



**AGRICULTURAL LAND CLASSIFICATION  
PADBURY BROOK SOLAR FARM**

CLIENT: JBM SOLAR PROJECTS 8 LTD  
PROJECT: PADBURY BROOK SOLAR FARM  
DATE: 25<sup>TH</sup> NOVEMBER 2022 – ISSUE 4  
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## 1. EXECUTIVE SUMMARY

- 1.1 This report assesses the Agricultural Land Classification (ALC) grading of 67.1Ha of agricultural land to the northeast of Stratton Audley in Oxfordshire
- 1.2 The limiting factor on most of the site is found to be soil wetness, a combination of the climatic regime, soil water regime and texture of the top 25cm of the soil.
- 1.3 The land is graded as follows:

**Grade 3b:                    67.1 hectares**

- 1.4 The application site is smaller than the area surveyed with the surveyed area within the application boundary extending to 57.5Ha graded as follows:

**Grade 3b:                    57.5 hectares**

## 2. INTRODUCTION

- 2.1 Amet Property Ltd have been instructed by JBM Solar Projects 8 Limited to produce an Agricultural Land Classification (ALC) report on a 67.1-hectare site to the northeast of Stratton Audley, approximately 3 miles northeast of Bicester, Oxfordshire in Cherwell District in support of a planning application for a solar farm with associated infrastructure.
- 2.2 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 producing agricultural land classification reports.
- 2.3 The report is based on site visits conducted by James Fulton and an assistant surveyor on the 25<sup>th</sup> of June and 29<sup>th</sup> August 2022. During the site visits conditions were dry and overcast in June and dry and sunny in August with soils in a moist state in June and becoming dry in August. During the inspection 2 trial pits were dug to a depth of 120cm. In addition to the trial pits an auger was used to take a minimum of 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 where it was not clear from the auger samples. A plan of auger points can be found at **appendix 1**. The trial pit locations were selected as they were representative of the soils found on site. Where only the auger was used the structure was inferred from trial pits.
- 2.4 The survey area is made up of 9 land parcels. The land is level to gently sloping with altitudes ranging from 91m to 105m AOD.
- 2.5 The land is in an arable rotation.
- 2.6 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.
- 2.7 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.
- 2.8 The principal factors influencing agricultural production are climate, site and soil and the interaction between them <sup>MAFF (1988) & Natural England (2012)</sup>.

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

### **3. PUBLISHED INFORMATION**

- 3.1 The British Geological Survey 1:50,000 scale map shows the bedrock geology of the land to be Peterborough Member – Mudstone. Superficial deposits are either not recorded or shown to be Till, Mid Pleistocene - Diamicton.
- 3.2 The national soils map shows the site to be in the Denchworth Association – Slowly permeable, seasonally waterlogged clayey soils with similar fine loamy over clayey soils.
- 3.3 The 1:250,000 series agricultural land classification mapping predicts the site 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.

Figure 4.1 Agro-Climatic Data – Details at **appendix 2**

Grid Reference	462400 227245
Altitude (ALT)	95
Average Annual Rainfall (AAR)	673
Accumulated Temperature - Jan to June (ATO)	1393
Duration of Field Capacity (FCD)	144
Moisture Deficit Wheat	102
Moisture Deficit Potatoes	92

- 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, as a measure of the relative warmth of a locality.
- 4.4 The Average Annual Rainfall and Accumulated Temperature provide no climatic limitation to grade.
- 4.5 The land is shown as flood zone 1- land with an annual chance of flooding of less than a 1 in 1000. There was no evidence of flooding on site or any reason to believe that the flood risk would be the most limiting factor to land grade.

## 5. STONINESS

- 5.1 The sample points on site ranged from 0% to 10% stone in the topsoil but these were all relatively small stones that would not impact on cultivations or crop production and so do not directly affect land grade.

## 6. GRADIENT

- 6.1 The site is all level to gently sloping with no area where gradient would be considered most limiting factor to land grade.

## 7. SOILS

- 7.1 The soils across the whole site were extremely consistent
- 7.2 The topsoil was always very dark greyish brown (2.5Y 3/2) clay or a very heavy clay loam.
- 7.3 There were two distinct subsoils, both were grey (2.5Y 5/1) but the structure of the second subsoil was massive rather than coarse angular blocky and noticeably firmer.
- 7.4 A full assessment of auger sample points, trial pits and lab results can be found at **appendix 3**.
- 7.5 One of the lab tests suggests that the soil may be calcareous, but there was no reaction on site to the soil and only occasionally a reaction where there was a small piece of limestone in the sample where the HCl was applied. It is considered that the reaction was caused by applied lime and not a naturally calcareous soil.

## 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 coarse angular blocky and massive structured subsoils with no discernible biopores and mottling evidencing wetness indicate a slowly permeable layer starting at between 30 and 35cm. The grey colours and significant ochreous mottles indicate gleying which together with the number of field capacity days result in wetness class IV and combine with the clay or heavy clay loam topsoil to give a grade of 3b.

### 9. DROUGHTINESS

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

$$MB \text{ (Wheat)} = AP \text{ (Wheat)} - MD \text{ (Wheat)}$$

and

$$MB \text{ (Potatoes)} = AP \text{ (Potatoes)} - MD \text{ (Potatoes)}$$

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:

$$MD \text{ (Wheat)} = 101$$

$$MD \text{ (Potatoes)} = 83$$

- 9.3 The combination of soil and rainfall in this location mean that droughtiness are not a limiting factor.



## 10. AGRICULTURAL LAND CLASSIFICATION

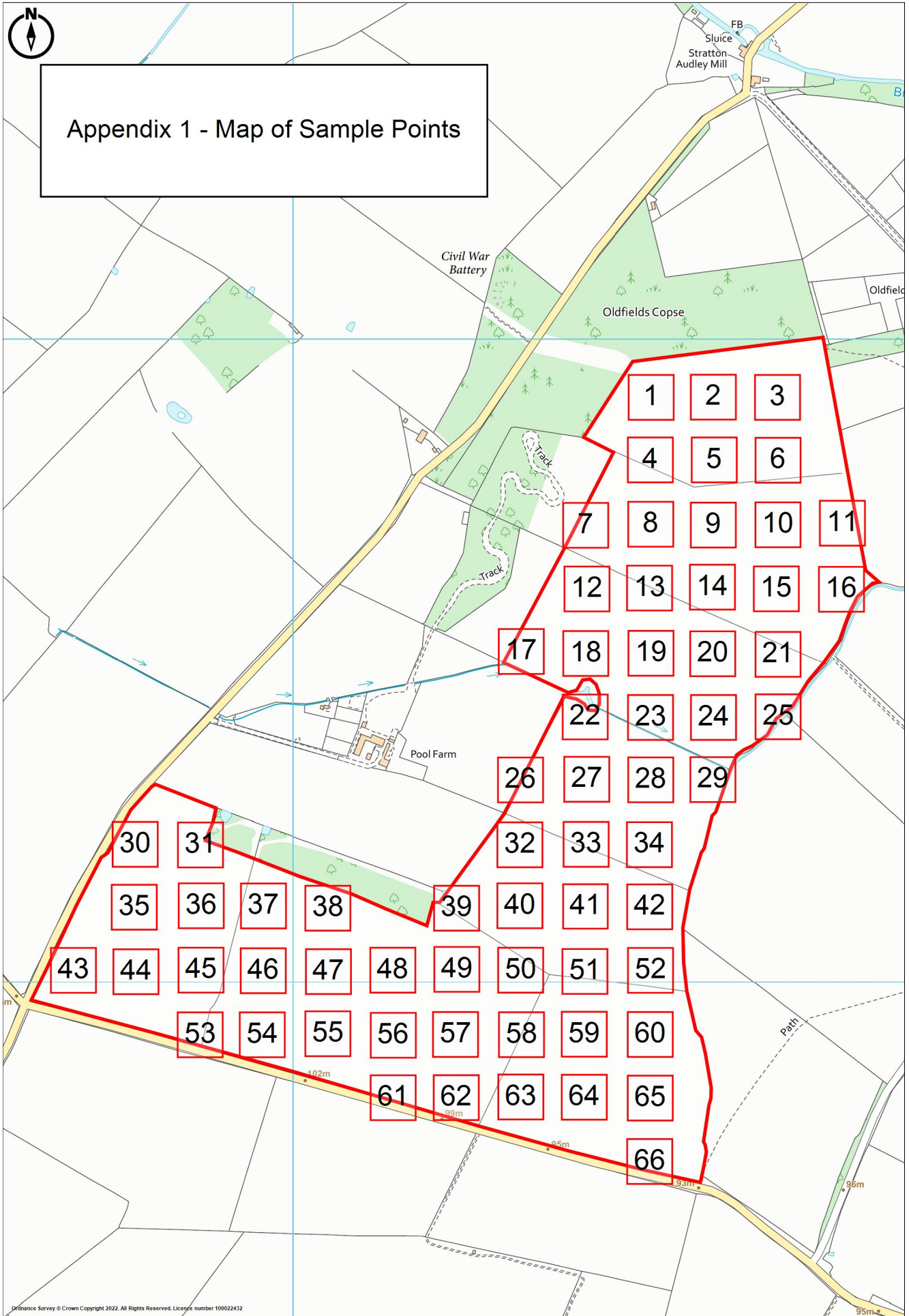
- 10.1 The Agricultural Land Classification provides a framework for classifying land according to which its physical or chemical characteristics impose long-term limitations on agricultural use. The limitations can operate in one or more of four principal ways: they may affect the range of crops that can be grown, the level of yield, the consistency of yield and the cost of obtaining it.
- 10.2 The principal 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 while no one factor limits the grade of the land, the interaction between climate and soil result in a wetness assessment that limits the land to grade 3b.
- 10.4 The land is graded:

**Grade 3b:                    67.1 hectares**

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



# Appendix 1 - Map of Sample Points



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## APPENDIX 2 – AGRO-CLIMATIC DATA

Site Details: Padbury Brook

Grid reference (centre of site): 462400 227245

Altitude: Mean 95.47

Climatic data from surrounding locations:

Grid Reference	ALT	AAR	LR_AAR	ASR	ATO	ATS	MDW	MDP	FCD
46002250	84	688	0.3	350	1407	2366	102	93	147
46002300	105	670	0.3	350	1381	2337	100	90	144
46502250	93	660	0.3	340	1396	2356	104	94	139
46502300	99	670	0.1	345	1387	2346	102	92	144

Altitude Adjusted

Grid Reference	AAR	ATO	FCD	MDW	MDP	Proximity Adjustment
46002250	691.44	1393.92	147.50	100.58	91.12	28.76%
46002300	667.14	1391.86	143.59	101.18	91.56	23.27%
46502250	660.74	1393.18	139.11	103.69	93.60	26.32%
46502300	669.65	1391.02	143.95	102.39	92.51	21.65%

Appendix 3 - Survey Data

Sample No	Altitude	Topsoil						Subsoil 1						Subsoil 2					
		Depth	Texture	Colour	Stoniness	Mottles	Structure	Depth	Texture	Colour	Stoniness	Mottles	Structure	80-119	Texture	Colour	Stoniness	Mottles	Structure
1	94	0-30	C	2.5Y 3/2	<5%	CO	WMSAB	30-80	C	2.5Y 5/1		MO	CAB	80-120	C	2.5Y 5/1		MOB	M
2	93	0-35	C	2.5Y 3/2	<5%	CO	WMSAB	35-80	C	2.5Y 5/1		MO	CAB	80-120	C	2.5Y 5/1		MOB	M
3	92	0-35	C	2.5Y 3/2	<5%	CO	WMSAB	35-80	C	2.5Y 5/1		MO	CAB	80-120	C	2.5Y 5/1		MOB	M
4	95	0-35	C	2.5Y 3/2	<5%	CO	WMSAB	35-80	C	2.5Y 5/1		MO	CAB	80-120	C	2.5Y 5/1		MOB	M
5	94	0-30	C	2.5Y 3/2	<5%	CO	WMSAB	30-80	C	2.5Y 5/1		MO	CAB	80-120	C	2.5Y 5/1		MOB	M
6	91	0-30	C	2.5Y 3/2	<5%	CO	WMSAB	30-80	C	2.5Y 5/1		MO	CAB	80-120	C	2.5Y 5/1		MOB	M
7	93	0-35	C	2.5Y 4/2	<5%	CO	WMSAB	35-80	C	2.5Y 5/1		MO	CAB	80-120	C	2.5Y 5/1		MOB	M
8	93	0-35	C	2.5Y 3/2	<5%	CO	WMSAB	35-80	C	2.5Y 5/1		MO	CAB	80-120	C	2.5Y 5/1		MOB	M
9	92	0-35	C	2.5Y 3/2	<5%	CO	WMSAB	35-80	C	2.5Y 5/1		MO	CAB	80-120	C	2.5Y 5/1		MOB	M
10	92	0-35	C	2.5Y 4/2	<5%	CO	WMSAB	35-80	C	2.5Y 5/3		MO	CAB	80-120	C	2.5Y 5/3		MOB	M
11	91	0-30	C	2.5Y 3/2	<5%	CO	WMSAB	30-80	C	2.5Y 5/1		MO	CAB	80-120	C	2.5Y 5/1		MOB	M
12	94	0-30	C	2.5Y 4/2	<5%	CO	WMSAB	30-80	C	2.5Y 5/1		MO	CAB	80-120	C	2.5Y 5/1		MOB	M
13	94	0-30	C	2.5Y 3/2	<5%	CO	WMSAB	30-80	C	2.5Y 5/1		MO	CAB	80-120	C	2.5Y 5/1		MOB	M
14	94	0-35	C	2.5Y 4/2	<5%	CO	WMSAB	35-80	C	2.5Y 5/1		MO	CAB	80-120	C	2.5Y 5/1		MOB	M
15	93	0-30	C	2.5Y 3/2	<5%	CO	WMSAB	30-80	C	2.5Y 5/1		MO	CAB	80-120	C	2.5Y 5/1		MOB	M
16	91	0-35	HCL	2.5Y 4/2	<5%	CO	WMSAB	35-80	C	2.5Y 5/3		MO	CAB	80-120	C	2.5Y 5/3		MOB	M
17	92	0-30	C	2.5Y 3/2	<5%	CO	WMSAB	30-80	C	2.5Y 5/1		MO	CAB	80-120	C	2.5Y 5/1		MOB	M
18	92	0-30	C	2.5Y 3/2	<5%	CO	WMSAB	30-80	C	2.5Y 5/1		MO	CAB	80-120	C	2.5Y 5/1		MOB	M
19	92	0-30	C	2.5Y 5/2	<5%	CO	WMSAB	30-80	C	2.5Y 5/1		MO	CAB	80-120	C	2.5Y 5/1		MOB	M
20	92	0-30	C	2.5Y 3/2	<5%	CO	WMSAB	30-80	C	2.5Y 5/1		MO	CAB	80-120	C	2.5Y 5/1		MOB	M
21	92	0-30	C	2.5Y 3/2	<5%	CO	WMSAB	30-80	C	2.5Y 5/1		MO	CAB	80-120	C	2.5Y 5/1		MOB	M
22	94	0-30	C	2.5Y 3/2	<5%	CO	WMSAB	30-80	C	2.5Y 5/1		MO	CAB	80-120	C	2.5Y 5/1		MOB	M
23	92	0-30	C	2.5Y 3/2	<5%	CO	WMSAB	30-80	C	2.5Y 5/1		MO	CAB	80-120	C	2.5Y 5/1		MOB	M
24	92	0-30	C	2.5Y 3/2	<5%	CO	WMSAB	30-70	C	2.5Y 5/2		MO	CAB	70-120	SC	2.5Y 5/1		MO	M
25	91	0-30	C	2.5Y 3/2	<5%	CO	WMSAB	30-80	C	2.5Y 5/1		MO	CAB	80-120	C	2.5Y 5/1		MOB	M
26	96	0-30	HCL	2.5Y 3/2	10%	CO	WMSAB	30-80	C	2.5Y 5/1		MO	CAB	80-120	C	2.5Y 5/1		MOB	M
27	95	0-30	HCL	2.5Y 3/2	10%	CO	WMSAB	30-80	C	2.5Y 5/1		MO	CAB	80-120	C	2.5Y 5/1		MOB	M
28	94	0-30	HCL	2.5Y 3/2	10%	CO	WMSAB	30-120	SCL	2.5Y 5/1		MO	WMAB						
29	95	0-30	HCL	2.5Y 3/2	10%	CO	WMSAB	30-80	C	2.5Y 5/1		MO	CAB	80-120	C	2.5Y 5/1		MOB	M
30	97	0-35	C	2.5Y 3/2	<5%	CO	WMSAB	35-80	C	2.5Y 5/1		MO	CAB	80-120	C	2.5Y 5/1		MOB	M
31	97	0-30	C	2.5Y 3/2	<5%	CO	WMSAB	30-80	C	2.5Y 5/1		MO	CAB	80-120	C	2.5Y 5/1		MOB	M
32	95	0-35	C	2.5Y 3/2	<5%	CO	WMSAB	35-80	C	2.5Y 5/1		MO	CAB	80-120	C	2.5Y 5/1		MOB	M
33	91	0-30	C	2.5Y 3/2	<5%	CO	WMSAB	30-80	C	2.5Y 5/1		MO	CAB	80-120	C	2.5Y 5/1		MOB	M
34	91	0-30	C	2.5Y 3/2	<5%	CO	WMSAB	30-80	C	2.5Y 5/1		MO	CAB	80-120	C	2.5Y 5/1		MOB	M
35	97	0-30	C	2.5Y 3/2	<5%	CO	WMSAB	30-80	C	2.5Y 5/1		MO	CAB	80-120	C	2.5Y 5/1		MOB	M
36	97	0-35	C	2.5Y 3/2	<5%	CO	WMSAB	35-80	C	2.5Y 5/1		MO	CAB	80-120	C	2.5Y 5/1		MOB	M
37	97	0-30	C	2.5Y 3/2	<5%	CO	WMSAB	30-80	C	2.5Y 5/1		MO	CAB	80-120	C	2.5Y 5/1		MOB	M
38	100	0-30	C	2.5Y 4/2	<5%	CO	WMSAB	30-80	C	2.5Y 5/1		MOB	CAB	80-120	C	2.5Y 5/1		MOB	M
39	101	0-30	C	2.5Y 3/2	<5%	CO	WMSAB	30-80	C	2.5Y 5/1		MO	CAB	80-120	C	2.5Y 5/1		MOB	M
40	95	0-30	C	2.5Y 3/2	<5%	CO	WMSAB	30-80	C	2.5Y 5/1		MO	CAB	80-120	C	2.5Y 5/1		MOB	M
41	92	0-30	C	2.5Y 3/2	<5%	CO	WMSAB	30-80	C	2.5Y 5/1		MO	CAB	80-120	C	2.5Y 5/1		MOB	M
42	91	0-30	C	2.5Y 3/2	<5%	CO	WMSAB	30-80	C	2.5Y 5/1		MO	CAB	80-120	C	2.5Y 5/1		MOB	M
43	102	0-30	C	2.5Y 3/2	<5%	FO	WMSAB	30-80	C	2.5Y 5/1		MO	CAB	80-120	C	2.5Y 5/1		MOB	M
44	103	0-35	C	2.5Y 3/2	<5%	CO	WMSAB	35-80	C	2.5Y 5/1		MO	CAB	80-120	C	2.5Y 5/1		MOB	M
45	105	0-30	C	2.5Y 3/2	<5%	CO	WMSAB	30-80	C	2.5Y 5/1		MO	CAB	80-120	C	2.5Y 5/1		MOB	M

Sample No	Altitude	Topsoil						Subsoil 1						Subsoil 2					
		Depth	Texture	Colour	Stoniness	Mottles	Structure	Depth	Texture	Colour	Stoniness	Mottles	Structure	80-119	Texture	Colour	Stoniness	Mottles	Structure
46	101	0-35	C	2.5Y 3/2	10%	CO	WMSAB	35-80	C	2.5Y 5/3		MO	CAB	80-120	C	2.5Y 5/3		MOB	M
47	100	0-30	C	2.5Y 3/2	10%	CO	WMSAB	30-80	C	2.5Y 5/1		MO	CAB	80-120	C	2.5Y 5/1		MOB	M
48	101	0-30	C	2.5Y 3/2	10%	CO	WMSAB	30-80	C	2.5Y 5/1		MO	CAB	80-120	C	2.5Y 5/1		MOB	M
49	98	0-30	C	2.5Y 3/2	<5%	CO	WMSAB	30-80	C	2.5Y 5/1		MOB	CAB	80-120	C	2.5Y 5/1		MOB	M
50	96	0-30	C	2.5Y 3/2	<5%	CO	WMSAB	30-80	C	2.5Y 5/1		MO	CAB	80-120	C	2.5Y 5/1		MOB	M
51	93	0-30	C	2.5Y 3/2	<5%	CO	WMSAB	30-80	C	2.5Y 5/1		MO	CAB	80-120	C	2.5Y 5/1		MOB	M
52	93	0-35	C	2.5Y 3/2	<5%	CO	WMSAB	35-80	C	2.5Y 5/1		MOB	CAB	80-120	C	2.5Y 5/1		MOB	M
53	102	0-30	C	2.5Y 3/2	<5%	FO	WMSAB	30-80	C	2.5Y 5/1		MO	CAB	80-120	C	2.5Y 5/1		MOB	M
54	103	0-30	C	2.5Y 3/2	<5%	CO	WMSAB	30-80	C	2.5Y 5/1		MO	CAB	80-120	C	2.5Y 5/1		MOB	M
55	101	0-35	C	2.5Y 3/2	<5%	CO	WMSAB	35-80	C	2.5Y 5/1		MO	CAB	80-120	C	2.5Y 5/1		MOB	M
56	100	0-30	C	2.5Y 3/2	<5%	CO	WMSAB	30-80	C	2.5Y 5/1		MO	CAB	80-120	C	2.5Y 5/1		MOB	M
57	102	0-30	C	2.5Y 3/2	<5%	CO	WMSAB	30-80	C	2.5Y 5/1		MO	CAB	80-120	C	2.5Y 5/1		MOB	M
58	97	0-30	C	2.5Y 3/2	<5%	CO	WMSAB	30-80	C	2.5Y 5/1		MO	CAB	80-120	C	2.5Y 5/1		MOB	M
59	94	0-30	C	2.5Y 3/2	<5%	CO	WMSAB	30-80	C	2.5Y 5/1		MO	CAB	80-120	C	2.5Y 5/1		MOB	M
60	93	0-30	C	2.5Y 3/2	<5%	CO	WMSAB	30-80	C	2.5Y 5/1		MO	CAB	80-120	C	2.5Y 5/1		MOB	M
61	101	0-30	C	2.5Y 3/2	<5%	CO	WMSAB	30-80	C	2.5Y 5/1		MO	CAB	80-120	C	2.5Y 5/1		MOB	M
62	99	0-35	C	2.5Y 3/2	<5%	CO	WMSAB	35-80	C	2.5Y 5/1		MO	CAB	80-120	C	2.5Y 5/1		MOB	M
63	96	0-30	C	2.5Y 3/2	<5%	CO	WMSAB	30-80	C	2.5Y 5/1		MO	CAB	80-120	C	2.5Y 5/1		MOB	M
64	94	0-30	C	2.5Y 3/2	<5%	CO	WMSAB	30-80	C	2.5Y 5/1		MO	CAB	80-120	C	2.5Y 5/1		MOB	M
65	93	0-30	C	2.5Y 3/2	<5%	CO	WMSAB	30-80	C	2.5Y 5/1		MO	CAB	80-120	C	2.5Y 5/1		MOB	M
66	93	0-30	C	2.5Y 3/2	<5%	CO	WMSAB	30-80	C	2.5Y 5/1		MO	CAB	80-120	C	2.5Y 5/1		MOB	M

95.47

### Key to abbreviations used

#### Texture

C Clay  
HCL Heavy Clay Loam




#### Structure



WMSAB Weak medium subangular blocky  
CAB Coarse angular blocky  
M Massive

#### Mottles

CO Common ochreous mottles  
MO Many ochreous mottles  
MOB Many ochreous mottles and black ferri-manganiferous concentrations

**Appendix 3b – Trial Pit Descriptions**

Sample Point No. 44		
Horizon 1	0-35cm Very dark greyish brown (2.5Y 3/2) stoneless non-calcareous clay topsoil with weak medium sub angular structure and common ochreous mottling.	
Horizon 2	35-80cm Grey (2.5Y 5/1) stoneless clay subsoil with coarse angular blocky structure and many ochreous mottles, no discernible bipores	
Horizon 3	As per Horizon 2 but definable massive structure evident at 80cm with many ochreous and black mottling, no discernible bipores	
Pictures		
Horizon 1	Horizon 2	Horizon 3
		

Sample Point No. 4		
Horizon 1	0-35cm Very dark brown (2.5Y 3/2) non-calcareous clay topsoil with weak medium sub angular blocky structure with common ochreous mottling.	
Horizon 2	35-80cm Grey (2.5Y 5/1) stoneless clay subsoil with coarse angular blocky structure and many ochreous mottles, no discernible bipores	
Horizon 3	As per Horizon 2 but definable massive structure evident at 80cm with many ochreous and black mottling, no discernible bipores	
Pictures		
Horizon 1 	Horizon 2 	Horizon 3



**ANALYTICAL REPORT**

<b>Report Number</b>	<b>22281-22</b>	<b>W250</b>	<b>AMET PROPERTY</b>
<b>Date Received</b>	<b>21-JUN-2022</b>		<b>HENWICK BARN</b>
<b>Date Reported</b>	<b>01-JUL-2022</b>		<b>BULWICK</b>
<b>Project</b>	<b>SOIL</b>		<b>CORBY</b>
<b>Reference</b>	<b>AMET PROPERTY</b>		<b>NORTHANTS</b>
<b>Order Number</b>			<b>NN17 3DU</b>

Laboratory Reference		SOIL567360	SOIL567361							
Sample Reference		BIC 8 TS	BIC 48 TS							
Determinand	Unit	SOIL	SOIL							
Coarse Sand 2.00-0.63mm	% w/w	2	0							
Medium Sand 0.63-0.212mm	% w/w	16	15							
Fine Sand 0.212-0.063mm	% w/w	6	7							
Silt 0.063-0.002mm	% w/w	35	41							
Clay <0.002mm	% w/w	41	37							
Stones >50mm	% w/w	0.0	0.0							
Stones 20-50mm	% w/w	0.0	7.4							
Stones 2-20mm	% w/w	2.5	4.3							
Organic Matter LOI	% w/w	6.5	5.8							
Neutralising Value as CaCO3 eq.	% w/w	1.1	<1							
Neutralising Value as CaO eq.	% w/w	<1	<1							
Textural Class **		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      **This test report shall not be reproduced, except in full, without the written approval of the laboratory.**





ANALYTICAL NOTES

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Notes

Reported by

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

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## ADAS (UK) Textural Class Abbreviations

The texture classes are denoted by the following abbreviations:

<b>Class</b>	<b>Code</b>
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 Assessment

Sample No	Wetness Assesment			Wetness Class	Grade
	Depth to SPL	Gley	Reddish		According to Wetness
1	35	<40	N	IV	3b
2	35	<40	N	IV	3b
3	35	<40	N	IV	3b
4	35	<40	N	IV	3b
5	35	<40	N	IV	3b
6	35	<40	N	IV	3b
7	35	<40	N	IV	3b
8	35	<40	N	IV	3b
9	35	<40	N	IV	3b
10	35	<40	N	IV	3b
11	35	<40	N	IV	3b
12	35	<40	N	IV	3b
13	35	<40	N	IV	3b
14	35	<40	N	IV	3b
15	35	<40	N	IV	3b
16	35	<40	N	IV	3b
17	35	<40	N	IV	3b
18	35	<40	N	IV	3b
19	35	<40	N	IV	3b
20	35	<40	N	IV	3b
21	35	<40	N	IV	3b
22	35	<40	N	IV	3b
23	35	<40	N	IV	3b
24	35	<40	N	IV	3b
25	35	<40	N	IV	3b
26	35	<40	N	IV	3b
27	35	<40	N	IV	3b
28	35	<40	N	IV	3b
29	35	<40	N	IV	3b
30	35	<40	N	IV	3b
31	35	<40	N	IV	3b
32	35	<40	N	IV	3b
33	35	<40	N	IV	3b
34	35	<40	N	IV	3b
35	35	<40	N	IV	3b

Sample No	Wetness Assesment			Wetness Class	Grade According to Wetness
	Depth to SPL	Gley	Reddish		
36	35	<40	N	IV	3b
37	35	<40	N	IV	3b
38	35	<40	N	IV	3b
39	35	<40	N	IV	3b
40	35	<40	N	IV	3b
41	35	<40	N	IV	3b
42	35	<40	N	IV	3b
43	35	<40	N	IV	3b
44	35	<40	N	IV	3b
45	35	<40	N	IV	3b
46	35	<40	N	IV	3b
47	35	<40	N	IV	3b
48	35	<40	N	IV	3b
49	35	<40	N	IV	3b
50	35	<40	N	IV	3b
51	35	<40	N	IV	3b
52	35	<40	N	IV	3b
53	35	<40	N	IV	3b
54	35	<40	N	IV	3b
55	35	<40	N	IV	3b
56	35	<40	N	IV	3b
57	35	<40	N	IV	3b
58	35	<40	N	IV	3b
59	35	<40	N	IV	3b
60	35	<40	N	IV	3b
61	35	<40	N	IV	3b
62	35	<40	N	IV	3b
63	35	<40	N	IV	3b
64	35	<40	N	IV	3b
65	35	<40	N	IV	3b
66	35	<40	N	IV	3b

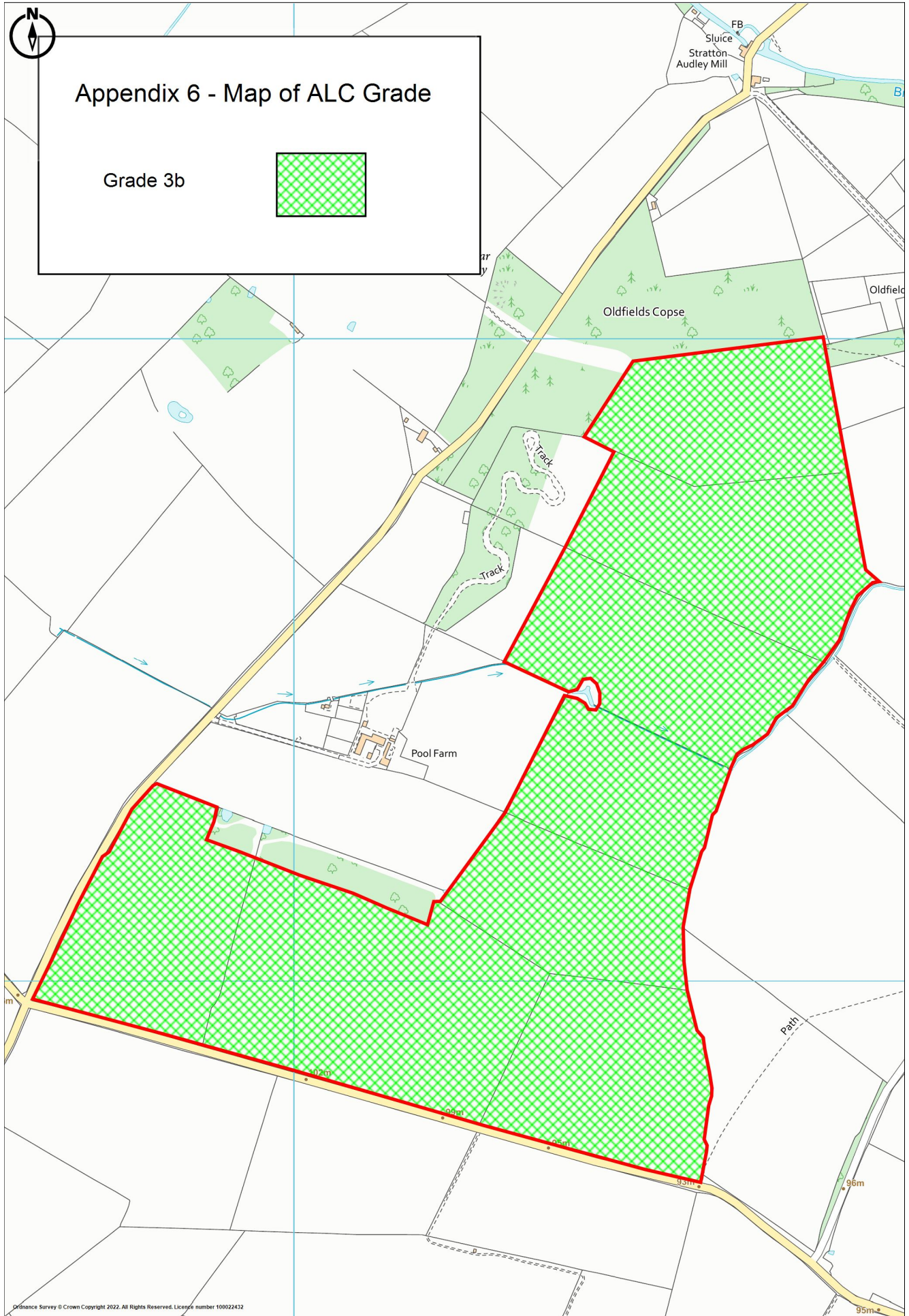
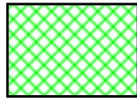
## APPENDIX 5 - DESCRIPTION OF ALC GRADES

- 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.



# Appendix 6 - Map of ALC Grade

Grade 3b



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