



AGRICULTURAL LAND CLASSIFICATION NORTHEAST STEVENAGE

CLIENT: KERNON COUNTRYSIDE CONSULTANTS
PROJECT: NORTHEAST STEVENAGE
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ISSUED BY: JAMES FULTON MRICS FAAV

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1. EXECUTIVE SUMMARY

- 1.1 This report assesses the Agricultural Land Classification (ALC) grading of 78.6 Ha, of agricultural land at Stevenage.
- 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 where soils are shallow over stone or chalk
- 1.3 The land is graded as follows:

Grade 2:	15.2 Ha
Grade 3a:	17.3 Ha
Grade 3b:	39.3 Ha
Non-agricultural:	6.8 Ha

2. INTRODUCTION

- 2.1 Amet Property Ltd have been instructed by Kernon Countryside Consultants to produce an Agricultural Land Classification (ALC) report on a 78.6-hectare site on land to the northeast of Stevenage.
- 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 advising farmers on soil structure and cultivation methods and in producing agricultural land classification reports. Additional information on authors experience is found at **appendix 1**.
- 2.3 The report is based on a site visit conducted by James Fulton and 1 assistant surveyor on the 12th of January 2024 during which the conditions were overcast and dry. Soils were moist at all horizons. A small area to the north was surveyed on the 11th January 2025 when conditions were foggy and soils moist.
- 2.4 During the inspections 3 trial pits were dug to a depth of 120cm or as deep as possible if the sample point became impenetrable. In addition to the trial pits an auger 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 auger samples. A plan of auger points and trial pit locations can be found at **appendix 2**. 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 handbook¹; where an auger has been used the structure is described as good, moderate or poor based on figure 9,10 and 11 in the MAFF² guidance. Colours are described using Munsell Colours³.
- 2.5 The site is described in literature as likely to be calcareous in places and so hydrochloric acid was used to test in field for a reaction that would indicate calcareous soils.
- 2.6 The surveyed area extends to 78.6Ha of land comprising predominantly arable land with some grassland and woodland.
- 2.7 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.

¹ Hodgson, JM (1997) Soil Survey Field Handbook

² MAFF (1988) - *Agricultural Land Classification of England and Wales. Revised guidelines and criteria for grading the quality of agricultural land*. MAFF Publications

³ Munsell Color (2009) Munsell Soil Color Charts

- 2.8 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.
- 2.9 The principal factors influencing agricultural production are climate, site and soil and the interaction between them MAFF (1988) & Natural England (2012)⁴.
- 2.10 The report is prepared and formatted considering the latest BSSS guidance⁵.

3. PUBLISHED INFORMATION

- 3.1 The British Geological Survey 1:50,000 scale map shows the bedrock geology of the site to be Lewes Nodular Chalk Formation and Seaford Chalk Formation – Chalk. The east side of the site has superficial deposits of Lowestoft Formation – Diamiction. On the west side of the site a patch runs through the middle from the south to the north and branching off to the western border with superficial deposits of head – Clay, silt, sand and gravel.
- 3.2 The soils at the northwest corner of the site are identified as being 582d HORNBEAM 3 Association, deep fine loamy over clayey and clayey soils with slowly permeable subsoils and slight seasonal waterlogging. Some slowly permeable seasonally waterlogged fine loamy over clayey soils. Calcareous subsoils in places. The northeast corner of the site is identified as being 411d HANSLOPE Association, slowly permeable calcareous clayey soils. For the rest of the site the soils are identified as 582c HORNBEAM 2 Association, deep fine loamy over clayey soils with slowly permeable subsoils and slight seasonal waterlogging.
- 3.3 The 1:250,000 series Agricultural Land Classification maps show the land to be Grade 3 – good to moderate. 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 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

⁵ BSSS (2022) Working with Soil Guidance Note on Assessing Agricultural Land Classification Surveys in England and Wales

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 3**

Grid Reference	526426,227756
Altitude (ALT)	132
Average Annual Rainfall (AAR)	620
Accumulated Temperature - Jan to June (ATO)	1336
Duration of Field Capacity (FCD)	120
Moisture Deficit Wheat	104
Moisture Deficit Potatoes	94

- 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 The site ranges from stoneless to up to 5% small and medium subrounded to subangular hard stone. There is not enough stone to limit land grade.

6. GRADIENT AND MICRORELIEF

- 6.1 The site is gently sloping with no gradient or microrelief that limits 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 4**.
- 7.2 The topsoil across the site is consistently clay or heavy clay loam with some survey points reacting to the HCl test and thus described as calcareous and some having no reaction at all.
- 7.3 Subsoils vary considerable with some locations there being either chalk or flint directly below the topsoil and other areas where there are clay subsoils. Where there are clay subsoils there is often a moderately structured upper subsoil over a poorly structured slowly permeable gleyed lower subsoil. In some places there is no moderately structured subsoil, only a poorly structured slowly permeable subsoil directly beneath the topsoil.

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 Where there is no gleyed horizon and no slowly permeable layer the assessment gives wetness class I. Table 6, <125FCD, wetness class I and Clay topsoil gives a grade 3a limitation, calcareous clay or heavy clay loam gives a grade 2 limitation.
- 8.3 Where there is a gleyed horizon at more than 40cm and slowly permeable layer starting within 80cm the assessment gives wetness class II. A gleyed horizon at less than 40cm and slowly permeable layer starting at more than 60cm also gives wetness class II. Table 6, <125FCD, wetness class II and Clay or heavy clay loam topsoil gives a grade 3a limitation, calcareous clay or calcareous heavy clay loam gives a grade 2 limitation.
- 8.4 Where there is a gleyed horizon at less than 40cm and slowly permeable layer starting within 60cm the assessment gives wetness class III. Table 6, <125FCD, wetness class III and Clay or heavy clay loam topsoil gives a grade 3b limitation, calcareous clay or calcareous heavy clay loam gives a grade 3a limitation.
- 8.5 Wetness is the most limiting factor across the majority of the site.

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:

$$MD \text{ (Wheat)} = 104$$

$$MD \text{ (Potatoes)} = 94$$

- 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.
- 9.4 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**.
- 9.5 Droughtiness is the most limiting factor where soils are shallow over stone or chalk.

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:	15.2 Ha
Grade 3a:	17.3 Ha
Grade 3b:	39.3 Ha
Non-agricultural:	6.8 Ha

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

Appendix 1 – 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.

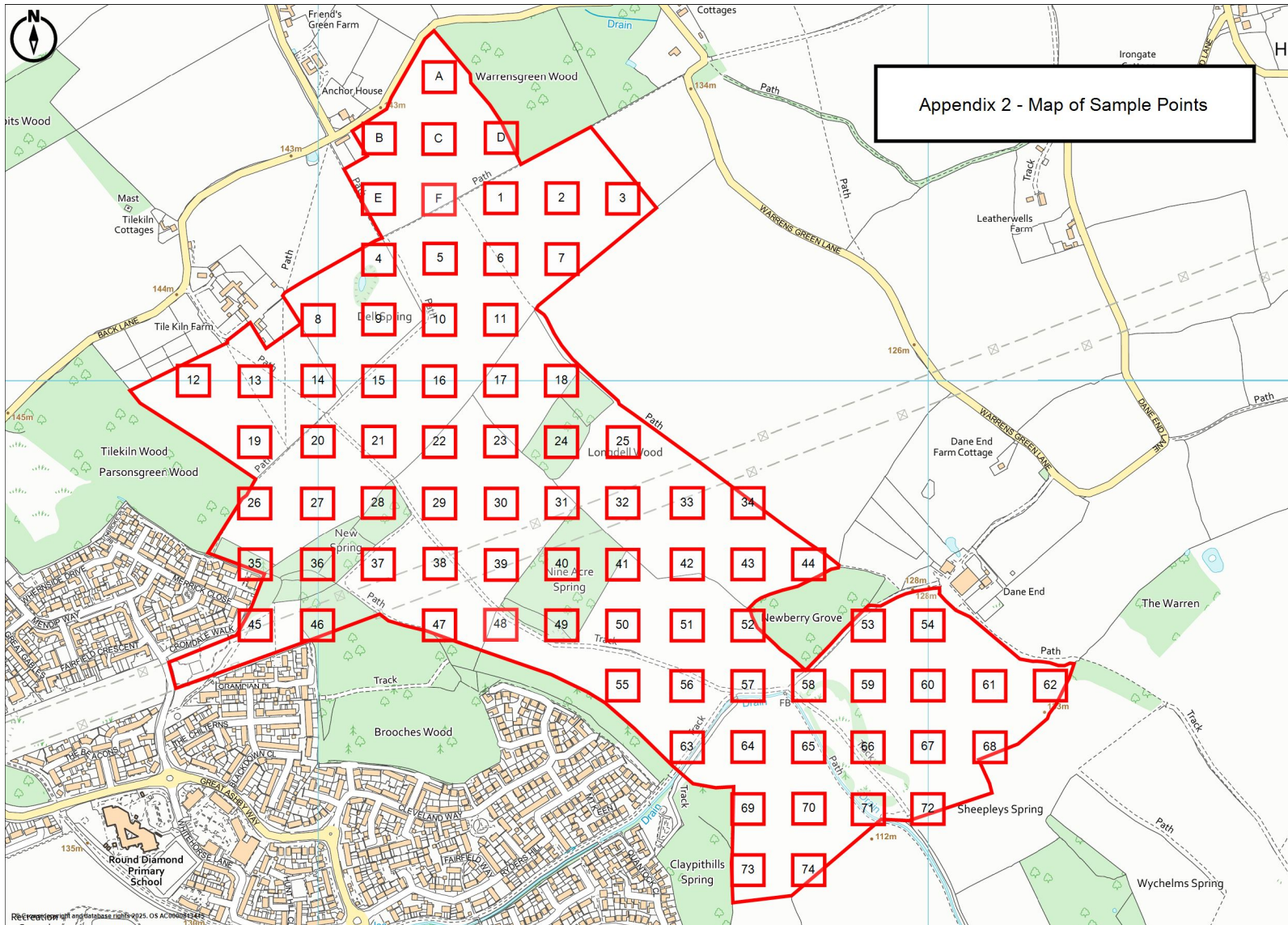
While I am not a member of the BSSS I meet the minimum competencies set out by the BSSS in Document 1 *Foundation skills in field soil investigation, description and interpretation* and Document 2 *Agricultural Land Classification (England and Wales)*

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

All assistant surveyors have completed the BSSS working with soil course and have been trained to meet the requirements of BSSS Document 1 *Foundation skills in field soil investigation, description, and interpretation*.



Appendix 3 – Climatic Data

Site Details: NE Stevenage

Grid reference (centre of site): 526426,227756

Altitude: Mean 131.77 AOD

Climatic data from surrounding locations:

Grid Reference	ALT	AAR	LR_AAR	ASR	ATO	ATS	MDW	MDP	FCD
5250 2250	122	626	0.3	320	1349	2329	106	97	122
5250 2300	130	599	0.4	320	1338	2317	105	95	115
5300 2250	116	646	0.2	325	1355	2338	105	96	127
5300 2300	111	620	0.4	330	1358	2341	104	95	122

Altitude Adjusted

GRID REFERENCE	AAR	ATO	FCD	MDW	MDP	PROXIMITY ADJUSTMENT
5250 2250	628.93	1337.86	122.42	104.79	95.40	29.62%
5250 2300	599.71	1335.98	115.10	104.77	94.69	40.35%
5300 2250	649.15	1337.02	127.46	103.16	93.56	14.00%
5300 2300	628.31	1334.32	123.20	101.29	91.41	16.02%

Appendix 4a - Sample Point Assessment

Sample No	Altitude	Topsoil		Stoniness	Mottles	Upper Subsoil		Stoniness	Mottles	Structure	Lower Subsoil		Stoniness	Mottles	Structure	Wetness Assessment				Grade limit by	Droughtiness Assessment		Grade limit by	Grade by most limiting factor	
		Depth	Texture			Depth	Texture				Depth	Texture				Colour	SPL	Gley	Class		Wetness	Wheat			Potato
A	142	0-30	HCL	10YR 4/2		30-120	C	10YR 4/6		CO	Moderate								I	2				2	
B	143	0-30	HCL	10YR 4/2		30-50	C	2.5Y 4/3		FOB	Moderate	50-120	C	10YR 6/4		CO	Poor	50	50	II	3a			3a	
C	142	0-35	HCL	10YR 4/2		35-50	C	10YR 5/3		FO	Moderate	50-120	C	2.5Y 6/4		CO	Poor	50	50	II	3a			3a	
D	141	0-30	HCL	10YR 4/2		35-120	C	10YR 5/4		CO	Moderate								I	2				2	
E	143	0-30	HCL	10YR 4/2		30-70	C	10YR 6/6		CO	Poor	60	IMP									-16.39	0.98	3a	3a
F	142	0-35	HCL	10YR 4/2		35-70	C	10YR 4/4			Moderate	70-120	C	2.5Y 5/3		CO	Poor	70	70	II	2				2
1	140	0-40	Calc C	2.5Y 4/3		40-70	Calc C	2.5Y 5/4		CO	Moderate	70-120	Calc C	10YR 4/1		CO	Poor	70	70	II	2				2
2	137	0-40	Calc C	2.5Y 4/3		40-60	Calc C	2.5Y 5/4		CO	Moderate	60-120	Calc C	10YR 5/2		CO	Poor	60	60	II	2				2
3	136	0-30	Calc C	2.5Y 4/3		30-40	Calc C	2.5Y 5/4		CO	C Platy	40-120	Calc C	2.5Y 5/3		FO	WMAB	40	40	III	3a	25.01	11.78	2	3a
4	141	0-30	HCL	10YR 4/2		30-60	C	10YR 5/4		CO	Moderate	60-120	C	10YR 5/3	5%	CO	Poor	60	60	II	3a				3a
5	140	0-35	HCL	10YR 4/2		35-70	Calc C	10YR 5/4		CO	Moderate	70-120	Calc C	10YR 5/2		FO	Poor	70	70	II	3a				3a
6	138	0-30	Calc C	2.5Y 4/3		30-60	Calc C	10YR 5/4		CO	Moderate	60-120	Calc C	10YR 5/3		FO	Poor	60	60	II	2				2
7	137	0-30	Calc C	2.5Y 4/3		30-60	Calc C	10YR 5/4		CO	Moderate	60-120	Calc C	10YR 5/3		FO	Poor	60	60	II	2				2
8	139	0-40	HCL	10YR 4/3		40-70	Calc C	10YR 5/4		CO	Moderate	70-120	C	10YR 5/3		CO	Poor	70	70	II	3a				3a
9	140	0-30	HCL	10YR 4/3		30-55	C	10YR 5/4	10%	CO	Moderate	60-120	C	10YR 5/2	5%	CO	Poor	60	60	II	3a				3a
10	139	0-30	HCL	10YR 4/2		30-60	C	5YR 4/4		CO	Poor	60	IMP					30		III	3b				3b
11	138	0-30	HCL	10YR 4/2		30-70	C	10YR 5/3		CO	Moderate	70-120	C	10YR 5/2		FO	Poor	70	30	II	3a				3a
12	146	0-30	HCL	10YR 4/3		30-60	C	10YR 5/3		CO	Poor	60-120	C	10YR 5/2		CO	Poor	30	30	III	3b				3b
13	145	0-35	HCL	10YR 4/3		35-50	HCL	10YR 5/3		CO	MSAB	50-120	C	10YR 6/2		CO	Poor	50	35	III	3b				3b
14	144	0-35	HCL	10YR 4/3		35-60	HCL	10YR 5/3		CO	Moderate	60-120	C	10YR 6/2		CO	Poor	60	35	III	3b				3b
15	142	0-30	HCL	10YR 4/2		30-65	C	5YR 4/4		CO	Poor	65	IMP					30		III	3b				3b
16	140	0-30	HCL	10YR 4/2		30-60	C	5YR 4/4		CO	Poor	60	IMP					30		III	3b				3b
17	137	0-30	HCL	10YR 4/2		30-60	C	10YR 5/3		CO	Moderate	60-120	C	7.5YR 6/3		CO	Poor	60	30	III	3b				3b
18	135	0-30	HCL	10YR 4/2		30-60	C	10YR 5/3		CO	Moderate	60-120	C	10YR 6/2		CO	Poor	60	30	III	3b				3b
19	142	0-30	HCL	10YR 4/3	5%	30-60	C	10YR 5/3		CO	Poor	60-120	C	10YR 5/2		CO	Poor	30	30	III	3b				3b
20	141	0-40	HCL	10YR 4/2		40-70	C	10YR 5/3		CO	Poor	70-120	Calc C	10YR 5/2		CO	Poor	40	40	III	3b				3b
21	140	0-35	HCL	10YR 4/2		35-65	C	10YR 5/3		CO	Poor	65-120	Calc C	10YR 5/1		FO	Poor	35	35	III	3b				3b
22	138	0-35	HCL	10YR 4/2		35-60	C	10YR 5/3		CO	Poor	60-120	Calc C	10YR 5/1		FO	Poor	35	35	III	3b				3b
23	136	0-35	HCL	10YR 4/2	5%	35-60	C	5YR 4/4		CO	Poor	60	IMP					35		III	3b				3b
24	135	Non - Agricultural																							
25	132	0-30	HCL	10YR 4/3		30-50	Calc C	10YR 5/4		FO	Moderate	50	IMP							I	2	-23.99	-14.22	3b	3b
26	142	0-30	C	10YR 4/3	5%	30-65	Calc C	2.5Y 5/3		CO	Poor	65-120	C	10YR 6/2		COB	Poor	30	30	III	3b				3b
27	140	0-40	HCL	10YR 4/2		40-70	C	10YR 5/3		CO	Poor	70-120	Calc C	10YR 5/2		CO	Poor	40	40	III	3b				3b
28	139	Non - Agricultural																							
29	137	0-30	C	10YR 4/2	5%	30-60	C	7.5YR 4/3		FOB	Moderate	60-120	C	7.5YR 5/3		CO	Poor	60	60	II	3a				3a
30	135	0-30	C	10YR 4/2	5%	30-60	C	7.5YR 4/3		FOB	Moderate	60-120	C	7.5YR 5/3		CO	Poor	60	60	II	3a				3a
31	134	0-30	HCL	10YR 4/3		30-60	Calc C	10YR 5/4		FO	Moderate	60	IMP							I	2	-16.39	0.98	3a	3a
32	132	0-30	HCL	10YR 4/3		30-50	Calc C	10YR 5/4		FO	Moderate	50	IMP							I	2	-23.99	-14.22	3b	3b
33	130	0-30	HCL	10YR 4/3		30-60	Calc C	10YR 5/4		FO	Moderate	60	IMP							I	2	-16.39	0.98	3a	3a
34	129	0-30	HCL	10YR 4/3		30-60	Calc C	10YR 5/4		FO	Moderate	60	IMP							I	2	-16.39	0.98	3a	3a
35	140	Non - Agricultural																							
36	139	Non - Agricultural																							
37	138	0-30	C	10YR 4/2	5%	30-65	Calc C	7.5YR 4/3		FOB	Moderate	65-120	C	7.5YR 5/3		CO	Poor	65	65	II	3a				3a
38	138	0-30	C	10YR 4/2	5%	30-60	Calc C	7.5YR 4/3		FOB	Moderate	60-120	C	7.5YR 5/3		CO	Poor	60	60	II	3a				3a
39	136	0-30	C	10YR 4/2	5%	30-50	Calc C	7.5YR 4/2		FOB	Moderate	50-120	C	7.5YR 5/3		CO	Poor	50	30	III	3b				3b
40	134	Non - Agricultural																							
41	133	0-30	HCL	10YR 4/3		30-50	Calc C	10YR 5/4		FO	Moderate	50	IMP							I	2	-23.99	-14.22	3b	3b
42	132	0-35	HCL	10YR 4/3		35-50	Calc C	10YR 5/4		FO	Moderate	50	IMP							I	2	-23.99	-14.22	3b	3b
43	130	0-30	HCL	10YR 4/3		30-60	Calc C	10YR 5/4		FO	Moderate	60	IMP							I	2	-16.39	0.98	3a	3a
44	129	0-30	HCL	10YR 4/3		30-70	Calc C	10YR 5/4		FO	Moderate	70	IMP							I	2	-9.74	15.23	3a	3a
45	137	0-30	HCL	10YR 4/2		30-45	C	2.5Y 5/3		CO	Poor	45	IMP					30	30	III	3b				3b
46	136	Non - Agricultural																							
47	129	0-30	C	10YR 4/2	5%	30-65	Calc C	7.5YR 4/4		FOB	Moderate	65-120	C	7.5YR 5/3		CO	Poor	65	65	II	3a				3a
48	127	0-30	C	10YR 4/2	5%	30-50	Calc C	7.5YR 4/2		FOB	Moderate	50-120	C	7.5YR 5/3		CO	Poor	50	30	III	3b				3b
49	125	Non - Agricultural																							
50	124	0-40	Calc HCL	10YR 4/3		40-120	Chalk													I	2				2
51	123	0-40	Calc HCL	10YR 4/3		40-120	Chalk													I	2				2
52	121	0-40	Calc HCL	10YR 4/3	5%	40	IMP													I	2	-31.99	-22.22	3	

[illegible]

Appendix 4b – Trial Pit Descriptions

Sample Point No. 3		
Horizon 1		0-30cm Olive brown (2.5Y 4/3) stoneless calcareous clay
Horizon 2		30-40cm Light olive brown (2.5Y 5/4) calcareous clay with a coarse platy structure, very firm consistence and many ochreous mottles. Structure appears to be mechanical compaction that could be alleviated by subsoiling. Common ochreous mottles roots and biopores present.
Horizon 3		40-120cm Light olive brown (2.5Y 5/3) calcareous clay with a weak medium angular blocky structure with firm consistence and few ochreous mottles. Negligible roots or biopores present.
Pictures		
Horizon 1	Horizon 2	Horizon 3
		
Slowly permeable layer		Starts at 40cm – evidenced by firm weak medium angular blocky structure with less than 0.5% biopores >0.5mm
Gleying		Starts at 40cm evidenced by pale colours and ochreous mottles
Wetness Class		III
Wetness limitation		3a
MB Wheat		25.01
MB potatoes		11.78
Droughtiness Limitation		2

Sample Point No. 66	
Horizon 1	0-40cm Greyish brown (10YR 5/2) calcareous heavy clay loam and 5% small and medium subrounded and subangular hard stones.
Horizon 2	40-120 Chalk
Pictures	
Horizon 1 	Horizon 2 
Slowly permeable layer	Not present
Gleying	Not present
Wetness Class	I
Wetness limitation	2
MB Wheat	27.01
MB potatoes	7.78
Droughtiness Limitation	2

Sample Point No. 69	
Horizon 1	0-40cm Dark greyish brown (10YR 4/2) clay with 5% small and medium subrounded and subangular hard stones.
Horizon 2	40cm impenetrable due to very large very tightly packed hard stone (flint).
Pictures	
Horizon 1 	Horizon 2 
Slowly permeable layer	Not present
Gleying	Not present
Wetness Class	I
Wetness limitation	3a
MB Wheat	-31.99
MB potatoes	-22.22
Droughtiness Limitation	3b

Survey point 5



Survey point 23



Survey point 33



Survey point 46



Chalk pit near survey point 49



ANALYTICAL REPORT

Report Number	18382-24	W250	AMET PROPERTY
Date Received	22-JAN-2024		HENWICK BARN
Date Reported	30-JAN-2024		BULWICK
Project	SOIL		CORBY
Reference	AMET		NORTHANTS
Order Number			NN17 3DU

Laboratory Reference		SOIL675092	SOIL675093	SOIL675094						
Sample Reference		STEVENAGE TOPSOIL 67	STEVENAGE TOPSOIL 3	STEVENAGE TOPSOIL 8						
Determinand	Unit	SOIL	SOIL	SOIL						
Coarse Sand 2.00-0.63mm	% w/w	4	3	1						
Medium Sand 0.63-0.212mm	% w/w	13	18	29						
Fine Sand 0.212-0.063mm	% w/w	6	13	12						
Silt 0.063-0.002mm	% w/w	38	30	28						
Clay <0.002mm	% w/w	39	36	30						
Textural Class **		C	C	HCL						

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.

Reported by	** Please see the attached document for the definition of textural classes. Teresa Clyne Natural Resource Management, a trading division of Cawood Scientific Ltd. Coopers Bridge, Braziers Lane, Bracknell, Berkshire, RG42 6NS Tel: 01344 886338 Fax: 01344 890972 email: enquiries@nrm.uk.com
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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 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.

