July 2024

Richborough Estates Limited

Agricultural Land Classification and Soil Resources

at

Land at Croxley Green

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Contents

1. Introduction

1.1. Reading Agricultural Consultants Limited (RAC) is instructed by Richborough Estates Limited to investigate the Agricultural Land Classification (ALC) and soil resources of land north of Little Green Lane, Croxley Green by means of a detailed survey of site and soil characteristics.

1.2. Guidance for assessing the quality of agricultural land in England and Wales is set out in the Ministry of Agriculture, Fisheries and Food (MAFF) revised guidelines and criteria for grading the quality of agricultural land[1], and summarised in Natural England's Technical Information Note (TIN) 049[2].

1.3. Agricultural land in England and Wales is graded between 1 and 5, depending on the extent to which physical or chemical characteristics impose long-term limitations on agricultural use. The principal physical factors influencing grading are climate, site conditions and soil which, together with interactions between them, form the basis for classifying land into one of the five grades.

1.4. Grade 1 land is excellent quality agricultural land with very minor or no limitations to agricultural use. Grade 2 is very good quality agricultural land, with minor limitations which affect crop yield, cultivations or harvesting. Grade 3 land has moderate limitations which affect the choice of crops, timing and type of cultivation, harvesting or the level of yield, and is subdivided into Subgrade 3a (good quality land) and Subgrade 3b (moderate quality land). Grade 4 land is poor quality agricultural land with severe limitations which significantly restrict the range of crops and/or level of yields. Grade 5 is very poor quality land, with severe limitations which restrict use to permanent pasture or rough grazing.

1.5. Land which is classified as Grades 1, 2 and 3a in the ALC system is defined as best and most versatile (BMV) agricultural land.

1.6. As explained in Natural England's TIN049, the whole of England and Wales was mapped from reconnaissance field surveys in the late 1960s and early 1970s, to provide general strategic guidance on agricultural land quality for planners. This Provisional Series of maps was published

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

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

on an Ordnance Survey base at a scale of One Inch to One Mile (1:63,360). The Provisional ALC map shows the site as undifferentiated Grade 3 with a small area of Grade 2 in the west. However, TIN049 explains that:

> *"These maps are not sufficiently accurate for use in assessment of individual fields or development sites, and should not be used other than as general guidance. They show only five grades: their preparation preceded the subdivision of Grade 3 and the refinement of criteria, which occurred after 1976. They have not been updated and are out of print. A 1:250 000 scale map series based on the same information is available. These are more appropriate for the strategic use originally intended …"*

1.7. TIN049 goes on to explain that a definitive ALC grading should be obtained by undertaking a detailed survey according to the published guidelines, at an observation density of one auger observation per hectare. This survey follows the detailed methodology set out in the ALC guidelines.

2. Site and climatic conditions

General features, landform and drainage

2.1. The site extends to approximately 40.6ha to the north of Croxley Green. Land is primarily in arable use with Green Lane Wood in the centre-east of the site and a few smaller wooded areas. The site is bordered by Little Green Lane to the south and by Rousebarn Lane to the east and north-east. Other agricultural land and woodland borders the site on the remaining boundaries.

2.2. The site mostly slopes from the west to the east, with land to the north of Green Lane Wood also sloping into a shallow east-west orientated depression. The highest elevation at the site is approximately 80m above Ordnance Datum (AOD) in the west, falling to approximately 58m AOD in the east.

2.3. Land primarily drains through the soil profile.

Agro-climatic conditions

2.4. Agro-climatic data for the site have been interpolated from the Meteorological Office's standard 5km grid point dataset at representative altitude of 71m AOD. The data are given in Table 1. The site has moderate rainfall and is moderately warm, with moderate to moderately large crop moisture deficits. The number of Field Capacity Days (FCD) is close to average for lowland

England (150) and is very slightly favourable for providing opportunities for agricultural field work.

Table 1: Local agro-climatic conditions

Parameter	Value
Average Annual Rainfall	702mm
Accumulated Temperatures >0°C	1424 day°
Field Capacity Days	149 days
Average Moisture Deficit, wheat	105mm
Average Moisture Deficit, potatoes	97mm

Soil parent material and soil type

2.5. The bedrock geology mapped by the British Geological Survey[3] across the site is undifferentiated and includes the Seaford Chalk Formation and Newhaven Chalk Formation. Both formations comprise chalk, with varying degrees of hardness, and contain seams of flint.

2.6. Superficial sand and gravel deposits of the Gerrards Cross Gravel Member are mapped in the south-west and north-west of the site but no superficial deposits are mapped across the remainder of the site.

2.7. The Soil Survey of England and Wales soil association mapping[4] (1:250,000 scale) shows the Sonning 1 association across the site, which is characterised by well drained, flinty, coarse loamy and sandy soils, mainly over gravel. Profiles are typically assessed as Wetness Class (WC) I and are well drained[5].

[3] **British Geological Survey (2024).** *Geology of Britain viewer*, http://mapapps.bgs.ac.uk/geologyofbritain/home.html

[4] **Soil Survey of England and Wales (1984).** *Soils of South East England* (1:250,000), Sheet 6.

[5] **Jarvis et al (1984).** *Soils and Their Use in South East England*. Soil Survey of England and Wales Bulletin 15, Harpenden.

3. Agricultural land quality

Soil survey methods

3.1. In total, 38 soil profiles were examined across the site using an Edelman (Dutch) auger at an observation density of one per hectare in accordance with the established recommendations for ALC surveys. Five observation pits were also excavated to examine subsoil structures and stone content. The locations of observations are shown on Figure RAC/10439/1. At each observation point the following characteristics were assessed for each soil horizon up to a maximum of 120cm or any impenetrable layer:

- soil texture;
- stone content;
- colour (including localised mottling);
- consistency;
- structural condition;
- free carbonate; and
- depth.

3.2. Three topsoil samples were submitted for laboratory determination of particle size distribution, pH, organic matter content and nutrient contents (P, K, Mg). Results are presented in Appendix 1.

3.3. Soil WC was determined from the matrix colour, presence or absence of, and depth to, greyish and ochreous gley mottling, and slowly permeable subsoil layers at least 15cm thick, in relation to the number of Field Capacity Days at the location.

3.4. Soil droughtiness was investigated by the calculation of moisture balance equations (given in Appendix 2). Crop-adjusted Available Profile Water (AP) is estimated from texture, stoniness and depth, and then compared to a calculated moisture deficit (MD) for the standard crops wheat and potatoes. The MD is a function of potential evapotranspiration and rainfall. Grading of the land can be affected if the AP is insufficient to balance the MD and droughtiness occurs.

Agricultural land classification and site limitations

3.5. Assessment of agricultural land quality has been carried out according to the revised ALC guidelines[1]. Soil profiles have been described according to Hodgson[6] which is the recognised source for describing soil profiles and characteristics according to the revised ALC guidelines.

3.6. Agricultural land quality across the site is limited by topsoil stone content. The high levels of topsoil and upper subsoil stone restricted full observation of many soil profiles. However, five pits were dug within the site which is a very intensive density of sampling and which, alongside the full auger observations, provides a good understanding of the prevailing soil characteristics.

3.7. The topsoil comprises very dark greyish brown (10YR3/2 in the Munsell soil colour charts[7]) sandy silt loam or sandy loam. The topsoil is moderately stony, at 16-35% by volume, and has a granular structure and a friable consistency.

3.8. The upper subsoil comprises brown (10YR4/3 or 7.5YR4/3 or 7.5YR4/4) sandy silt loam or sandy loam. The upper subsoil is predominantly very stony, at 40-70%. Soil within this horizon has a granular structure and is friable.

3.9. Where observed, the lower subsoil comprises either clay, with few recordings of heavy clay loam, or loamy sand. Where the lower subsoil is clay or heavy clay loam, it has a brown (7.5YR4/4) colour and is very slightly to slightly stony, at 5-15%. Lower subsoil structure is medium subangular blocky and the consistency is firm.

3.10. Where the lower subsoil is loamy sand, it has a yellowish brown (10YR5/6) or dark yellowish brown (10YR4/4) colour. The loamy sand observed within Pit 1 was slightly stony. However, within Pit 2, high levels of stone were recorded to 70cm where further observation was restricted. Observation of a loamy sand lower subsoil correlates to the presence of the Gerrards Cross Gravel member mapped across the south-west of the site.

3.11. Pit 5 was dug and augered to a depth of 90cm with no observation of either the clay or loamy sand lower subsoil found in the other areas of the site. Instead, the stony sandy silt loam extends to a depth of 90cm although clay, loamy sand or potentially chalk bedrock may be present at greater depth.

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[6] **Hodgson, J. M. (Ed.) (1997).** *Soil survey field handbook.* Soil Survey Technical Monograph No. 5, Silsoe.

[7] **Munsell Color (2009).** *Munsell Soil Color Book*. Grand Rapids, MI, USA

3.12. Observations 21 and 29 do not contain the very stony upper subsoil previously described. Instead, the topsoil lies directly over a brown (7.5YR4/4), slightly stony clay or heavy clay loam largely matching that found in the lower subsoils of Pits 3 and 4.

3.13. Soils across the site are of WC I and are freely draining. Agricultural land quality across the whole site is restricted to Subgrade 3b by topsoil stone content. The high levels of topsoil stone affect land management including the drilling, establishment and harvesting of crops, as well as increasing the wear and tear on farm machinery. A few observations are limited to the same extent by droughtiness.

3.14. Two observations (8/Pit 1 and 29) are restricted to Subgrade 3a, with a topsoil stone content of 12% greater than 2cm. However, these points are isolated and do not form coherent units which can be mapped or farmed separately, and so have been amalgamated into the Subgrade 3b unit.

3.15. All the agricultural land at the site is classified as Subgrade 3b as shown in Figure RAC/10439/2. There is no BMV land present within the site.

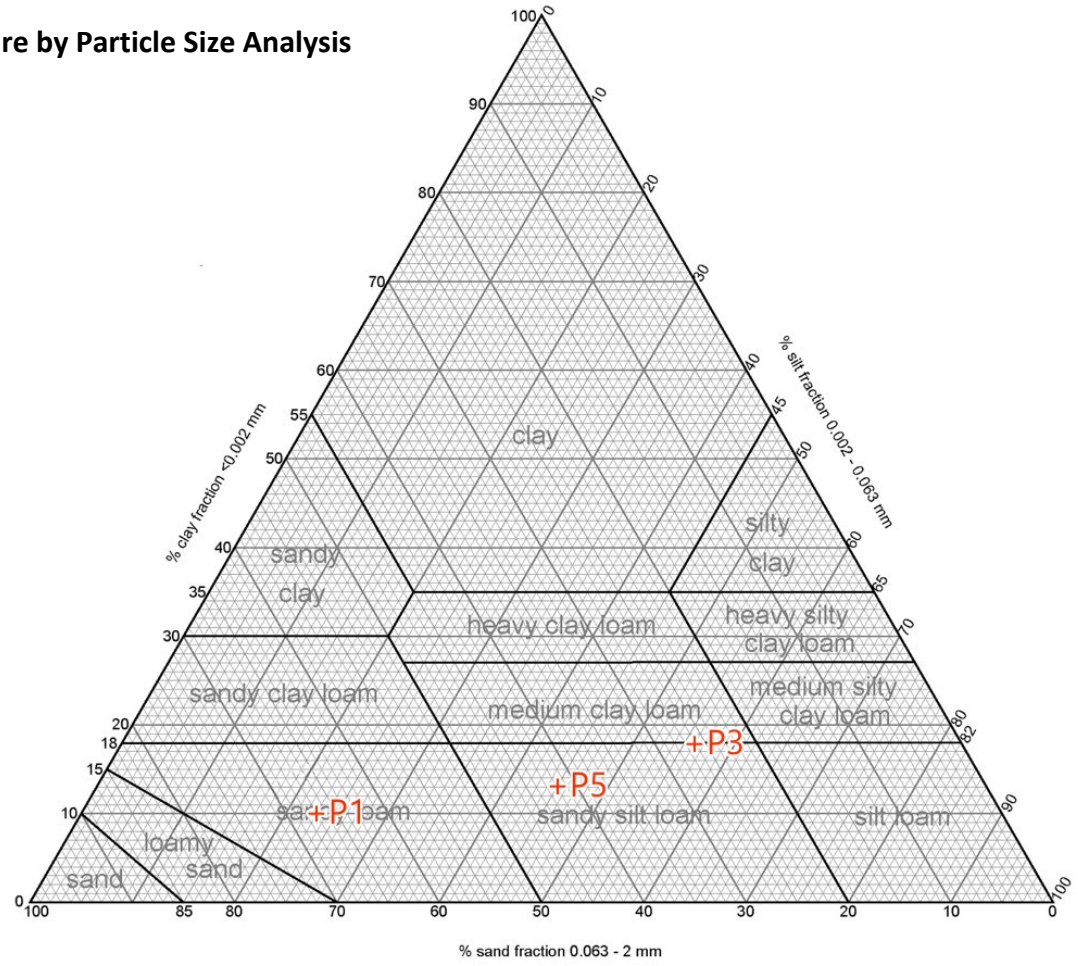
Appendix 1: Laboratory Data

Determinand	Pit 1 Topsoil	Pit 3 Topsoil	Pit 5 Topsoil	Units
Sand 2.00-0.063 mm	67	26	42	% w/w
Silt 0.063-0.002 mm	23	56	45	% w/w
Clay <0.002 mm	10	18	13	% w/w
Organic Matter	3.8	3.9	5.0	% w/w
Texture	Sandy loam	Medium clay loam/sandy silt loam	Sandy silt loam	

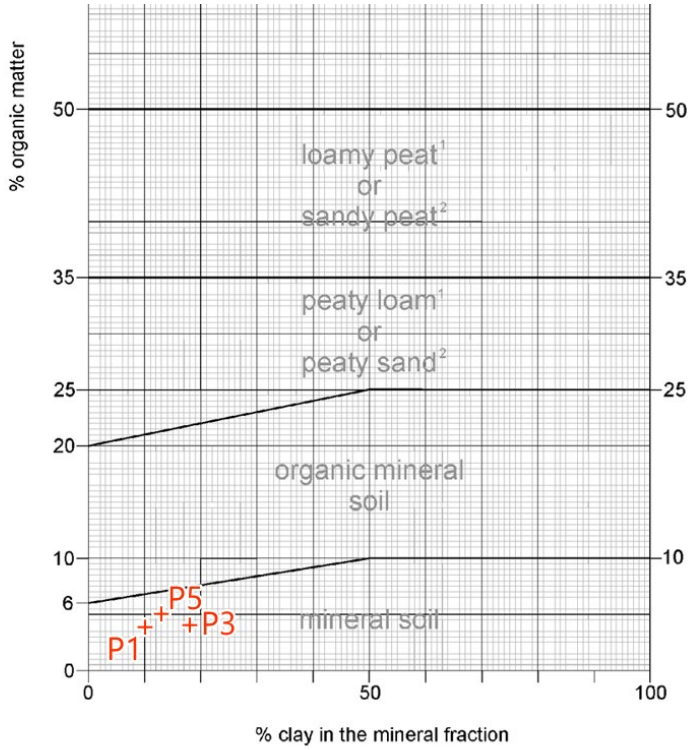
Determinand	Pit 1 Topsoil	Pit 3 Topsoil	Pit 5 Topsoil	Units
Soil pH	7.0	**7.2**	**7.6**	
Phosphorus (P)	48.0	32	26.6	mg/l (av)
Potassium (K)	108	100	87.4	mg/l (av)
Magnesium (Mg)	65.8	102	95.8	mg/l (av)

Determinand	Pit 1 Topsoil	Pit 3 Topsoil	Pit 5 Topsoil	Units
Phosphorus (P)	4	3	3	ADAS Index
Potassium (K)	1	1	1	ADAS Index
Magnesium (Mg)	2	3	2	ADAS Index

Soil Texture by Particle Size Analysis



Organic Matter Class



[1] Less than 50% sand in the mineral fraction

[2] 50% sand or more in the mineral fraction

Appendix 2: Soil Profile Summaries and Droughtiness Calculations

Wetness / workability limitations are determined according to the methodology given in Appendix 3 of the ALC guidelines, MAFF 1988

Droughtiness calculations are made according to the methodology given in Appendix 4 of the ALC guidelines, MAFF 1988.

Grades are shown for drought, wetness and any other soil or site factors which are relevant. The overall Grade is set by the most limiting factor and shown on the right.

Stone types		
%	TAv	EAv
Hard	1	0.5
Chalk	10	7

Climate Data	
MDwheat	105
MDpotato	97
FCD	149
AAR	702

Wetness Class Guidelines	*II*	*III*	*IV*	*V*
SPL within 80cm, gleying within 40cm	>68cm	40-68cm	<40cm	
SPL within 80cm, gleying at 40-70cm	>51cm	<51cm		
No SPL but gleying within 40cm	coarse subsoil	*I*	other cases	*II*

Climate
1,424
Limitation
Grade 1

hard flint & pebble

Maximum depth of auger penetration is underlined

Site No.		Depth cm		Texture	$CaCO_3$	Colour	Mottle colour	abund-ance	stone% Hard	stone% Chalk	Struct-ure	APwheat mm	AP potato mm	Gley	SPL	WC	Wetness grade WE	Final Grade	Limiting Factor(s)
1	T	0	28	SZL		10YR3/2			30	0		38	38	n	n	*I*	1	**3b**	ST
		28	60	SZL		10YR4/3			70	0		16	19	n	n				
		60	120	C		7.5YR4/4	few	mn	5	0		46	15	n	n				
											Total	**100**	**72**		ST.stone >2cm			20%	3b
											MB	-5	-25						
											Droughtiness grade (DR)	3a	3a						
2	T	0	30	SZL		10YR3/2			30	0		41	41	n	n	*I*	1	**3b**	ST
		30	60	SZL		10YR4/3			70	0		15	17	n	n				
		60	120	C		7.5YR4/4	few	mn	5	0		46	15	n	n				
											Total	**102**	**73**		ST.stone >2cm			20%	3b
											MB	-3	-24						
											Droughtiness grade (DR)	3a	3a						
3	T	0	28	mSL		10YR3/2			25	0		36	36	n	n	*I*	1	**3b**	ST
		28	50	mSL		10YR4/3			40	0		21	21	n	n				
		50	120	LmS		7.5YR4/6			5	0		40	17	n	n				
											Total	**97**	**74**		ST.stone >2cm			20%	3b
											MB	-8	-23						
											Droughtiness grade (DR)	3a	3a						
4	T	0	30	mSL		10YR3/2			28	0		38	38	n	n	*I*	1	**3b**	ST
		30	40	mSL		7.5YR4/3			40	0		9	9	n	n				

		40	50	mSL	7.5YR4/4	40	0		9	9	n	n					
		50	120	LmS	7.5YR4/6	5	0		40	17	n	n					
								Total	**96**	**74**		ST.stone >2cm			23%	3b	
								MB	-9	-23							
							Droughtiness grade (DR)		3a	3a							
5	T	0	30	SZL	10YR3/2	25	0		44	44	n	n	/	1	**3b**	ST	
		30	60	SZL	7.5YR4/4	60	0		20	22	n	n					
		60	120	C	7.5YR4/4	5	0		46	15	n	n					
								Total	**109**	**81**		ST.stone >2cm			20%	3b	
								MB	4	-16							
							Droughtiness grade (DR)		3a	3a							
6	T	0	30	SZL	10YR3/2	28	0		42	42	n	n	/	1	**3b**	ST	
		30	60	SZL	7.5YR4/4	60	0		20	22	n	n					
		60	120	C	7.5YR4/4	5	0		46	15	n	n					
								Total	**107**	**79**		ST.stone >2cm			23%	3b	
								MB	2	-18							
							Droughtiness grade (DR)		3a	3a							
7	T	0	29	SZL	10YR3/2	22	0		44	44	n	n	/	1	**3b**	ST	
		29	44	SZL	7.5YR4/3	60	0		11	11	n	n					
		44	60	SZL	7.5YR4/4	60	0		9	12	n	n					
		60	120	C	7.5YR4/4	5	0		46	15	n	n					
								Total	**110**	**82**		ST.stone >2cm			17%	3b	
								MB	5	-15							
							Droughtiness grade (DR)		2	3a							
8	T	0	28	mSL	10YR3/2	17	0		40	40	n	n	/	1	**3a**	ST	
Pit 1		28	47	mSL	10YR4/3	40	0		18	18	n	n					
		47	60	LmS	7.5YR4/6	5	0		8	11	n	n					
		60	120	LmS	7.5YR4/6	5	0		34	9	n	n					
								Total	**100**	**78**		ST.stone >2cm			12%	3a	
								MB	-5	-19							
							Droughtiness grade (DR)		3a	3a							
9	T	0	30	mSL	10YR3/2	25	0		39	39	n	n	/	1	**3b**	ST	
		30	60	mSL	10YR4/3	40	0		26	28	n	n					
		60	120	LmS	7.5YR4/6	5	0		34	9	n	n					

										Total	**99**	**76**		ST.stone >2cm				20%	3b
										MB	-6	-21							
									Droughtiness grade (DR)		3a	3a							
10	T	0	30	SZL	10YR3/2			25	0		44	44	n	n	/	1	**3b**	ST	
		30	60	SZL	10YR4/3			70	0		15	17	n	n					
		60	120	C	7.5YR4/4	few	mn	5	0		46	15	n	n					
										Total	**104**	**76**		ST.stone >2cm				20%	3b
										MB	-1	-21							
									Droughtiness grade (DR)		3a	3a							
11	T	0	33	SZL	10YR3/2			30	0		45	45	n	n	/	1	**3b**	ST	
Pit 3		33	62	SZL	10YR4/3			70	0		14	17	n	n					
		62	120	C	7.5YR4/4	few	mn	5	0		44	12	n	n					
										Total	**103**	**74**		ST.stone >2cm				25%	3b
										MB	-2	-23							
									Droughtiness grade (DR)		3a	3a							
12	T	0	32	SZL	10YR3/2			30	0		44	44	n	n	/	1	**3b**	ST	
		32	60	SZL	7.5YR4/4			60	0		18	21	n	n					
		60	120	C	7.5YR4/4			5	0		46	15	n	n					
										Total	**107**	**79**		ST.stone >2cm				25%	3b
										MB	2	-18							
									Droughtiness grade (DR)		3a	3a							
13	T	0	30	SZL	10YR3/2			30	0		41	41	n	n	/	1	**3b**	ST	
		30	60	SZL	10YR4/3			70	0		15	17	n	n					
		60	120	C	7.5YR4/4	few	mn	5	0		46	15	n	n					
										Total	**102**	**73**		ST.stone >2cm				25%	3b
										MB	-3	-24							
									Droughtiness grade (DR)		3a	3a							
14	T	0	28	mSL	10YR3/2			28	0		35	35	n	n	/	1	**3b**	ST	
		28	45	mSL	10YR4/3			50	0		14	14	n	n					
		45	60	mSL	10YR4/3			60	0		8	10	n	n					
		60	120	LmS	10YR5/6			5	0		34	9	n	n					
										Total	**91**	**67**		ST.stone >2cm				23%	3b
										MB	-14	-30		Some LmS streaks in USS					
									Droughtiness grade (DR)		3a	3a							

15	T	0	30	mSL	10YR3/2	25	0		39	39	n	n	/	1	**3b**	ST DR
		30	60	mSL	10YR4/3	70	0		14	16	n	n				
		60	70	mSL	10YR4/4	80	0		3	4	n	n				
		70	120	LmS	10YR4/4	80	0		8	0	n	n				
								Total	**64**	**58**		ST.stone >2cm			17%	3b
								MB	-41	-39						
								Droughtiness grade (DR)	3b	3b						
16	T	0	32	mSL	10YR3/2	30	0		39	39	n	n	/	1	**3b**	ST DR
Pit 2		32	60	mSL	10YR4/3	70	0		13	15	n	n				
		60	70	mSL	10YR4/4	80	0		3	4	n	n				
		70	120	LmS	10YR4/4	80	0		8	0	n	n				
								Total	**63**	**57**		ST.stone >2cm			22%	3b
								MB	-42	-40						
								Droughtiness grade (DR)	3b	3b						
17	T	0	30	SZL	10YR3/2	25	0		44	44	n	n	/	1	**3b**	ST
		30	60	SZL	7.5YR4/4	60	0		20	22	n	n				
		60	120	C	7.5YR4/4	5	0		46	15	n	n				
								Total	**109**	**81**		ST.stone >2cm Locally varied TS stone			20%	3b
								MB	4	-16						
								Droughtiness grade (DR)	3a	3a						
18	T	0	30	SZL	10YR3/2	25	0		44	44	n	n	/	1	**3b**	ST
		30	60	SZL	7.5YR4/4	60	0		20	22	n	n				
		60	120	C	7.5YR4/4	5	0		46	15	n	n				
								Total	**109**	**81**		ST.stone >2cm			20%	3b
								MB	4	-16						
								Droughtiness grade (DR)	3a	3a						
19	T	0	30	SZL	10YR3/2	30	0		41	41	n	n	/	1	**3b**	ST
		30	60	SZL	7.5YR4/4	60	0		20	22	n	n				
		60	120	C	7.5YR4/4	5	0		46	15	n	n				
								Total	**106**	**78**		ST.stone >2cm			23%	3b
								MB	1	-19						
								Droughtiness grade (DR)	3a	3a						
20	T	0	30	SZL	10YR3/2	22	0		45	45	n	n	/	1	**3b**	ST
		30	46	SZL	10YR4/3	40	0		17	17	n	n				

		46	50	SZL	10YR4/3	60	0		3	3	n	n					
		50	120	C	7.5YR4/4	5	0		53	31	n	n					
								Total	**118**	**96**		ST.stone >2cm			18%	3b	
								MB	13	-1							
								Droughtiness grade (DR)	2	2							
21	T	0	28	SZL	10YR3/2	30	0		38	38	n	n	/	1	**3b**	ST	
		28	70	C	7.5YR4/4	5	0		49	64	n	n					
		70	120	C	7.5YR4/4	10	0		36	0	n	n					
								Total	**123**	**102**		ST.stone >2cm			25%	3b	
								MB	18	5							
								Droughtiness grade (DR)	2	2							
22	T	0	30	SZL	10YR3/2	30	0		41	41	n	n	/	1	**3b**	ST	
		30	50	SZL	10YR4/3	60	0		15	15	n	n					
		50	120	C	7.5YR4/4	5	0		53	31	n	n					
								Total	**109**	**86**		ST.stone >2cm			20%	3b	
								MB	4	-11							
								Droughtiness grade (DR)	3a	3a							
23	T	0	30	SZL	10YR3/2	28	0		42	42	n	n	/	1	**3b**	ST	
		30	45	SZL	7.5YR4/4	60	0		11	11	n	n					
		45	120	C	7.5YR4/4	5	0		61	38	n	n					
								Total	**114**	**91**		ST.stone >2cm			23%	3b	
								MB	9	-6							
								Droughtiness grade (DR)	2	2							
24	T	0	30	SZL	10YR3/2	30	0		41	41	n	n	/	1	**3b**	ST	
Pit 4		30	42	SZL	10YR4/3	70	0		7	7	n	n					
		42	56	hCL	7.5YR4/4	5	0		18	21	n	n					
		56	120	C	7.5YR4/4	15	0		44	19	n	n					
								Total	**110**	**88**		ST.stone >2cm			25%	3b	
								MB	5	-9							
								Droughtiness grade (DR)	2	2							
25	T	0	28	SZL	10YR3/2	28	0		39	39	n	n	/	1	**3b**	ST	
		28	50	SZL	7.5YR4/4	60	0		16	16	n	n					
		50	120	C	7.5YR4/4	5	0		53	31	n	n					
								Total	**109**	**86**		ST.stone >2cm			25%	3b	

								MB	4	-11							
								Droughtiness grade (DR)	3a	3a							
26	T	0	30	SZL	10YR3/2	35	0		38	38	n	n	/	1	**3b**	ST	
		30	50	SZL	7.5YR4/4	60	0		15	15	n	n					
		50	120	C	7.5YR4/4	5	0		53	31	n	n					
								Total	**106**	**83**		ST.stone >2cm			30%	3b	
								MB	1	-14							
								Droughtiness grade (DR)	3a	3a							
27	T	0	30	SZL	10YR3/2	30	0		41	41	n	n	/	1	**3b**	ST	
		30	60	SZL	7.5YR4/4	60	0		20	22	n	n					
		60	120	C	7.5YR4/4	5	0		46	15	n	n					
								Total	**106**	**78**		ST.stone >2cm			20%	3b	
								MB	1	-19							
								Droughtiness grade (DR)	3a	3a							
28	T	0	27	SZL	10YR3/2	27	0		38	38	n	n	/	1	**3b**	ST	
		27	60	SZL	7.5YR4/4	60	0		22	24	n	n					
		60	120	C	7.5YR4/4	5	0		46	15	n	n					
								Total	**106**	**78**		ST.stone >2cm			20%	3b	
								MB	1	-19							
								Droughtiness grade (DR)	3a	3a							
29	T	0	30	hCL	10YR3/2	16	0		46	46	n	n	/	1	**3a**	ST	
		30	120	hCL	7.5YR4/4	3	0		99	62	n	n					
								Total	**145**	**108**		ST.stone >2cm			12%	3a	
								MB	40	11							
								Droughtiness grade (DR)	1	1							
30	T	0	28	SZL	10YR3/2	25	0		41	41	n	n	/	1	**3b**	ST	
		28	37	SZL	7.5YR4/3	60	0		7	7	n	n					
		37	120	SZL	7.5YR4/4	60	0		43	24	n	n					
								Total	**90**	**72**		ST.stone >2cm			20%	3b	
								MB	-15	-25							
								Droughtiness grade (DR)	3a	3a							
31	T	0	28	SZL	10YR3/2	30	0		38	38	n	n	/	1	**3b**	ST	
Pit 5		28	90	SZL	10YR4/3	60	0		35	31	n	n					
		90	120	SZL	10YR4/3	60	0		14	0	n	n					

									Total	**87**	**69**		ST.stone >2cm			25%	3b	
									MB	-18	-28							
									Droughtiness grade (DR)	3a	3a							
32	T	0	26	SZL		10YR3/2	24	0		38	38	n	n	/	1	**3b**	ST	
		26	40	SZL		10YR4/3	20	0		19	19	n	n					
		40	47	hCL	mod	7.5YR4/4	10	10		10	10	n	n					
		47	120	Chalk						52	23	n	n					
									Total	**119**	**90**		ST.stone >2cm			17%	3b	
									MB	14	-7							
									Droughtiness grade (DR)	2	2							
33	T	0	28	SZL		10YR3/2	30	0		38	38	n	n	/	1	**3b**	ST	
		28	120	SZL		7.5YR4/4	60	0		49	31	n	n					
									Total	**87**	**69**		ST.stone >2cm			23%	3b	
									MB	-18	-28							
									Droughtiness grade (DR)	3a	3a							
34	T	0	30	SZL		10YR3/2	30	0		41	41	n	n	/	1	**3b**	ST	
		30	120	SZL		7.5YR4/4	60	0		48	30	n	n					
									Total	**88**	**70**		ST.stone >2cm			25%	3b	
									MB	-17	-27							
									Droughtiness grade (DR)	3a	3a							
35	T	0	28	SZL		10YR3/2	22	0		42	42	n	n	/	1	**3b**	ST	
		28	60	SZL		7.5YR4/4	40	0		30	34	n	n					
		60	70	SZL		7.5YR4/4	60	0		5	7	n	n					
		70	120	C		7.5YR4/4	5	0		38	0	n	n					
									Total	**115**	**83**		ST.stone >2cm			17%	3b	
									MB	10	-14							
									Droughtiness grade (DR)	2	3a							
36	T	0	27	SZL		10YR3/2	32	0		36	36	n	n	/	1	**3b**	ST	
		27	45	SZL		7.5YR4/4	40	0		19	19	n	n					
		45	70	SZL		7.5YR4/4	60	0		13	19	n	n					
		70	120	C		7.5YR4/4	5	0		38	0	n	n					
									Total	**106**	**73**		ST.stone >2cm			25%	3b	
									MB	1	-24							
									Droughtiness grade (DR)	3a	3a							

37	T	0	27	SZL	10YR4/2	25	0		39	39	n	n	/	1	**3b**	ST
		27	45	SZL	7.5YR4/4	30	0		22	22	n	n				
		45	70	SZL	7.5YR4/4	60	0		13	19	n	n				
		70	120	C	7.5YR4/4	5	0		38	0	n	n				
								Total	**112**	**80**		ST.stone >2cm			20%	3b
								MB	7	-17						
								Droughtiness grade (DR)	2	3a						
38	T	0	30	SZL	10YR4/2	25	0		44	44	n	n	/	1	**3b**	ST
		30	70	SZL	7.5YR4/4	60	0		24	30	n	n				
		70	120	C	7.5YR4/4	5	0		38	0	n	n				
								Total	**106**	**73**		ST.stone >2cm			20%	3b
								MB	1	-24						
								Droughtiness grade (DR)	3a	3a						

Appendix 3: Site Photographs

Pit 1 overview

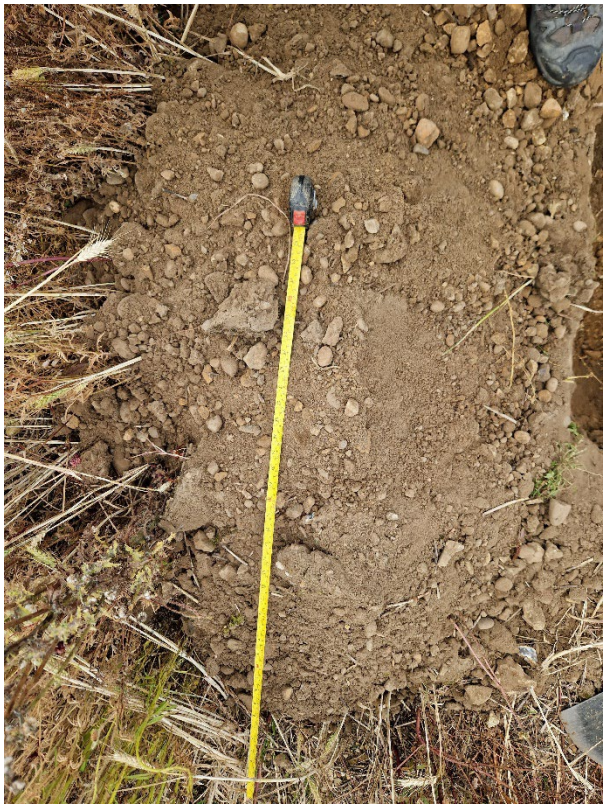
Topsoil

Upper subsoil

Loamy sand lower subsoil

Pit 2 topsoil depth

Pit overview



Topsoil

Upper subsoil

Pit 3 overview

Topsoil

Upper subsoil

Clay lower subsoil extracted from pit via auger

Pit 4 overview

Topsoil from pit with stone separated

Upper subsoil from pit with stone separated

Heavy clay loam lower subsoil

Pit 5 overview

Topsoil from pit with stone separated

Upper subsoil extracted from pit

Upper subsoil from pit with stone separated

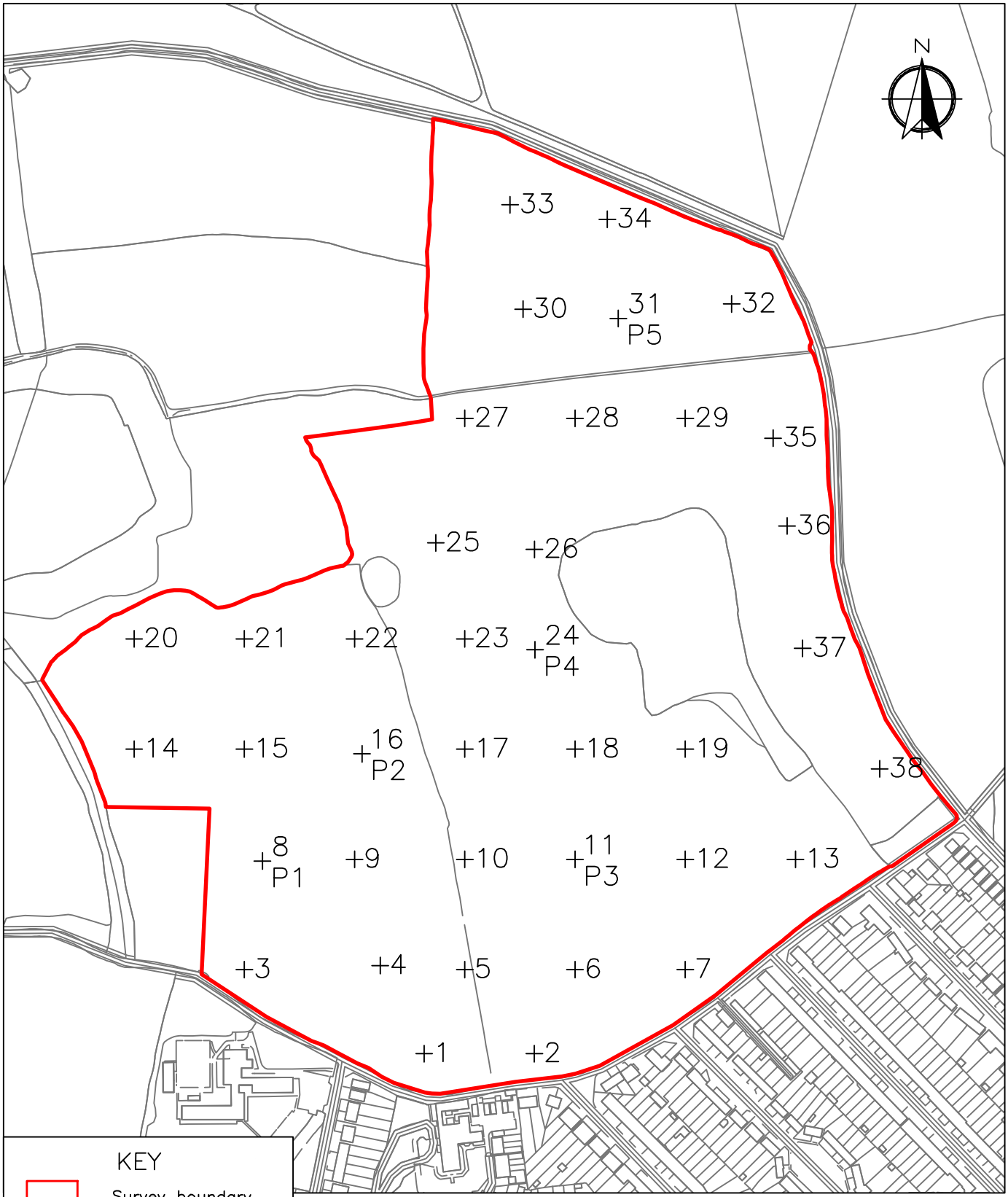
Further examples of topsoil stone observed across the site

Pit 1

Pit 2

Observation 21

Observation 26



Drawing title OBSERVATION MAPPING	Ref. RAC/10439/1	Rev.			
Contract LAND NORTH OF LITTLE GREEN LANE, CROXLEY GREEN	Scales AGM	Checked by AIF			
	Scales 1:5,000@A4	Date 07/2024	Rev.	Comment	Date

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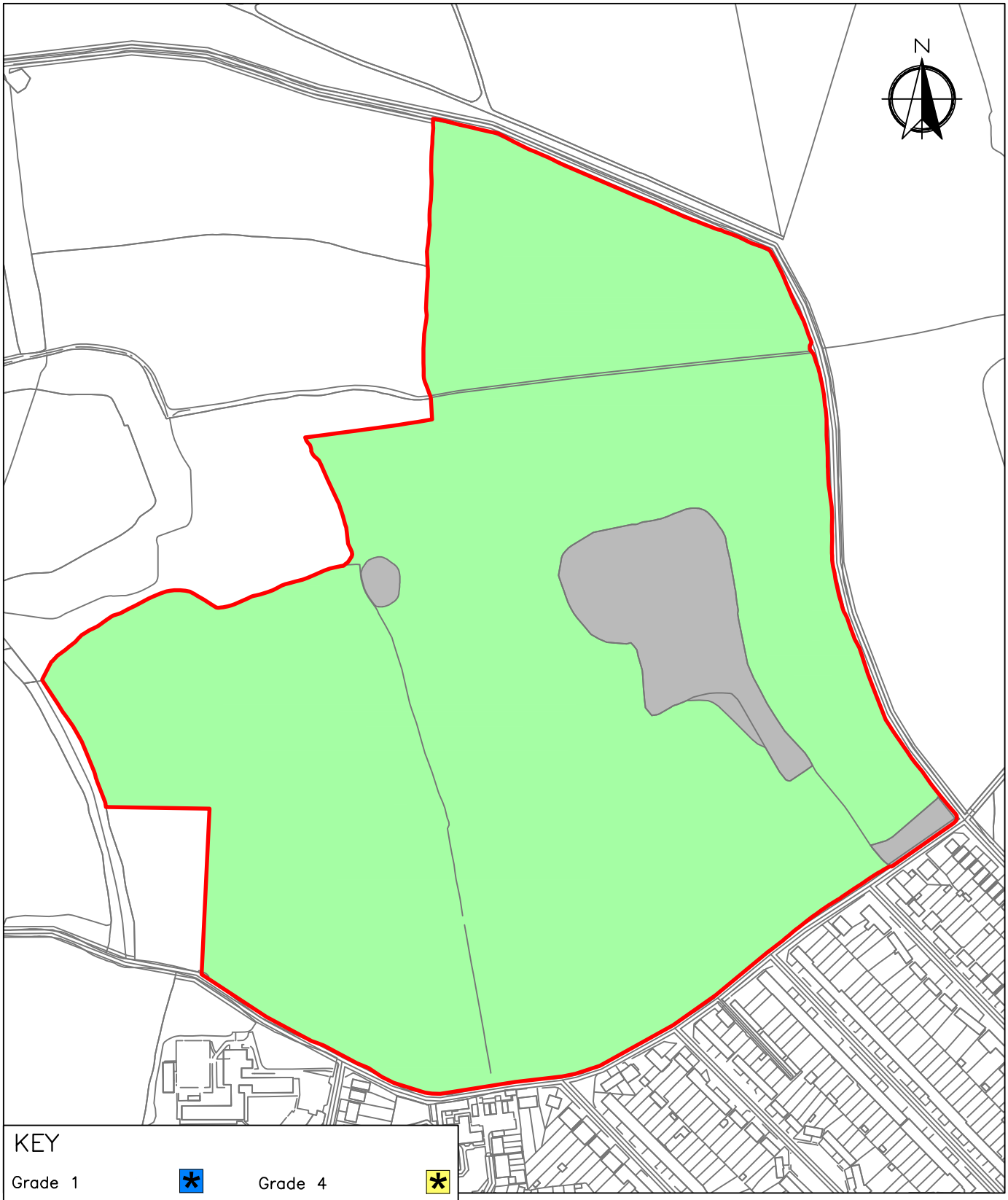

Drawing title AGRICULTURAL LAND CLASSIFICATION	Ref. RAC/10439/2	Rev.			
Contract LAND NORTH OF LITTLE GREEN LANE, CROXLEY GREEN	Scales AGM	Checked by AIF			
	Scales 1:5,000@A4	Date 07/2024	Rev.	Comment	Date

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