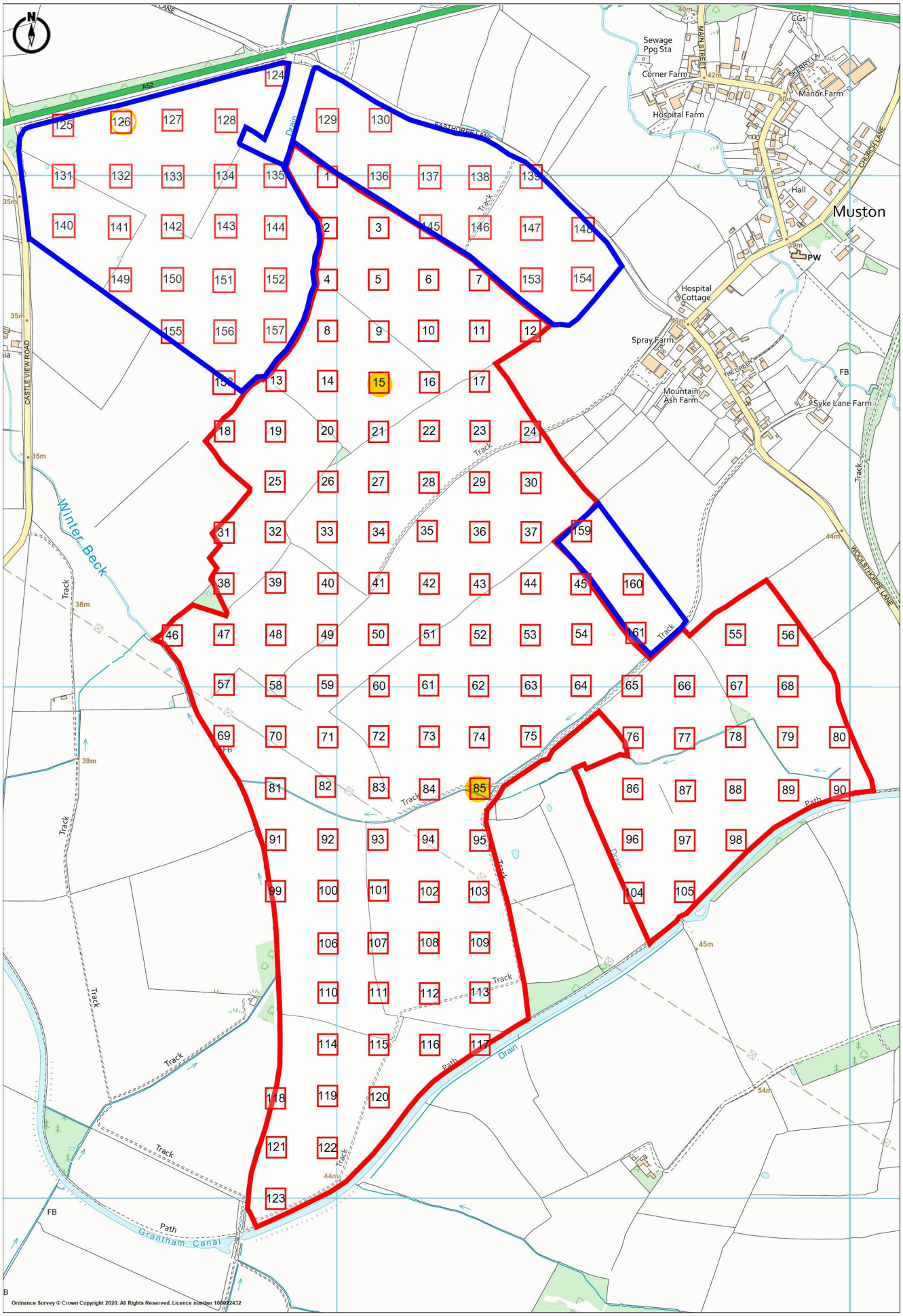
Professional Standards

As a member of the Royal Institution of Chartered Surveyors and Fellow of the Central Association of Agricultural Valuers I am bound by their professional standards and am only able to carry out work where I am suitably qualified and experienced to do so. Due to the formal and practical training that I have received I am able to competently produce Agricultural Land Classification reports.

Assistant Surveyors

The BSSS acknowledges a significant lack of suitably qualified individuals able to produce ALC reports and so I have trained individuals to meet the requirements of BSSS Document 1 *Foundation skills in field soil investigation, description, and interpretation.*

Appendix 1 - Map Sample Points



Promap V2
LANDMARK INFORMATION

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Plotted Scale - **1:10000**. Paper Size - **A4**

Area outlined red surveyed 3rd January 2020
Area outlined blue surveyed 17th July 2020
Highlighted points are trial pit locations from 2020 and 2022.

APPENDIX 2 – AGRO-CLIMATIC DATA

Site Details: Belvoir

Grid reference (centre of site): 482180 337159

Altitude: Mean 45.10m

Climatic data from surrounding locations:

Grid Reference	ALT	AAR	LR_AAR	ASR	ATO	ATS	MDW	MDP	FCD
48003350	46	584	0.3	300	1398	2364	113	106	117
48003400	28	570	0.4	280	1416	2384	119	114	113
48503350	78	601	0.2	315	1360	2324	106	97	127
48503400	42	585	0.4	300	1399	2368	113	107	118

Altitude adjusted

Grid Reference	AAR	ATO	FCD	MDW	MDP	Proximity Adjustment
48003350	583.70	1399.13	116.96	113.12	106.16	32.16%
48003400	576.80	1396.61	113.98	116.78	111.06	22.18%
48503350	594.40	1397.61	126.05	109.85	102.11	26.38%
48503400	586.20	1395.57	118.17	112.61	106.48	19.27%

Site Average Annual Rainfall: 585

Site Accumulated Temperature January to June: 1397

Site Field Capacity Days: 119

Moisture Deficit Wheat: 113

Moisture Deficit Potatoes: 106

Appendix 3 - Soil Sampling Information

		Topsoil					Subsoil 1						Subsoil 2						Subsoil 3					
Sample No	Altitude	Depth	Texture	Colour	Stoniness	Mottles	Depth	Texture	Colour	Stoniness	Mottles	Structure	Depth	Texture	Colour	Stoniness	Mottles	Structure	Depth	Texture	Colour	Stoniness	Mottles	Structure
1	41	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
2	43	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
3	43	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
4	44	0-30	C	2.5Y 3/2			30-60	C	10YR 4/6		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
5	44	0-35	C	2.5Y 3/2			35-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
6	44	0-40	C	2.5Y 3/2			40-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
7	45	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
8	45	0-30	C	2.5Y 3/2			30-60	C	10YR 4/6		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
9	46	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
10	46	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
11	47	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
12	46	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
13	45	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
14	46	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
15	47	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	CAB	60-120	C	2.5Y 5/1		MO	C Prism						
16	47	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
17	46	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
18	44	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	CAB	60-75	StC	10YR 4/6		MO	Poor	75-120	C	2.5Y 5/1		MO	Massive
19	44	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
20	45	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
21	48	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
22	47	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
23	48	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
24	49	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
25	44	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
26	45	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
27	48	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
28	49	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
29	50	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
30	50	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
31	42	0-30	C	2.5Y 3/2			30-50	C	2.5Y 5/2		MO	Poor	50-90	StC	10YR 4/6		MO	Poor	90-120	C	2.5Y 5/1		MO	Poor
32	44	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
33	45	0-25	C	2.5Y 3/2			25-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
34	48	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
35	49	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
36	49	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
37	48	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
38	41	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
39	43	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	CAB	60-120	C	2.5Y 5/1		MO	Poor						
40	45	0-35	C	2.5Y 3/2			35-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
41	48	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
42	48	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
43	49	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
44	49	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-90	StC	10YR 4/6		MO	Poor	90-120	C	2.5Y 5/1		MO	M
45	47	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
46	40	0-30	C	2.5Y 3/2			30-70	C	2.5Y 5/2		MO	Poor	70-120	C	2.5Y 5/1		MO	Poor						
47	41	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-90	StC	10YR 4/6		MO	Poor	90-120	C	2.5Y 5/1		MO	M
48	43	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
49	45	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
50	47	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
51	48	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
52	48	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
53	48	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
54	47	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
55	46	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
56	46	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
57	41	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
58	42	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
59	44	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
60	45	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
61	47	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
62	46	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
63	46	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						

		Topsoil					Subsoil 1						Subsoil 2						Subsoil 3					
Sample No	Altitude	Depth	Texture	Colour	Stoniness	Mottles	Depth	Texture	Colour	Stoniness	Mottles	Structure	Depth	Texture	Colour	Stoniness	Mottles	Structure	Depth	Texture	Colour	Stoniness	Mottles	Structure
64	46	0-25	C	2.5Y 3/2			25-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
65	46	0-25	C	2.5Y 3/2			25-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
66	46	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
67	46	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
68	46	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
69	40	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
70	43	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
71	44	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
72	46	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
73	45	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-90	StC	10YR 4/6		MO	Poor	90-120	C	2.5Y 5/1		MO	M
74	44	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
75	44	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
76	45	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
77	45	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
78	45	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
79	46	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-90	StC	10YR 4/6		MO	Poor	90-120	C	2.5Y 5/1		MO	M
80	46	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
81	42	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
82	42	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
83	43	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
84	43	0-30	C	2.5Y 3/2			30-50	C	2.5Y 5/2		MO	Poor	50-80	StC	10YR 4/6		MO	Poor	80-120	C	2.5Y 5/1		MO	M
85	43	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	CAB	60-90	StC	10YR 4/6		MO	VCPlaty	90-120	C	2.5Y 5/1		MO	M
86	43	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
87	45	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
88	46	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
89	45	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
90	46	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
91	40	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
92	41	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
93	42	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
94	43	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
95	42	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-90	StC	10YR 4/6		MO	Poor	90-120	C	2.5Y 5/1		MO	Poor
96	44	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
97	45	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
98	46	0-30	C	2.5Y 3/2			30-80	C	2.5Y 5/2		MO	Poor	80-120	C	2.5Y 5/1		MO	Poor						
99	41	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
100	41	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
101	42	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
102	43	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
103	43	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
104	45	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
105	46	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
106	42	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
107	42	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
108	43	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
109	45	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
110	43	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
111	45	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
112	45	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
113	47	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
114	45	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
115	45	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
116	46	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
117	47	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
118	45	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
119	46	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
120	46	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
121	46	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
122	46	0-30	C	10YR 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
123	46	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
124	37	0-30	SCL	10YR 3/3			30-65	SCL	10YR 5/4			Moderate	60-120	S	10YR 5-4			Moderate						
125	36	0-30	SL	10YR 3/3			30-75	SCL	10YR 5/4			Moderate	75-120	S	10YR 5-4			Moderate						
126	37	0-45	SCL	10YR 3/3			45-120	S	10YR 5/4			M												
127	37	0-30	SCL	10YR 3/3			30-65	SCL	10YR 5/4			Moderate	60-120	S	10YR 5/4			Moderate						

		Topsoil					Subsoil 1						Subsoil 2						Subsoil 3					
Sample No	Altitude	Depth	Texture	Colour	Stoniness	Mottles	Depth	Texture	Colour	Stoniness	Mottles	Structure	Depth	Texture	Colour	Stoniness	Mottles	Structure	Depth	Texture	Colour	Stoniness	Mottles	Structure
128	38	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	CAB	60-120	C	2.5Y 5/1		MO	Poor						
129	38	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	CAB	60-120	C	2.5Y 5/1		MO	Poor						
130	38	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	CAB	60-120	C	2.5Y 5/1		MO	Poor						
131	36	0-30	SL	10YR 3/3			30-75	SCL	10YR 5/4			Moderate	75-120	S	10YR 5/4			Moderate						
132	37	0-30	SCL	10YR 3/3			30-65	SCL	10YR 5/4			Moderate	60-120	S	10YR 5/4			Moderate						
133	40	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
134	40	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
135	41	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
136	40	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
137	41	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
138	42	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
139	43	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
140	37	0-30	SCL	10YR 3/3			30-65	SCL	10YR 5/4			Moderate	60-120	S	10YR 5/4			Moderate						
141	38	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
142	40	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
143	43	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
144	44	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
145	43	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
146	44	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
147	44	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
148	45	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
149	38	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
150	41	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
151	44	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
152	44	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
153	45	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
154	45	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
155	43	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
156	45	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
157	44	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
158	45	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
159	47	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
160	46	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
161	48	0-30	C	2.5Y 3/2			30-60	C	2.5Y 5/2		MO	Poor	60-120	C	2.5Y 5/1		MO	Poor						
	44.16																							

Appendix 3b – Trial Pit Descriptions

Sample Point No. 15	
Horizon 1	0-30cm Very dark greyish brown (2.5Y 3/2) clay.
Horizon 2	30-60cm Greyish brown (2.5Y 5/2) clay with a course angular blocky structure, very firm consistence and many ochreous mottles
Horizon 3	60-75cm Dark yellowish brown Brown (10YRY 4/6) slightly stony clay with a very course platy structure, firm consistence and many ochreous mottles
Horizon 4	90-120cm Grey (2.5Y 5/1) clay with a course prismatic structure, firm consistence and many ochreous mottles. During the visit in December 2020 this horizon was recorded as massive but changed to course prismatic when re-examined in drier conditions in 2022
Slowly permeable layer	Starts at 30cm – evidenced by firm course angular blocky structure with less than 0.5% biopores >0.5mm
Gleying	Starts at 30cm evidenced by grey ped faces and ochreous mottles
Wetness Class	III
Wetness limitation	3b
MB Wheat	12.79
MB potatoes	8.08
Droughtiness Limitation	2

Sample Point No. 85		
Horizon 1	0-30cm Very dark greyish brown (2.5Y 3/2) clay.	
Horizon 2	30-60cm Greyish brown (2.5Y 5/2) clay with a course angular blocky structure, very firm consistence and many ochreous mottles	
Horizon 3	60-120cm Grey (2.5Y 5/1) clay with a course prismatic structure, firm consistence and many ochreous mottles. During the visit in December 2020 this horizon was recorded as massive but changed to course prismatic when re-examined in drier conditions in 2022	
Pictures		
Horizon 1 	Horizon 2 	Horizon 3 
Slowly permeable layer	Starts at 30cm – evidenced by firm course angular blocky structure with less than 0.5% biopores >0.5mm	
Gleying	Starts at 30cm evidenced by grey ped faces and ochreous mottles	
Wetness Class	III	
Wetness limitation	3b	
MB Wheat	12.79	
MB potatoes	8.08	
Droughtiness Limitation	2	

Sample Point No. 126	
Horizon 1	0-45cm Dark Brown (10YR 3/3) sandy clay loam. Surprisingly deep for a topsoil but no definable difference between land that was cultivated and land that was not.
Horizon 2	45-120cm Yellowish Brown (10YR 5/4) sand with a massive structure and firm consistence.
Slowly permeable layer	Not Present
Gleying	Not Present
Wetness Class	I
Wetness limitation	No limit to land grade
MB Wheat	1.79
MB potatoes	0.92
Droughtiness Limitation	2

Photographs of auger samples collected 5th January 2023

Sample point 5

Sample point 25

Sample Point 34

Sample Point 48

Sample Point 61

Sample Point 100

Sample Point 103

Sample Point 119

Sample Point 126

Sample Point 151

Minor colour variations that can be seen are exacerbated by the photographs compared to what was noted on site and in a lot of cases the quantity of mottles affect the surface colour of the auger cores

ANALYTICAL REPORT

Report Number	**37552-22**	**W250**	**AMET PROPERTY**
Date Received	**05-OCT-2022**		**HENWICK BARN**
Date Reported	**11-OCT-2022**		**BULWICK**
Project	**SOIL**		**CORBY**
Reference	**JBM**		**NORTHANTS**
Order Number			**NN17 3DU**

Laboratory Reference		**SOIL582876**	**SOIL582877**
Sample Reference		**BELVOIR 85**	**BELVOIR 126**
Determinand	**Unit**	**SOIL**	**SOIL**
Coarse Sand 2.00-0.63mm	% w/w	3	5
Medium Sand 0.63-0.212mm	% w/w	16	58
Fine Sand 0.212-0.063mm	% w/w	5	7
Silt 0.063-0.002mm	% w/w	28	11
Clay <0.002mm	% w/w	48	19
Textural Class **		C	SCL

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

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

Reported by

Linaben Patel

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Supporting a safer, healthier planet
www.cawood.co.uk

ADAS (UK) Textural Class Abbreviations

The texture classes are denoted by the following abbreviations:

Class	Code
Sand	S
Loamy sand	LS
Sandy loam	SL
Sandy Silt loam	SZL
Silt loam	ZL
Sandy clay loam	SCL
Clay loam	CL
Silt clay loam	ZCL
Clay	C
Silty clay	ZC
Sandy clay	SC

For the *sand, loamy sand, sandy loam* and *sandy silt loam* classes the predominant size of sand fraction may be indicated by the use of prefixes, thus:

- vf Very Fine (more than 2/3's of sand less than 0.106 mm)
- f Fine (more than 2/3's of sand less than 0.212 mm)
- c Coarse (more than 1/3 of sand greater than 0.6 mm)
- m Medium (less than 2/3's fine sand and less than 1/3 coarse sand).

The subdivisions of *clay loam* and *silty clay loam classes* according to clay content are indicated as follows:

- M medium (less than 27% clay)
- H heavy (27-35% clay)

Organic soils i.e. those with an organic matter greater than 10% will be preceded with a letter O.

Peaty soils i.e. those with an organic matter greater than 20% will be preceded with a letter P.

Appendix 4 - Wetness and Droughtiness assesment

	Wetness Assesment			Grade	Droughtiness Assessment		Grade
Sample No	Depth to SPL	Gley	Wetness Class	According to Wetness	MB Wheat	MB Potato	According to Droughtiness
1	30	30	III	3b			
2	30	30	III	3b			
3	30	30	III	3b			
4	30	30	III	3b			
5	35	35	III	3b			
6	35	35	III	3b			
7	30	30	III	3b			
8	30	30	III	3b			
9	30	30	III	3b			
10	30	30	III	3b			
11	30	30	III	3b			
12	30	30	III	3b			
13	30	30	III	3b			
14	30	30	III	3b			
15	30	30	III	3b	12.79	8.08	2
16	30	30	III	3b			
17	30	30	III	3b			
18	30	30	III	3b			
19	30	30	III	3b			
20	30	30	III	3b			
21	30	30	III	3b			
22	30	30	III	3b			
23	30	30	III	3b			
24	30	30	III	3b			
25	30	30	III	3b			
26	30	30	III	3b			
27	30	30	III	3b			
28	30	30	III	3b			
29	30	30	III	3b			
30	30	30	III	3b			
31	30	30	III	3b			
32	30	30	III	3b			
33	25	25	III	3b			
34	30	30	III	3b			
35	30	30	III	3b			
36	30	30	III	3b			
37	30	30	III	3b			
38	30	30	III	3b			
39	30	30	III	3b			
40	35	35	III	3b			
41	30	30	III	3b			
42	30	30	III	3b			
43	30	30	III	3b			

	Wetness Assesment			Grade	Droughtiness Assessment		Grade
Sample No	Depth to SPL	Gley	Wetness Class	According to Wetness	MB Wheat	MB Potato	According to Droughtiness
44	30	30	III	3b			
45	30	30	III	3b			
46	30	30	III	3b			
47	30	30	III	3b			
48	30	30	III	3b			
49	30	30	III	3b			
50	30	30	III	3b			
51	30	30	III	3b			
52	30	30	III	3b			
53	30	30	III	3b			
54	30	30	III	3b			
55	30	30	III	3b			
56	30	30	III	3b			
57	30	30	III	3b			
58	30	30	III	3b			
59	30	30	III	3b			
60	30	30	III	3b			
61	30	30	III	3b			
62	30	30	III	3b			
63	30	30	III	3b			
64	25	25	III	3b			
65	25	25	III	3b			
66	30	30	III	3b			
67	30	30	III	3b			
68	30	30	III	3b			
69	30	30	III	3b			
70	30	30	III	3b			
71	30	30	III	3b			
72	30	30	III	3b			
73	30	30	III	3b			
74	30	30	III	3b			
75	30	30	III	3b			
76	30	30	III	3b			
77	30	30	III	3b			
78	30	30	III	3b			
79	30	30	III	3b			
80	30	30	III	3b			
81	30	30	III	3b			
82	30	30	III	3b			
83	30	30	III	3b			
84	30	30	III	3b			
85	30	30	III	3b	12.79	8.08	2
86	30	30	III	3b			
87	30	30	III	3b			

	Wetness Assesment			Grade	Droughtiness Assessment		Grade
Sample No	Depth to SPL	Gley	Wetness Class	According to Wetness	MB Wheat	MB Potato	According to Droughtiness
88	30	30	III	3b			
89	30	30	III	3b			
90	30	30	III	3b			
91	30	30	III	3b			
92	30	30	III	3b			
93	30	30	III	3b			
94	30	30	III	3b			
95	30	30	III	3b			
96	30	30	III	3b			
97	30	30	III	3b			
98	30	30	III	3b			
99	30	30	III	3b			
100	30	30	III	3b			
101	30	30	III	3b			
102	30	30	III	3b			
103	30	30	III	3b			
104	30	30	III	3b			
105	30	30	III	3b			
106	30	30	III	3b			
107	30	30	III	3b			
108	30	30	III	3b			
109	30	30	III	3b			
110	30	30	III	3b			
111	30	30	III	3b			
112	30	30	III	3b			
113	30	30	III	3b			
114	30	30	III	3b			
115	30	30	III	3b			
116	30	30	III	3b			
117	30	30	III	3b			
118	30	30	III	3b			
119	30	30	III	3b			
120	30	30	III	3b			
121	30	30	III	3b			
122	30	30	III	3b			
123	30	30	III	3b			
124			I	1	10.29	7.08	2
125			I	1	15.29	11.08	2
126			I	1	1.79	0.92	3a
127			I	1	10.29	7.08	2
128	30	30	III	3b			
129	30	30	III	3b			
130	30	30	III	3b			
131			I	1	15.29	11.08	2

	Wetness Assesment			Grade	Droughtiness Assessment		Grade
Sample No	Depth to SPL	Gley	Wetness Class	According to Wetness	MB Wheat	MB Potato	According to Droughtiness
132			I	1	10.29	7.08	2
133	30	30	III	3b			
134	30	30	III	3b			
135	30	30	III	3b			
136	30	30	III	3b			
137	30	30	III	3b			
138	30	30	III	3b			
139	30	30	III	3b			
140			I	1	10.29	7.08	2
141	30	30	III	3b			
142	30	30	III	3b			
143	30	30	III	3b			
144	30	30	III	3b			
145	30	30	III	3b			
146	30	30	III	3b			
147	30	30	III	3b			
148	30	30	III	3b			
149	30	30	III	3b			
150	30	30	III	3b			
151	30	30	III	3b			
152	30	30	III	3b			
153	30	30	III	3b			
154	30	30	III	3b			
155	30	30	III	3b			
156	30	30	III	3b			
157	30	30	III	3b			
158	30	30	III	3b			
159	30	30	III	3b			
160	30	30	III	3b			
161	30	30	III	3b			

APPENDIX 5 - DESCRIPTION OF ALC GRADES

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.

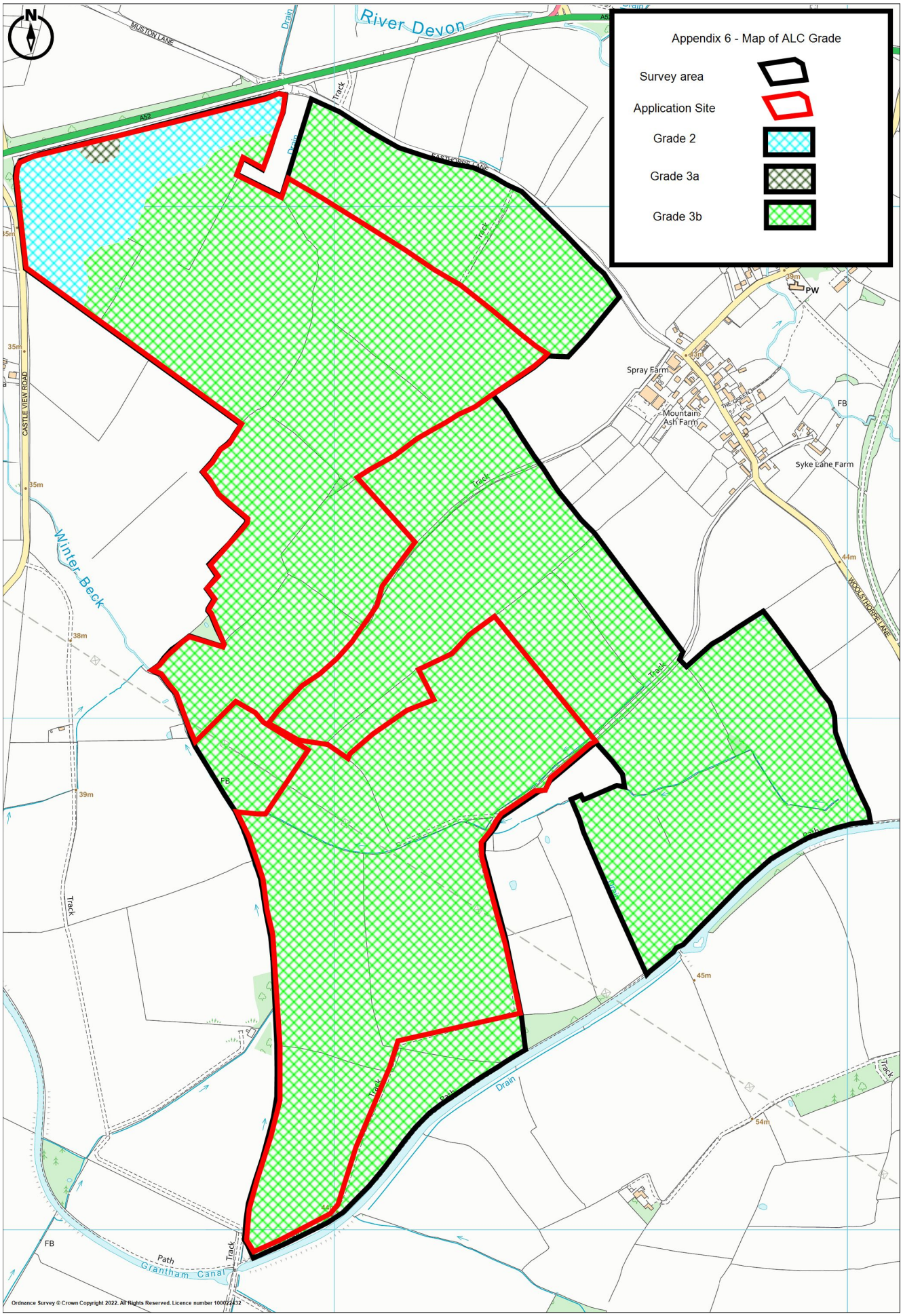
Grade 3 - good to moderate quality agricultural land Land with moderate limitations which affect the choice of crops, timing and type of cultivation, harvesting or the level of yield. Where more demanding crops are grown yields are generally lower or more variable than on land in Grades 1 and 2.

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 agricultural 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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LANDMARK INFORMATION

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