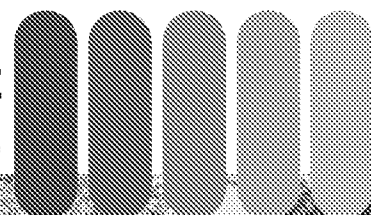


Agricultural Land Classification & Soil Resources Report

May 2016



HOOK LANE PAGHAM

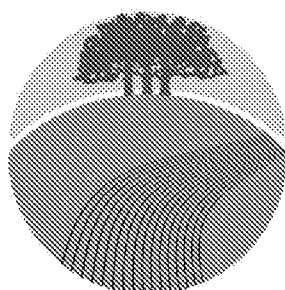
on behalf of:
Hallam Land Management Ltd

Hallam Land Management Ltd

Land at Pagham, West Sussex

**Agricultural Land Classification
and
Soil Resources**

May 2016



Reading Agricultural Consultants Ltd

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1. Introduction

- 1.1.1. Reading Agricultural Consultants Ltd (RAC) is instructed by Hallam Land Management Ltd to investigate the Agricultural Land Classification (ALC) and soil resources of land to the north of Pagham, West Sussex.
- 1.1.2. 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 (1988¹), and summarised in Natural England's Technical Information Note 049².
- 1.1.3. 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 and soil which, together with interactions between them, form the basis for classifying land into one of the five grades.
- 1.1.4. Grade 1 land is excellent quality agricultural land with very minor or no limitations to agricultural use, and Grade 5 is very poor quality land, with severe limitations due to adverse soil, relief, climate or a combination of these. Grade 3 land is subdivided into Subgrade 3a (good quality land) and Subgrade 3b (moderate quality land). Land which is classified as Grades 1, 2 and 3a in the ALC system is defined as best and most versatile agricultural land.
- 1.1.5. 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 on an Ordnance Survey base at a scale of One Inch to One Mile (1:63,360). The Provisional ALC map shows the site within a large area of Grade 2 land to the north of Pagham. 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 ..."
- 1.1.6. 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 boring per hectare. The site has been surveyed previously in detail on behalf of MAFF, and has been classified as predominantly

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

² **Natural England (2012)**. *Technical Information Note 049 - Agricultural Land Classification: protecting the best and most versatile agricultural land*, Second Edition 19th December 2012.

Grade 2 with some Subgrade 3a. This current survey also follows the detailed methodology set out in the MAFF guidelines.

2. Site and Climatic Conditions

2.1. General Features, Land Form and Drainage

- 2.1.1. The site extends to approximately 17 hectares of arable agricultural land as outlined in Figure RAC7226-1. At the time of survey, the land was in stubble following grain maize, and was severely rutted in some places.
- 2.1.2. The site is bordered to the north by Sefter Road, to the east and south by Hook Lane and associated residential development, and to the west by Pagham Road.
- 2.1.3. The site comprises two fields divided by a deep ditch. The site is level with a gentle slope along the western boundary and two slight depressions in the centre. Altitude is around 5-6m above Ordnance Datum (AOD).

2.2. Agro-climatic Conditions

- 2.2.1 Agro-climatic data for the site have been interpolated from the Meteorological Office's standard 5km grid point data set at a representative altitude of 5m AOD, and are given in Table 1. Climate is warm and moisture deficits are moderately high. Rainfall is high for lowland England. However, compared to most of Sussex this area has fewer Field Capacity Days, increasing opportunities for agricultural fieldwork. There is no overriding climatic limitation to agricultural land quality.

Table 1: Local agro-climatic conditions

National grid Reference	SZ 895991
Average Annual Rainfall	738 mm
Accumulated Temperatures >0°C	1,546 day°
Field Capacity Days	149 days
Average Moisture Deficit, wheat	121 mm
Average Moisture Deficit, potatoes	118 mm

2.3. Soil Parent Material and Soil Type

- 2.3.1. The underlying geology is mapped by the British Geological Survey³ as London Clay. This is covered by Drift marked as River Terrace Deposits (in this case, fine silt and clay) with Raised Beach Gravel in the north-west.

³ **British Geological Survey (2016).** *Geology of Britain* viewer, <http://mapapps.bgs.ac.uk/geologyofbritain/home.html>

- 2.3.2. The Soil Survey of England and Wales soil mapping⁴ (1:250,000 scale) shows Park Gate association across the site. This association comprises deep stoneless silty soils that are variably affected by groundwater. Wetness Class is naturally III or IV but can be improved to II or III by effective drainage measures.

3. Agricultural Land Quality

3.1. Soil Survey Methods

- 3.1.1. Twenty soil profiles were examined across the site using a narrow gouge auger at an observation density of at least one per hectare in accordance with the recommendations set out in Natural England's TIN049². Two observation pits were also dug to examine soil structure (descriptions are contained in Appendix 1). The locations of the auger and pit observations are indicated on Figure RAC7226-1. The following characteristics were assessed for each observable soil horizon up to a maximum of 120cm or any impenetrable layer:
- soil texture;
 - significant stoniness;
 - colour (including local gley and mottle colours);
 - consistency;
 - structural condition;
 - free carbonate; and
 - depth.
- 3.1.2. Two composite topsoil samples were submitted for laboratory determination of particle size distribution, pH, organic matter content and nutrient contents (P, K, Mg). Results are given in Appendix 2.
- 3.1.3. Soil Wetness Class (WC) was inferred from the matrix colour, presence or absence of, and depth to, greyish and ochreous gley mottling and/or poorly permeable subsoil layers at least 15cm thick.
- 3.1.4. Soil droughtiness was investigated by the calculation of moisture balance equations (given in Appendix 1). 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.

⁴ **Soil Survey of England and Wales (1984).** *Soils of South East England (1:250,000), Sheet 6 and Bulletin 15.*

3.2. Description of the soils

- 3.2.1. The topsoil is very slightly stony medium silty clay loam and the subsoil is stoneless silty clay loam with heavier layers (silty clay or clay), commonly mottled throughout.
- 3.2.2. There is a pattern of variation over the site, with the best soils running through the centre of the site from north to south, and comprising:
- Topsoil 0-30cm: pale brown (10YR 5/4 in the Munsell soil colour charts⁵) medium silty clay loam or silt loam, very slightly stony.
 - Upper Subsoil 30-50cm: yellow-brown (10YR 5/4-6/6) silty clay loam, below 40cm is paler (10YR 6/4) with common soil iron and manganese mottles. Very slightly stony (flints and small pebbles).
 - Lower Subsoil 50-80cm: stoneless silty clay with many manganese mottles overlying at 60 to 80cm pale grey (10YR 7/3) slowly permeable clay with many fine ochreous mottles. Locally reverts to browner siltier soil within 100cm. In profile 1 the lower subsoil is stony calcareous heavy clay loam, very stony at 80cm.
- 3.2.3. These soils are Wetness Class (WC) II on the basis of reduced permeability in the lower subsoil. In profiles 6, 7, 11, 12, 16 and 19, groundwater occurred within 1m.
- 3.2.4. In the north-east and on the fringes of the site, the soils comprise:
- Topsoil 0-30cm: brown (10YR 4/4) stickier silty clay loam, slightly stony.
 - Upper Subsoil 30-50cm: pale-brown (10YR 6/3) silty clay or heavy silty clay loam with common soil iron and manganese mottles. Stoneless.
 - Lower Subsoil 50-80cm: pale grey (10YR 7/3) slowly permeable clay with many fine ochreous mottles starting at 45-55cm. Locally this reverts to siltier soil below 80m.
- 3.2.5. These soils are WC III on the basis of reduced subsoil permeability. Groundwater occurred within 1m at profiles 5 and 9.
- 3.2.6. In the south and in a strip to the east of the site, the soils comprise:
- Topsoil 0-25cm: greyish-brown (10YR 5/3) heavy clay loam or silty clay with common mottles, very slightly stony.
 - Upper Subsoil 30-50cm: pale-brown (10YR 6/3) silty clay or clay with many iron and manganese mottles. Stoneless.
 - Lower Subsoil: heavy silty clay loam or clay loam below 80cm.
- 3.2.7. These soils are WC IV on the basis of slow permeability in the upper subsoil.

⁵ **Munsell Color (2009).** *Munsell Soil Color Book*, Grand Rapids, MI, USA

3.3. Soil resource and reuse

- 3.3.1. If the soil is to be reused, the topsoil (0-30cm) should be stockpiled separately to subsoil. The topsoil does not however meet the BS 3882:2015⁶ specification for topsoil because the silt content exceeds 65%. It cannot therefore be traded or moved from the site as topsoil. Its quality is also reduced by low organic matter although the nutrient fertility is good (Appendix 2).
- 3.3.2. Similarly the subsoil material does not meet the BS 8601:2013⁷ specification either because the sand content is less than 20% or the clay content exceeds 30%. Without amelioration, these cannot be traded as subsoils.
- 3.3.3. The handling and good restoration of silty or clayey soils is difficult and needs to be undertaken with care. Improved under-drains will be required for most re-uses of these soils.

3.4. Agricultural Land Classification and Site Limitations

- 3.4.1. Assessment of quality has been carried out according to the MAFF revised guidelines (1988¹). Soil profiles have been described according to Hodgson (1997⁸) which is the recognised source for describing soil profiles and characteristics according to the MAFF revised ALC guidelines.
- 3.4.2. Agricultural land quality at this site is shown on Figure RAC7226-2. Two factors set the limitations for this site. Much of the site is limited slightly by soil droughtiness (see Appendix 3) with nearly all the profiles having good but not very good supplies of available water, which limits them to Grade 2.
- 3.4.3. Soil wetness and workability also limits most of the site to varying degrees. The ditch across the site is of sufficient depth to control groundwater and for drain outfalls to function. The level in the ditch was 1m below the surface at the time of survey, although several soil profiles were wet below 80cm depth. There was evidence of surface wetness on lower-lying parts of the field and in some areas where the topsoil was notably more compact.
- 3.4.4. Topsoil condition is worsened by the low organic matter and untimely cultivation. Commonly there was mottling and poor structure in the 30-40cm layer which is partly due to machinery operations. The ALC system assumes that necessary subsoiling and drain improvements are made.
- 3.4.5. However, the lower subsoil naturally has clayey layers with reduced permeability starting at between 45 and 70cm depth resulting in WC II or III, resulting in a classification of Grade 2 or Subgrade 3a respectively, with a medium silty clay loam topsoil (Table 6 of the ALC guidelines¹).

⁶ **British Standard Institution (2015).** *Specification for topsoil.* BS 3882:2015

⁷ **British Standard Institution (2013).** *Specification for subsoil and requirements for use.* BS 8601:2013

⁸ **Hodgson, J. M. (Ed.) (1997).** *Soil survey field handbook.* Soil Survey Technical Monograph No. 5, Silsoe.

- 3.4.6. Where the topsoil is heavier and the clay starts higher in the profile, the ALC grade is reduced to Subgrade 3b on soil wetness.
- 3.4.7. The area of each ALC grade is shown in Figure RAC7226-2 and given in Table 2.

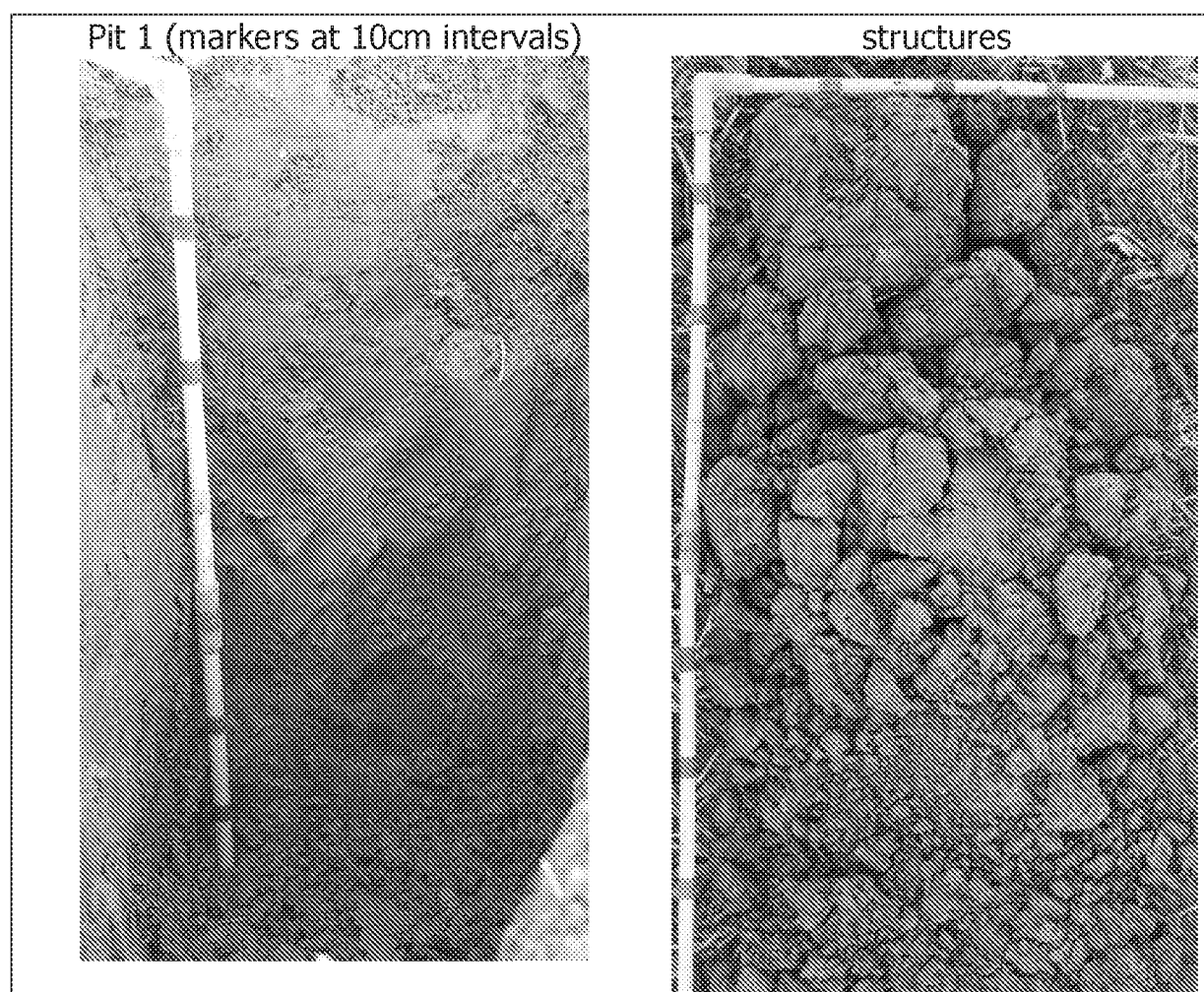
Table 2: Agricultural Land Classification

Grade	Description	Area (ha)	% of agric. land
2	Very good quality	10.1	58
3a	Good quality	6.3	36
3b	Moderate quality	0.9	6
	Total Agricultural	17.3	100

Appendix 1: Pit descriptions and photographs

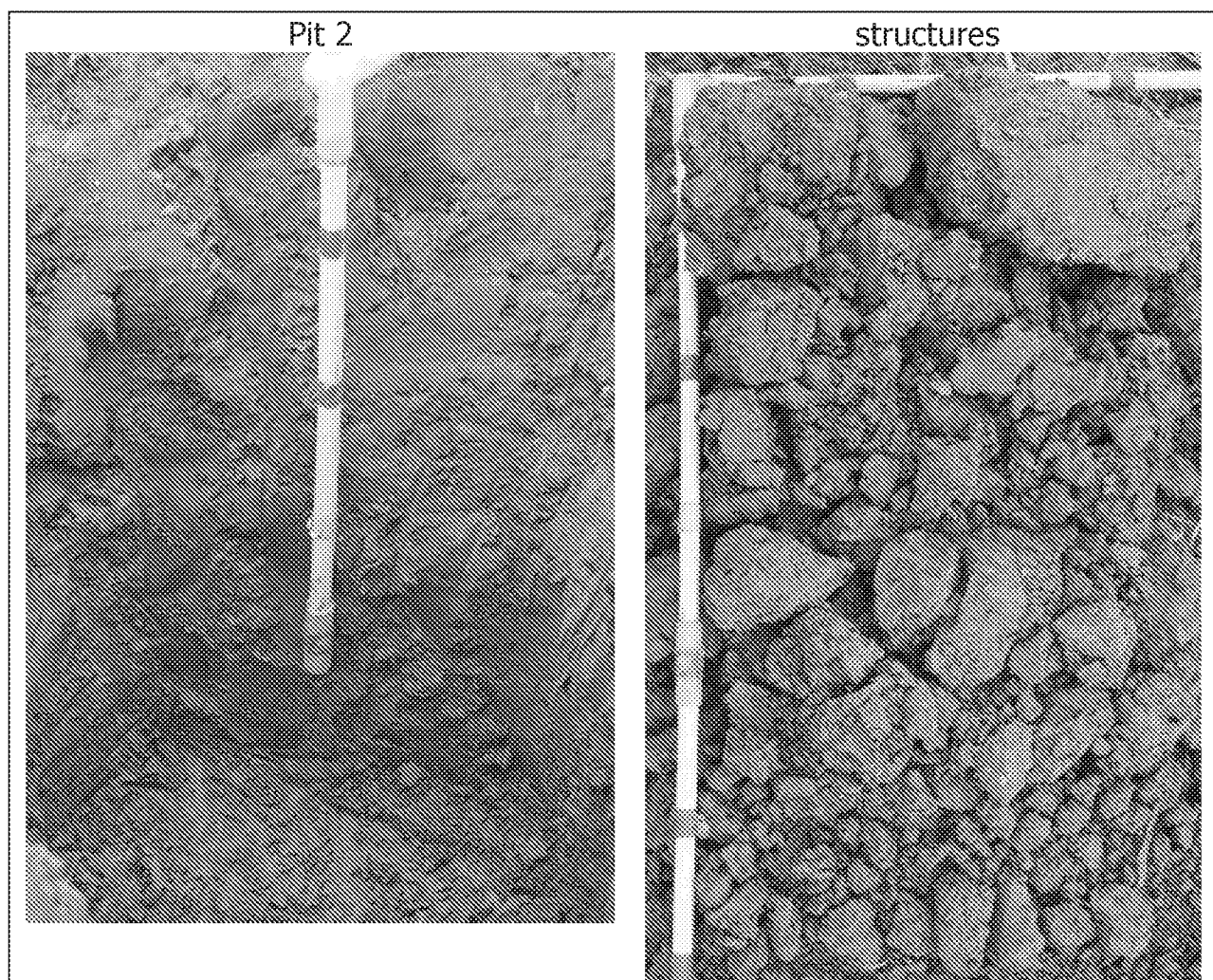
Pit A		Description
Ap	0-30 cm	Dull brown (10YR 5/4) medium silty clay loam. 4% fine stones. Poor structure breaking to coarse fragments. Few roots.
Bt1	20-40 cm	Dull brown (10YR 6/4) heavy silty clay loam with a few ochreous mottles. No roots, coarse angular blocks (compaction). Few stones.
Eg	40-65 cm	Dull brown (10YR 6/4) heavy silty clay loam with common ochreous mottles. Breaks to fine subangular blocky structure. Stoneless.
Btg	65-75 cm	Dull grey (10YR 7/3) silty clay with many fine ochreous (7.5YR 6/8) mottles and some manganese. Weak platy structure.
Cg	75 cm -	Stoneless dense clay.

Comment: slowly permeable within 75cm; Wetness Class II. Structure 0-40cm is poor and needs alleviation by timely subsoiling and ploughing.



Pit 2		Description
Ap	0-30 cm	Brown (10YR 4/4) medium silty clay loam. 5-10% stones. Poor structure in top 15cm (compact), looser medium subangular blocks beneath. A few roots.
Btg	30-40 cm	Pale-brown (10YR 6/3) silty clay with 20% ochreous and 10% manganiferous mottles. Some coarse angular blocks (compaction). Stoneless, no roots.
Btg	40-55 cm -	Heavy silty clay loam. Medium subangular blocky structure.
BCg	55 cm -	Light grey (10YR 7/3) clay with many fine ochreous mottles. Moderate medium prismatic structure.

Comment: mottling is due to compaction in upper subsoil and restricted permeability below 55cm. Wetness Class is III.



Stones at pit A. Some places had more than this (never exceeding 10%)



Ruts on headland



Main drain (view towards east)



Appendix 2: Laboratory Data

Samples taken at pits or composites of 20 cores sampled to 25cm depth and analysed at laboratory by pipette + sedimentation. Organic Matter is by Walkley Black method.

7,8, pit A

Determinand	% ww
Sand	15
Silt	67
Clay	18
Texture	medium silty clay loam - silt loam

Determinand	mg/ l	Index
pH	7.3	sl. alkaline
Phosphorus (P)	35	3 good
Potassium (K)	152	2- medium
Magnesium (Mg)	82	2 medium
Organic Matter	2.1 %	low

9,10, pit B

Determinand	% ww
Sand	12
Silt	68
Clay	20
Texture	medium silty clay loam

Determinand	mg/ l	Index
pH	7.2	sl. alkaline
Phosphorus (P)	32	3 good
Potassium (K)	141	2- medium
Magnesium (Mg)	77	2 medium
Organic Matter	2.1 %	low

Appendix 3: ALC and droughtiness assessment of each soil observation

Every profile is graded separately. A summary table is shown below, followed by a log showing all horizon descriptions.

Land No. Use	Top texture	Gley start cm	SPL start cm	FCD WETNESS Class	149 Gra	AP ww mm	AP pot mm	Mbal ww	DROUGHT pot	Auger limit cm	Gradient aspect	Other limitation	Other limitation	ALC FINAL GRADE	LIMITING FACTORS
1 arable	mZCL	n 60	60	I	1	133	116	12	-2	2	1 NW			2	DR
2 arable	mZCL	n 25	50	III	3a	138	116	17	-2	2				3a	WE
3 arable	mZCL	n 25	65	III	3a	138	117	17	-1	2				3a	WE
4 arable	mZCL	n 30	45	III	3a	137	111	16	-7	2				3a	WE
5 arable	mZCL	n 40	53	II	2	153	114	32	-4	2				2	DR WE
6 arable	ZCL	n 40	55	II	2	137	113	16	-5	2				2	DR WE
7 arable	mZCL	n 42	57	II	2	139	116	18	-2	2				2	DR WE
8 arable	mZCL	n 40	75	II	2	151	120	30	2	2	1 NW			2	DR WE
9 arable	mZCL	n 30	55	III	3a	137	115	16	-3	2	1 NW			3a	WE
10 arable	hZCL	n 30	52	III	3a	136	109	15	-9	2	1 NW			3a	WE
11 arable	mZCL	n 70	80	II	2	146	122	25	4	2				2	DR WE
12 arable	ZL	n 0	65	III	3a	151	129	30	11	1				3a	WE
13 arable	ZL	n 44	60	II	2	162	128	41	10	2				2	WE DR
14 arable	ZC	n 0	32	IV	3b	136	99	15	-19	3a	2 SE			3b	WE
15 arable	hZCL	n 40	53	II	3a	144	113	23	-5	2	1 SE			3a	WE
16 arable	ZL	n 50	60	II	2	154	128	33	10	1				2	WE
17 arable	mZCL	n 55	65	II	2	146	115	25	-3	2				2	DR WE
18 arable	mZCL	n 50	65	II	2	138	116	17	-2	2				2	DR WE
19 arable	mZCL	n 45	68	II	2	142	117	21	-1	2				2	DR WE
20 arable	hCL	n 25	45	III	3b	133	106	12	-12	3a				3b	WE

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			Climate Data		Wetness Class Guidelines				
%	TAV	Eav	MDwheat	121	SPL within 80cm, gleying within 40cm	II	III	IV	V
hard	1	0.5	MDpotato	118	SPL within 80cm, gleying at 40-70cm	>68cm	40-68cm	<40cm	
chalk	10	7	FCD	149	No SPL but gleying within 40cm	>63cm	<53cm		
hard flint & pebble					coarse subsoil	I	other cases	II	

Maximum depth of auger penetration is underlined

Site No.	Depth cm	Texture	CaCO ₃	Colour	Mottled colour	abundance	stone% hard	stone% chalk	Structure	APwheat mm	AP potato mm	Gley	SPL	WC	Wetness grade WE	Final Grade	Limiting Factor(s)
1	T 0	30 mZCL		10YR 4/4			8			53	53			I	1	2	DR
	30	49 hZCL					5			31	31						
	49	60 mZCL					0			12	19						
	60	80 hCL	mod	10YR 6/4	Fe	com	1	2		17	14	y					
	80	120 hCL					5			21	0						
							5		Total	133	116						
							0		MD	12	-2						
									Droughtiness grade (DR)	2	2						
2	T 0	25 mZCL		10YR 4/4	Fe	com	4			46	53			III	3a	3a	WE
	25	35 ZCL					5			16	31	y					
	35	50 hZCL		10YR 6/4	Mn	com	0			26	19	y					
	50	80 C		10YR 5/4	Fe fine	many	0		poor	21	14	y	y				
	80	100 ZC		10YR 5/4			0			16	0	y					
	100	120 C	slight	5Y 5/3		com	0		poor	14	0	y	y				
									Total	138	116						
									MD	17	-2						
									Droughtiness grade (DR)	2	2						
3	T 0	25 mZCL		10YR 4/4	Fe	com	4			46	46			III	3a	3a	WE
	T 25	32 mZCL		pan			5		poor	13	13	y					
	32	50 hZCL		10YR 6/3	Fe	com	5			29	29	y					
	50	65 ZC		10YR 5/4	Mn	many	0		po	12	23	y					
	65	120 C		10YR 6/4	FeMn	many	0		poor	39	7	y	y				
									Total	138	117						
									MD	17	-1						
									Droughtiness grade (DR)	2	2						

Droughtiness grade (DR)															
2															
2															
4	T	0	30	mZCL	10YR 5/4	FeMn	many	2	56	56	23	23	56	3a	WE
		30	45	ZC	10YR 6/3	Fe	many	0	23	23					
		45	90	C		Fe	many	0	35	35					
		90	120	ZC	mod	Mn	many	0	24	0					
									Total	137	111				
									MD	16	-7				
									Droughtiness grade (DR)		2	2			
5	T	0	30	mZCL	10YR 5/4	Fe	few	4	55	55	17	17	55	2	DR WE
		30	40 <td>hZCL</td> <td>10YR 6/4</td> <td>Fe</td> <td>com</td> <td>0</td> <td>19</td> <td>20</td> <td></td> <td></td> <td></td> <td></td> <td></td>	hZCL	10YR 6/4	Fe	com	0	19	20					
		40	53 <td>hZCL</td> <td>10YR 6/4</td> <td>Fe</td> <td>com</td> <td>0</td> <td>13</td> <td>22</td> <td></td> <td></td> <td></td> <td></td> <td></td>	hZCL	10YR 6/4	Fe	com	0	13	22					
		53	70	ZC			many	0	50	0					
		70	120 <td>hZCL</td> <td>10YR 6/6</td> <td></td> <td></td> <td>0</td> <td>153</td> <td>114</td> <td></td> <td></td> <td></td> <td></td> <td></td>	hZCL	10YR 6/6			0	153	114					
									Total	153	114				
									MD	32	-4				
									Droughtiness grade (DR)		1	2			
6	T	0	31	ZCL	10YR 5/4			8	54	54	15	15	54	2	DR WE
		31	40 <td>hZCL</td> <td>10YR 6/6</td> <td>Fe</td> <td>com</td> <td>0</td> <td>22</td> <td>26</td> <td></td> <td></td> <td></td> <td></td> <td></td>	hZCL	10YR 6/6	Fe	com	0	22	26					
		40	55 <td>hZCL</td> <td></td> <td>Mn</td> <td>many</td> <td>0</td> <td>18</td> <td>13</td> <td></td> <td></td> <td></td> <td></td> <td></td>	hZCL		Mn	many	0	18	13					
		55	80	ZC	10YR 7/2	wet	many	0	14	0					
		80	100	ZC	10YR 7/2	wet	many	0	14	0					
		100	120 <td>C</td> <td></td> <td></td> <td></td> <td>0</td> <td>137</td> <td>113</td> <td></td> <td></td> <td></td> <td></td> <td></td>	C				0	137	113					
									Total	137	113				
									MD	16	-5				
									Droughtiness grade (DR)		2	2			
7	T	0	26	mZCL	10YR 5/4			4	51	51	23	23	51	2	DR WE
		26	42 <td>mZCL</td> <td>10YR 6/6</td> <td></td> <td></td> <td>5</td> <td>21</td> <td>26</td> <td></td> <td></td> <td></td> <td></td> <td></td>	mZCL	10YR 6/6			5	21	26					
		42	57 <td>hZCL</td> <td></td> <td>FeMn</td> <td>com</td> <td>0</td> <td>23</td> <td>17</td> <td></td> <td></td> <td></td> <td></td> <td></td>	hZCL		FeMn	com	0	23	17					
		57	90	C	10YR 7/3	n	many	0	21	0					
		90	120	ZC		wet	many	0	139	116					
									Total	139	116				
									MD	18	-2				
									Droughtiness grade (DR)		2	2			
8	T	0	26	mZCL	10YR 5/4			8	49	49	2	2	49	2	DR WE

13	T	0	32	ZL	10YR 5/4	8		68	68		2	WE DR			
		32	44	mZCL	10YR 6/6	5	few	19	19						
					Mn										
		44	60	hZCL	10YR 6/3	0	com	20	27	y					
		60	60	C	10YR 6/3	0	many	14	13	y					
		80	120	hZCL	10YR 6/6	0				y					
					To			40	0						
					tal			162	128						
					MD			41	10						
Droughtline ss grade (DR)										1	2				
14	T	0	15	ZC	10YR 6/3	4	com	25	25	y	3b	WE			
		15	32	ZC		0	com	29	29	y					
		32	80	ZC	F	0	many	43	46	y					
		80	120	hZCL	e	0									
					To			40	0						
					tal			136	99						
					MD			15	-19						
					Droughtline ss grade (DR)			2	3a						
		Droughtline ss grade (DR)													
		15	T	0	30	hZCL	10YR 4/4	4		55			55		3a
30	40			hZCL	2.5Y 6/6	0	com	17	17	y					
40	53			ZC	2.5Y 6/4	0	m	17	18						
53	80			C		0	com	20	23	y					
80	100			hZCL	Fe	0		20	0	y					
100	120			ZC		0		16	0	y					
					To			144	113						
					tal			23	-5						
					MD			2	2						
Droughtline ss grade (DR)															
16	T	0	30	ZL	10YR 5/4	4	fe	66	66		2	WE			
		30	50	ZCL	10YR 6/4	0	w	34	34	y					
		50	60	ZC		0	com	8	15						
		60	80	C	10YR 6/3	0	com	14	13	y					
		80	120	ZC		0	wet	32	0	y					
					To			154	128						
					tal			33	10						
					MD			1	1						
		Droughtline ss grade (DR)													

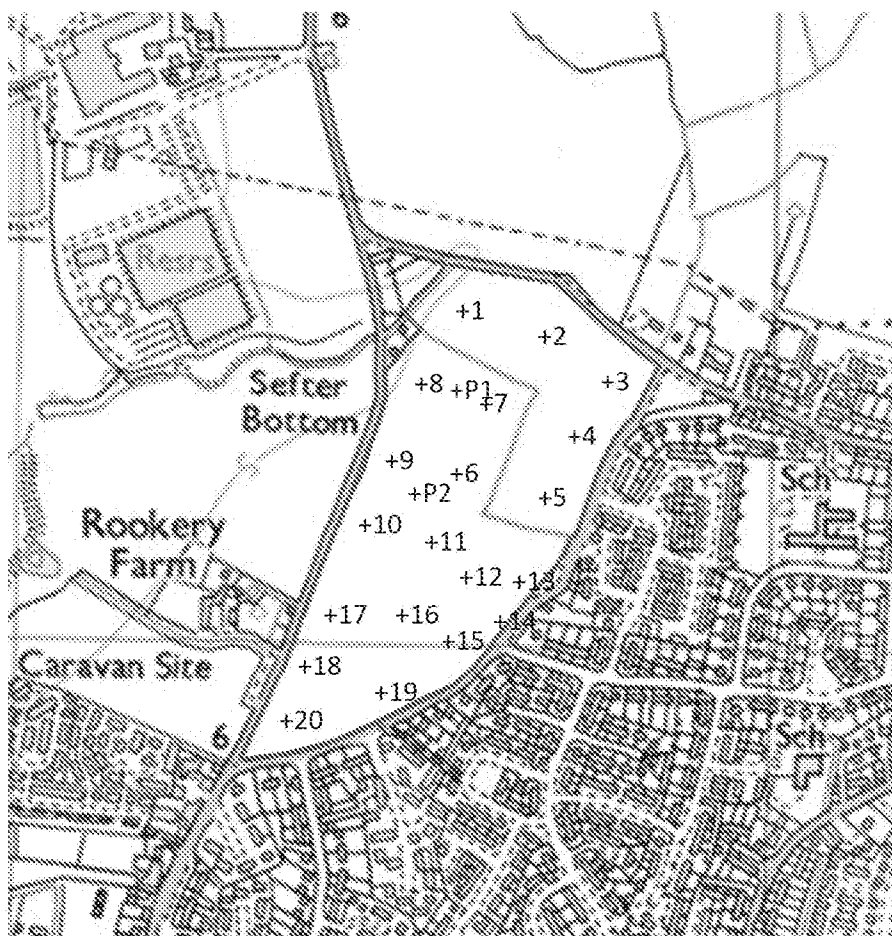
17	T	0	30	mZCL	10YR 4/4	4	55	55	II	2	2	DR WE	
		30	55	hZCL	10YR 6/4	5	37	41					
		55	65	ZC		0	7	12					
		65	110	C		0	36	8	y	y			
		110	120	SZL		0	11	0		y			

							Total	146	115				
								MD	25	-3			
									2	2	2		
							Droughtiness grade (DR)						

18	T	0	30	mZCL	10YR 5/4	4	55	55	II	2	2	DR WE	
	30	50		hZCL	10YR 6/6	5	32	32					
	50	65		ZC	10YR 6/4	0	12	23	y				
	65	120		C	10YR 6/3	0	39	7	y				
							poor						
							Total	138	116				
							MD	17	-2				
								2	2				
							Droughtiness grade (DR)						

19	T	0	30	mZCL	10YR 5/4	4	55	55	II	2	2	DR WE
							Droughtiness grade (DR)					
							Total	142	117			
							MD	21	-1			
							2	2				

20	T	0	25	hCL	10YR 4/4	4	43	43	III	3b	3b	WE	
	25	45	ZC	10YR 6/3	Fe many	0	30	30					
	45	105	C	10YR 7/2	Fe many	0	45	33	Y	Y			
	105	120	hCL	10YR 6/3	Fe many	0	15	0	Y	Y			
							Total	133	106				
							MD	12	-12				
							2	3a					
							Droughtiness grade (DR)						



- Survey Area
- .15 Auger Observation
- .P1 Pit Observation

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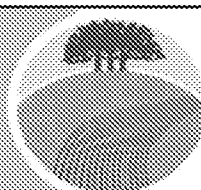
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Figure RAC7226-1 Observation Map

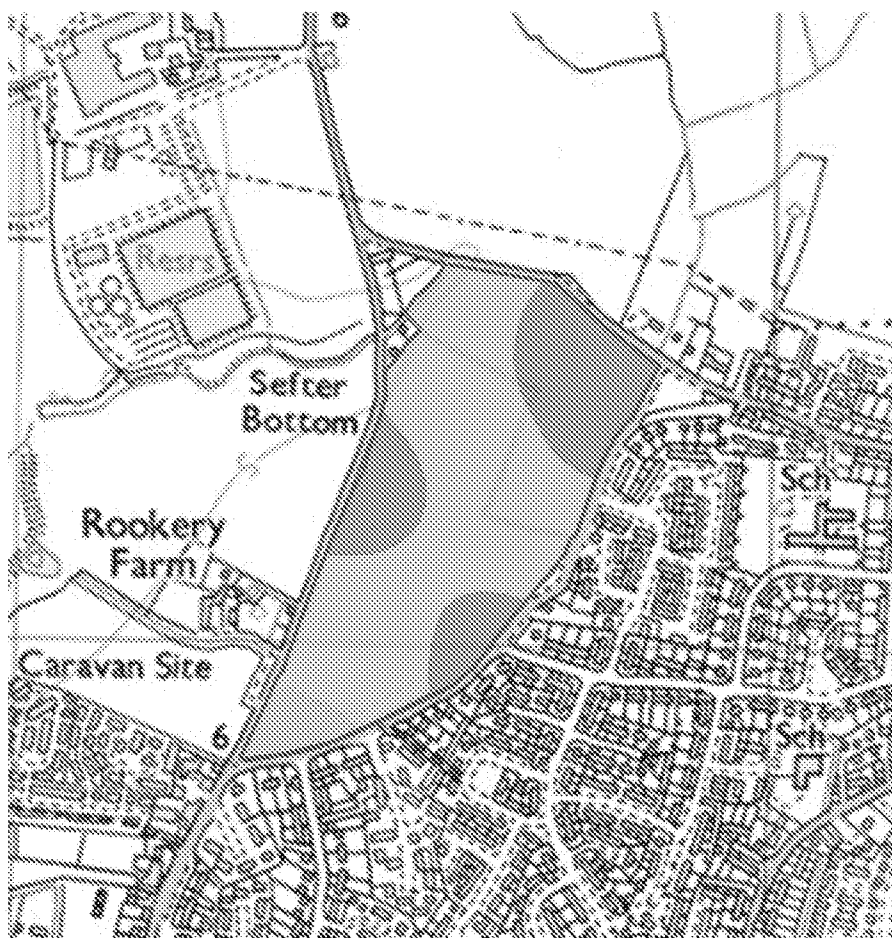
Site: Land at Pagnam, Sussex

Client: Hallam Land Management Ltd

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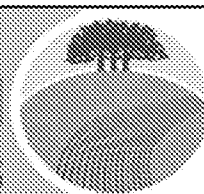
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Figure RAC7226-2 Agricultural Land Classification Map

Site: Land at Pagnam, Sussex

Client: Hallam Land Management Ltd

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