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**Wates Developments Ltd**

**Agricultural Land Classification and Soil  
Resources**

**Land at Foxhole Farm, Bolney, West Sussex**

**Beechwood Court,  
Long Toll, Woodcote,  
RG8 0RR**

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## 1 Introduction

- 1.1 Reading Agricultural Consultants Ltd (RAC) is instructed by Wates Developments Ltd to investigate the Agricultural Land Classification (ALC) and soil resources of land at Foxhole Farm, Bolney, West Sussex by means of a detailed survey of soil and site 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<sup>1</sup>, and summarised in Natural England's Technical Information Note 049<sup>2</sup>.
- 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.
- 1.4 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 very 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

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

<sup>2</sup> **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. 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 boring per hectare. This survey follows the detailed methodology set out in the ALC guidelines.

## **2 Site and climatic conditions**

### **General features and landform**

- 2.1 The site extends to approximately 17.4ha of mostly agricultural grassland to the south-west of Bolney. The site is bordered by Cowfold Road (A272) to the south, by Foxhole Lane to the west and by residential properties off The Street to the east. Woodland and a residential garden border to the north.
- 2.2 The site is relatively flat in the south and rises with moderate slope (3-5°) to a plateau at Foxhole Farm. Land slopes from the far north becoming relatively flat towards the northern boundary. Altitude ranges from 24m to 40m above Ordnance Datum (AOD). There is no gradient limitation to agricultural land quality.

### **Agro-climatic conditions**

- 2.3 Agro-climatic data for the site have been interpolated from the Meteorological Office's standard 5km grid point data set at representative altitude of 35m AOD. This is given in Table 1. Moisture deficits are moderately large although rainfall is above average for lowland England (about 800 mm per year) and there is a relatively large number of Field Capacity Days per year (170) with reduced opportunities for agricultural field work. There is however no overriding climatic limitation to agricultural land quality.

**Table 1:** Local agro-climatic conditions

Parameter	Value
Grid Reference	526000 122900
Average Annual Rainfall	796 mm
Accumulated Temperatures >0°C	1,493 day°
Field Capacity Days	170 days
Average Moisture Deficit, wheat	109 mm
Average Moisture Deficit, potatoes	103 mm

### Soil parent material and soil type

- 2.4 The bedrock geology is mapped by the British Geological Survey<sup>3</sup> as the Upper Tunbridge Wells Sand and the Weald Clay Formation.
- 2.5 The Upper Tunbridge Wells Sand is mapped in the southern and central parts of the site and comprises interbedded silty mudstones, siltstones, silty sandstones and fine-grained sandstones.
- 2.6 The Weald Clay Formation is mapped in the north and comprises mudstones and mudstone with subordinate siltstones, sandstones, limestones and clay ironstones.
- 2.7 No superficial deposits are mapped at the site.
- 2.8 The Soil Survey of England and Wales soil association mapping<sup>4</sup> (1:250,000 scale) shows the site as the Curtisden Association. These soils are typically clayey brown earths with impeded drainage that are silty over interbedded siltstone and sandstone. Wetness Class (WC) is typically III - IV with improvement to WC II-III possible where underdrainage is installed<sup>4</sup>.

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<sup>3</sup> **British Geological Survey (2024).** *BGS Geology Viewer*, <https://www.bgs.ac.uk/map-viewers/bgs-geology-viewer/>

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

### 3 Agricultural land quality

#### Soil survey methods

- 3.1 In total, 22 soil profiles were examined by auger at an observation density in excess of the one per hectare density recommended for ALC surveys<sup>2</sup>. Two pits were also excavated to examine subsoil structures. The location of observations are shown on Figure RAC/10518/1. At each observation point the following characteristics were assessed for each soil horizon up to 120cm or impenetrable layer:
- soil texture;
  - stone content;
  - colour (including localised mottling);
  - consistency;
  - structural condition;
  - free carbonate; and
  - depth.
- 3.2 Two topsoil samples were submitted for laboratory determination of particle size distribution, and pH, organic matter content and nutrient contents (P, K, Mg). Results are in Appendix 1.
- 3.3 Soil Wetness Class (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.
- 3.5 Assessment of agricultural land quality has been carried out according to the revised ALC guidelines<sup>1</sup>. Soil profiles have been described according to Hodgson<sup>5</sup> which is the recognised

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

source for describing soil profiles and characteristics according to the revised ALC guidelines. Soil colours are described using the notations in the Munsell soil colour charts<sup>6</sup>.

### Agricultural land quality and site limitations

3.6 There are three main soil types present at the site. Generic descriptions are given below.

#### Soil Type 1: Light silty soils over siltstone (WC I-II)

Depth (cm)	Description
0-30cm	Brown (10YR5/3-4/3) fine sandy silt loam. Friable, small rounded crumbs in top 5-10 cm. 10-25cm layer has subangular blocky structure. Fine roots are common throughout; a layer of buried stones can occur at 25-30cm.
30- 45 cm-	Brownish yellow (10YR6/6) to pale yellow (2.5Y7/4) fine sandy silt loam or silty clay loam. Variably mottled. Apedal, loose with little cohesion and some rooting.
45 cm-	Pale yellow (5Y8/2) or grey sandy silt loam or silty clay loam with many iron mottles. Slightly stony.
65/80 cm-	Dense or stony siltstone or fine sandstone.

#### Soil Type 2: Medium silty colluvium over mudstone (WC II-III)

Depth (cm)	Description
0-30cm	Brown (10YR4/3-5/3) medium clay loam. Non-calcareous.
30- 60 cm	Brownish yellow (10YR6/6) to pale yellow (2.5Y7/4) medium silty clay loam. Variably mottled.
50/65 cm-	Pale yellow (5Y8/2) with many iron mottles – variable texture silt to heavy silty clay loam. Stoneless or slightly stony.
60/100 cm-	Mudstone (slowly permeable).

#### Soil Type 3: Medium silty soils over silty mudstone (WC III-IV)

Depth (cm)	Description
0-30cm	Brown (10YR4/3) to dark greyish brown (10YR5/2) medium or heavy silty clay loam. Non-calcareous. Granular in top 10cm, fine subangular blocky beneath with roots throughout.
30- 60 cm	Brownish yellow (10YR6/6) to light yellowish brown (10YR6/4) heavy clay loam or silty clay. Variably mottled. Poorly to moderately developed firm angular blocky structures.
50/65 cm-	Light brownish grey (2.5Y6/2) silty clay with brownish yellow (10YR6/8) and yellowish red (5YR7/8) common fine mottles, coarse very firm subangular blocky structure.
80/100 cm-	Mudstone (locally siltstone).

3.7 Soil profiles are mostly limited by wetness and grades have been assessed in line with Table 6 of the ALC guidelines. A few profiles are limited by soil droughtiness.

3.8 The assessment of wetness class is dependent on the depth to a slowly permeable layer and the depth of any subsoil gleying. Soil wetness restricts suitable conditions throughout the year for

<sup>6</sup> **Munsell Color (2009).** *Munsell Soil Color Book*. Grand Rapids, MI, USA

machinery to work the land without damaging the soil profile. Wetness also increases the likelihood and occurrence of waterlogging within the soil profile, which restricts crop growth.

- 3.9 Imperfectly drained (WC III) profiles with a heavy silty clay loam topsoil or poorly drained (WC IV) profiles with a medium silty clay loam topsoil are classified as Subgrade 3b.
- 3.10 Imperfectly drained (WC III) profiles with a medium silty clay loam or medium clay loam topsoil and observations of WC II with a heavy silty clay loam topsoil are classified as Subgrade 3a.
- 3.11 Observations 16, 17, 18 and 20 are restricted to Grade 2 by droughtiness with slight deficits in available water available throughout the growing season.
- 3.12 The ALC distribution across the site is shown on Figure RAC/10518/2 and the area of each grade is given in Table 2.

**Table 2:** ALC area

<b>Grade</b>	<b>Description</b>	<b>Area (ha)</b>	<b>%</b>
Grade 2	Very good quality	3.5	20
Subgrade 3a	Good quality	4.1	24
Subgrade 3b	Moderate quality	8.7	50
Non-agricultural		1.1	6
Total		17.4	100

## Appendix 1: Laboratory Data

Determinand	A 0-25cm	B 0-25cm	Units
Sand 0.063-2mm	6	21	% w/w
Silt 0.063-0.002 mm	66	59	% w/w
Clay <0.002 mm	28	20	% w/w
Organic Matter	4.5	3.6	% w/w
Total Nitrogen	0.27	0.23	% w/w
Texture	Heavy silty clay loam	Medium clay loam	

Determinand	A 0-25cm	B 0-25cm	Units
Soil pH	5.9	5.6	
Phosphorus (P)	8.2	16.4	mg/l (av)
Potassium (K)	58.8	91.9	mg/l (av)
Magnesium (Mg)	70.6	65.9	mg/l (av)

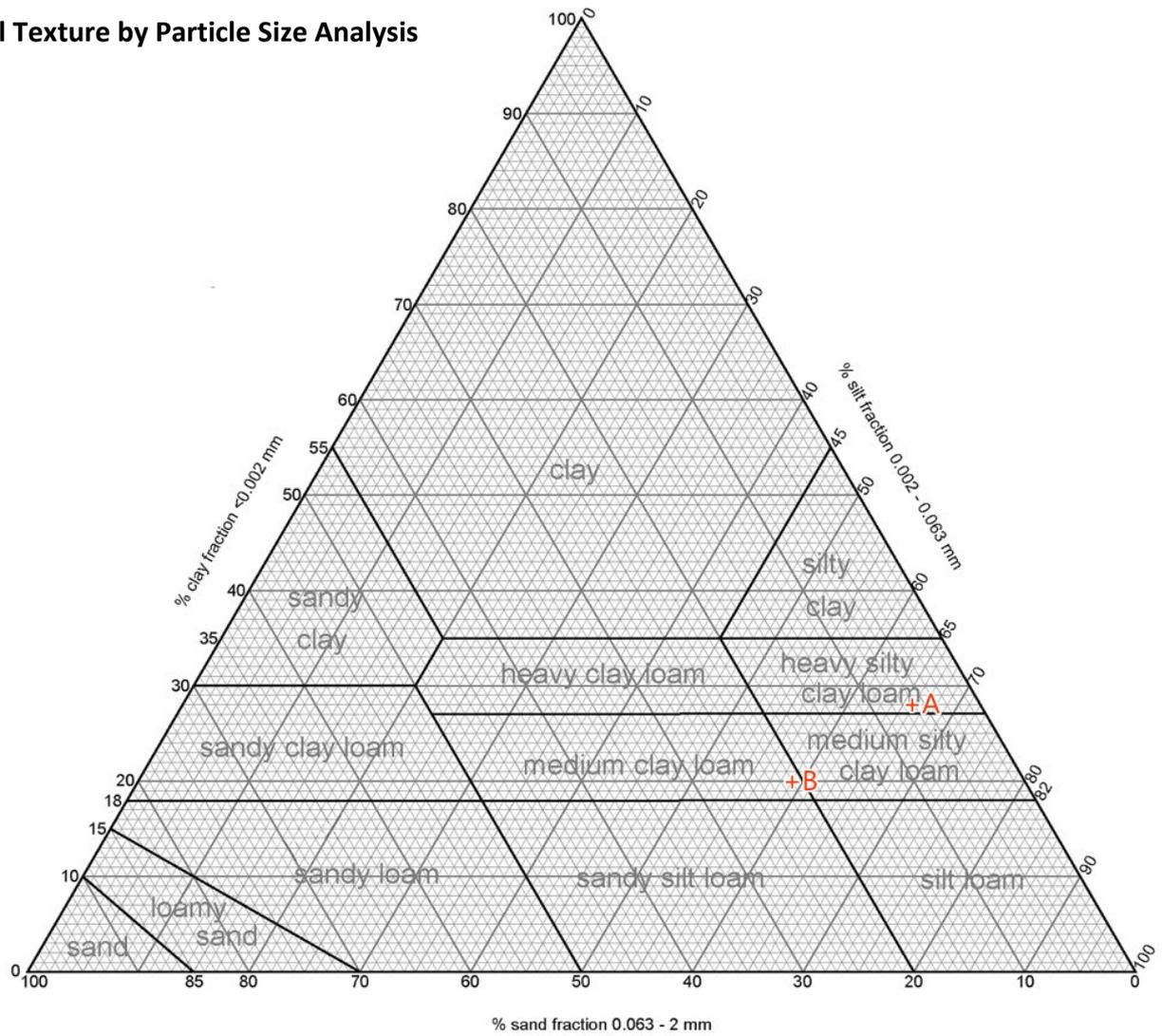
Determinand	A 0-25cm	B 0-25cm	Units
Phosphorus (P)	0	2	ADAS Index
Potassium (K)	0	1	ADAS Index
Magnesium (Mg)	2	2	ADAS Index
Organic Matter (SOM)	High	Moderate	SSEW <sup>4</sup>

Samples are composites of 15-20 cores taken to 25cm depth.

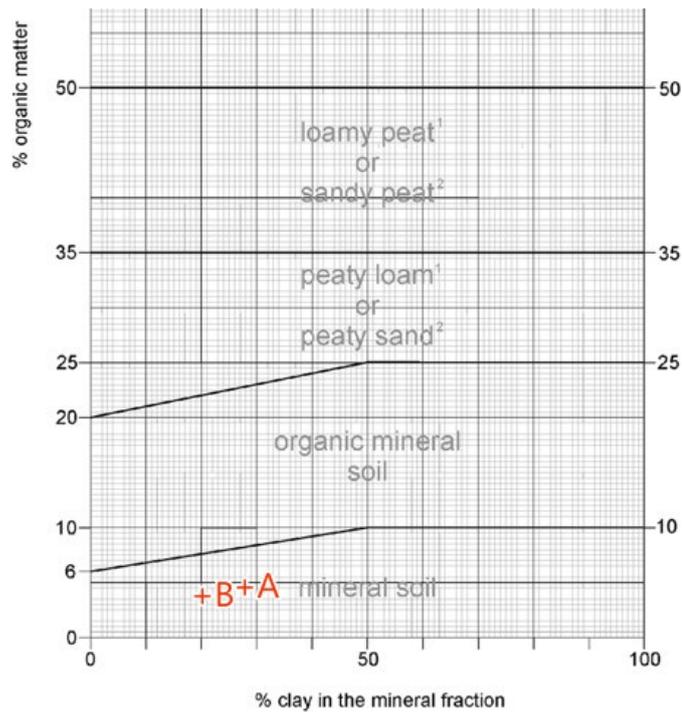
Particle size by Pipette method, Carbon by Skalar machine.

Organic Matter = Total Organic Carbon /0.58. Reported on 30°C dry sample basis

### Soil Texture by Particle Size Analysis



### Organic Matter Class



## 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		
%	TA <sub>v</sub>	EA <sub>v</sub>
siltstn	8	5
N/A		

ZSt = dense / hard Siltstone

Climate Data	
MDwheat	109
MDpotato	103
FCD	170

AAR 796

Wetness Class Guidelines	II	III	IV	V	Climate
SPL within 80cm, gleying within 40cm	>74cm	46-74cm	<46cm		1,493 D°
SPL within 80cm, gleying at 40-70cm	>60cm	<60cm			Limitation
No SPL but gleying within 40cm	coarse subsoil	/	other cases	//	Grade 1

Maximum depth of auger penetration is underlined

35 m

Site No.	Depth cm	Texture	CaCO <sub>3</sub>	Colour	Mottle colour	abundance	stone% siltstn	stone% N/A	Structure	APwheat mm	AP potato mm	Gley	SPL	WC	Wetness grade WE	Final Grade	Limiting Factor(s)	
1	T 0 25	ZCL	n	10YR5/3			0			48	48			IV	3b	3b	WE	
	25 42	hZCL		2.5Y7/2	Fe	many	0			29	29	y						
	42 90	mZCL	n	10GY7/1	Fe	many	0		poor	34	34	y	(y)					
	<u>90</u> 120	Zst								15	0	n	y					
	Total										125	110						
MB										16	7							
Droughtiness grade (DR)										2	2							
2	T 0 28	mZCL	n	10YR5/3	Fe	com				53	53	y		IV	3b	3b	WE	
	28 90	C	n	2.5Y6/2	Fe	v.many			poor	57	55	y	y					
	<u>90</u> 120	Mst							poor	15	0		y					
	Total										125	108						
	MB										16	5						
Droughtiness grade (DR)										2	2							
3	T 0 29	mZCL	n	10YR5/3						55	55			IV	3b	3b	WE	
	29 35	hZCL		10YR5/4	Mn	v.many			m/poor	9	9	n	y					
	35 80	ZC	n	2.5Y5/3	Fe	v.many			poor	39	42	y	y					
	<u>80</u> 120	Mst							poor	20	0		y					
	Total										123	106						
MB										14	3							
Droughtiness grade (DR)										2	2							

<b>4</b>	T	0	28	mZCL	n	10YR5/3			0		53	53			/V	3b	<b>3b</b>	WE	
			28	40	hZCL		2.5Y6/4	Fe	com	5		20	20	y					
			40	55	ZC		2.5Y7/2	Fe	many	0	poor	16	18	y	y				
			55	80	ZC/ZCL		2.5Y7/2	Fe	many	5	m/poor	21	21	y	(y)				
			80	105	C	n	7.5GY7/1	Fe	pred	0	poor	18	0	y	y				
			<u>105</u>	120	Zst							8	0	n	y				
											Total	<b>134</b>	<b>112</b>						
											MB	25	9						
											<b>Droughtiness grade (DR)</b>		2	2					
<b>A pit</b>	T	0	25	mZCL		10YR4/3					48	48			/V	3b	<b>3b</b>	WE	
			25	38	hZCL		10YR5/3	Fe	many		m/poor	19	19	y					
			38	50	ZC		2.5Y6/3	Fe	pred		poor	14	14	y	y				
			50	90	C		2.5Y6/3	Fe	pred		poor	28	26	y	y				
			<u>90</u>	120	Mst						poor	15	0		y				
												Total	<b>124</b>	<b>107</b>					
											MB	15	4						
											<b>Droughtiness grade (DR)</b>		2	2					
<b>5</b>	T	0	15	mZCL	n	10YR5/2					29	29			/V	3b	<b>3b</b>	WE	
			15	28	mZCL		10YR4/2	Mn				25	25						
			28	40	C		2.5Y6/1	Fe	many		m/poor	17	17	y	y				
			40	90	C	n	2.5Y6/2	Fe	v.many		poor	41	39	y	y				
			<u>90</u>	120	Mst						poor	15	0		y				
												Total	<b>127</b>	<b>110</b>					
											MB	18	7						
											<b>Droughtiness grade (DR)</b>		2	2					
<b>6</b>	T	0	25	hZCL	n	10YR5/3			0		48	48			/V	3b	<b>3b</b>	WE	
			25	35	hCL		2.5Y6/4	Mn	many	5		16	16	n					
			35	55	C		2.5Y7/2	Fe	many	0	poor	23	26	y	y				
			55	70	hCL		2.5Y7/2	Mn	many	5	m/poor	12	21	n	(y)				
			70	100	C	n	7.5GY7/1	Fe	pred	0	poor	21	0	y	y				
			<u>100</u>	120	Mst						poor	10	0	n	y				
											Total	<b>130</b>	<b>110</b>						



		28	45	CL/C		10YR6/4, 7.5YR6/8	pale	com	5	m/poor	24	24	y						
		45	85	mCL	n	5YR5/3, 5YR6/8	pale	com	5		42	39	y	n					
		<u>85</u>	120	Zst							18	0	n	y					
											Total		132	112	GR.gradient			5 o	N
											MB		23	9					
											Droughtiness grade (DR)		2	2					
<b>12</b>	T	0	20	hZCL	n	10YR5/3					38	38		III	3b	<b>3b</b>	WE		
		20	55	hCL		10YR6/4	Fe	com		m/poor	46	49	y						
		55	80	hCL	n	2.5Y6/3	Fe	pred		poor	18	18	y	y					
		<u>80</u>	120	Mst						poor	20	0		y					
											Total		122	105	Grass (paddock) - poached				
											MB		13	2					
											Droughtiness grade (DR)		2	2					
<b>13</b>	T	0	25	mZCL	n	10YR5/3	Fe	com	0		48	48	y	III	3a	<b>3a</b>	WE GW		
		25	40	mZCL		2.5Y6/3	Fe	few	5		25	25	n						
		40	70	mZCL		2.5Y6/4	Fe	com f	0		37	51	y						
		70	90	hZCL		2.5Y7/2	Fe	many	0	m/poor	16	0	y						
		90	100	ZC	n	10GY8/1	Fe	many	0	poor	7	0	y	y					
		100	120	Zst							10	0	n	y					
											Total		142	123	Increased WC to III. Wetness from Groundwater.				
											MB		33	20	Wetness assessment- table 11				
											Droughtiness grade (DR)		1	1					
<b>14</b>	T	0	15	hZCL	n	10YR4/3					29	29		III	3b	<b>3b</b>	WE		
	T	15	30	hZCL		10YR5/3					29	29							
		30	45	hZCL		10YR5/3	Mn	com		m/poor	22	22	n						
		45	90	ZC		2.5Y6/3	Fe	pred		poor	34	30	y	y					
		<u>90</u>	120	Zst							15	0		y					
											Total		128	109					
											MB		19	6					
											Droughtiness grade (DR)		2	2					
<b>15</b>	T	0	20	mZCL	n	10YR5/3					38	38		III	3a	<b>3a</b>	WE		

20	65	hCL		10YR5/3	FeMn	com	5		61	70	y	
65	90	hCL	n	10YR6/2	red/Fe	pred		poor	18	6	y	y
90	<u>120</u>	Mst						poor	15	0		y

Total	<b>132</b>	<b>114</b>
MB	23	11

Droughtiness grade (DR) 2 1

<b>B pit</b>	T	0	22	mZCL		10YR5/3			42	42		///	3a	<b>3a</b>	WE
		22	35	mZCL		10YR5/3		5	22	22					
		35	60	mCL		10YR4/6	Fe	many	34	40	(y)				
		60	70	C		10YR4/6	Fe	pred	m/poor	8	15	(y)			
		70	100	C		2.5Y7/2	red	pred	poor	21	0	y	y		
		100	120	Mst					poor	10	0			y	

Total	<b>136</b>	<b>118</b>
MB	27	15

Droughtiness grade (DR) 2 1

<b>16</b>	T	0	30	fSZL	n	10YR4/3			66	66		/	1	<b>2</b>	DR
		30	50	SZL		2.5Y6/4			34	34	n				
		50	80	LS	n	7.5YR5/8	grey	many	18	18	n				
		80	<u>120</u>	Zst					20	0	n	y			

Total	<b>138</b>	<b>118</b>
MB	29	15

Droughtiness grade (DR) 2 1

<b>17</b>	T	0	22	fSZL	n	10YR5/3		8	46	46		//	1	<b>2</b>	DR
		22	40	mCL		10YR6/3	Mn	com	26	26	n				
		40	65	SZL	n	10YR7/8	grey	com	31	39	n				
		<u>65</u>	120	Zst					28	4		y			

Total	<b>130</b>	<b>115</b>
MB	21	12

GR.gradient	3 o	S
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Droughtiness grade (DR) 2 1

<b>18</b>	T	0	22	fSZL	n	10YR5/3		8	46	46		//	1	<b>2</b>	DR
		22	35	SZL		7.5YR6/8	OM	10	21	21					
		35	70	SZL	n	10YR7/8	grey	com	45	56	n				

		<u>70</u>	120	Zst						25	0	n	y			
										Total	137	123		GR.gradient	2 o	S
										MB	28	20				
										<b>Droughtiness grade (DR)</b>		2	1			
<b>19</b>	T	0	20	mZCL	n	10YR5/3					38	38		/	1	<b>1</b>
		20	58	hCL		10YR5/3	Mn	few	5		55	59				
		58	100	hCL	n	10YR6/4	Fe	pred	5	m/poor	35	16	y			
		100	120	ZC		2.5Y6/2	Fe	many	5	m/poor	15	0	y			
										Total	142	114				
										MB	33	11				
										<b>Droughtiness grade (DR)</b>		1	1			
<b>20</b>	T	0	17	mZCL	n	10YR4/3					32	32		/	1	<b>2</b>
		17	58	mZCL		10YR4/3	Mn	few	5		62	68				DR
		58	80	C	n	10YR5/6					18	19				
		<u>80</u>	120	Zst							20	0		y		
										Total	132	119		GR.gradient	3 o	
										MB	23	16				
										<b>Droughtiness grade (DR)</b>		2	1			
<b>21</b>	T	0	28	hCL	n	10YR4/3					50	50		/V	3b	<b>3b</b>
		28	60	LC		2.5Y5/2	Fe	pred		poor	35	40	y	y		WE
		60	110	LC	n	7.5YR4/6	Mn	pred		poor	35	13	n	y		
		<u>110</u>	120	Mst						poor	5	0		y		
										Total	125	103		GR.gradient	2 o	
										MB	16	0				
										<b>Droughtiness grade (DR)</b>		2	2			
<b>22</b>	T	0	35	hCL	n	10YR4/3					63	63		///	3b	<b>3b</b>
		35	60	hCL		10YR5/3					34	40				WE
		60	90	hCL	n	10YR4/4	MnFe	many		poor	21	12	(y)	y		
		<u>90</u>	120	Mst						poor	15	0		y		
										Total	133	115				
										MB	24	12				
										<b>Droughtiness grade (DR)</b>		2	1			

### Appendix 3: Pit Descriptions and Photographs

<b>Pit A</b>		Description (grazed grass, poached) Top 2 cm is thatch (soil with much live and dead roots)
Ap	0-25 cm	Brown (10YR4/3) heavy silty clay loam. Friable, small round crumbs <6mm in top 5-10 cm, 10-25cm has sub-angular blocky structure; fine roots are common throughout.
Eb(g)	25-38 cm	Brown (10YR5/3) heavy silty clay loam, mottled, firm, fine sub angular blocky structure, few roots.
Btg	38-50 cm	Light yellowish brown (2.5Y6/3) silty clay, many mottles, very coarse angular blocky structure, poor development, no roots.
BCg	50 cm +	Light yellowish brown (2.5Y6/3) clay passing to mudstone, massive structure.

**Geology:** Weald Clay

**Comment:** slowly permeable at 38cm. Wetness Class IV and Subgrade 3b



Pit B		Description (grazed grass)
Ap	0-22 cm	Brown (10YR5/3) medium (silty) clay loam. Abundant roots, fine granular peds strongly developed, loose consistency.
Eb	22-35 cm	Brown (10YR5/3) medium (silty) clay loam. Many roots, fine granular peds and subangular blocky structure, strongly developed, loose consistency. Few mottles.
Btg	35-60 cm	Dark yellowish brown (10YR4/6) medium (silty) clay loam, many mottles, common roots, medium ped size, sub angular blocky, moderately developed with a weak consistency.
BCg	60 cm +	Light Grey (2.5Y7/2) clay with predominant red mottling.

**Geology:** Upper Tunbridge Wells Sand

**Comment:** slowly permeable at 70cm so WC III and Subgrade 3a.



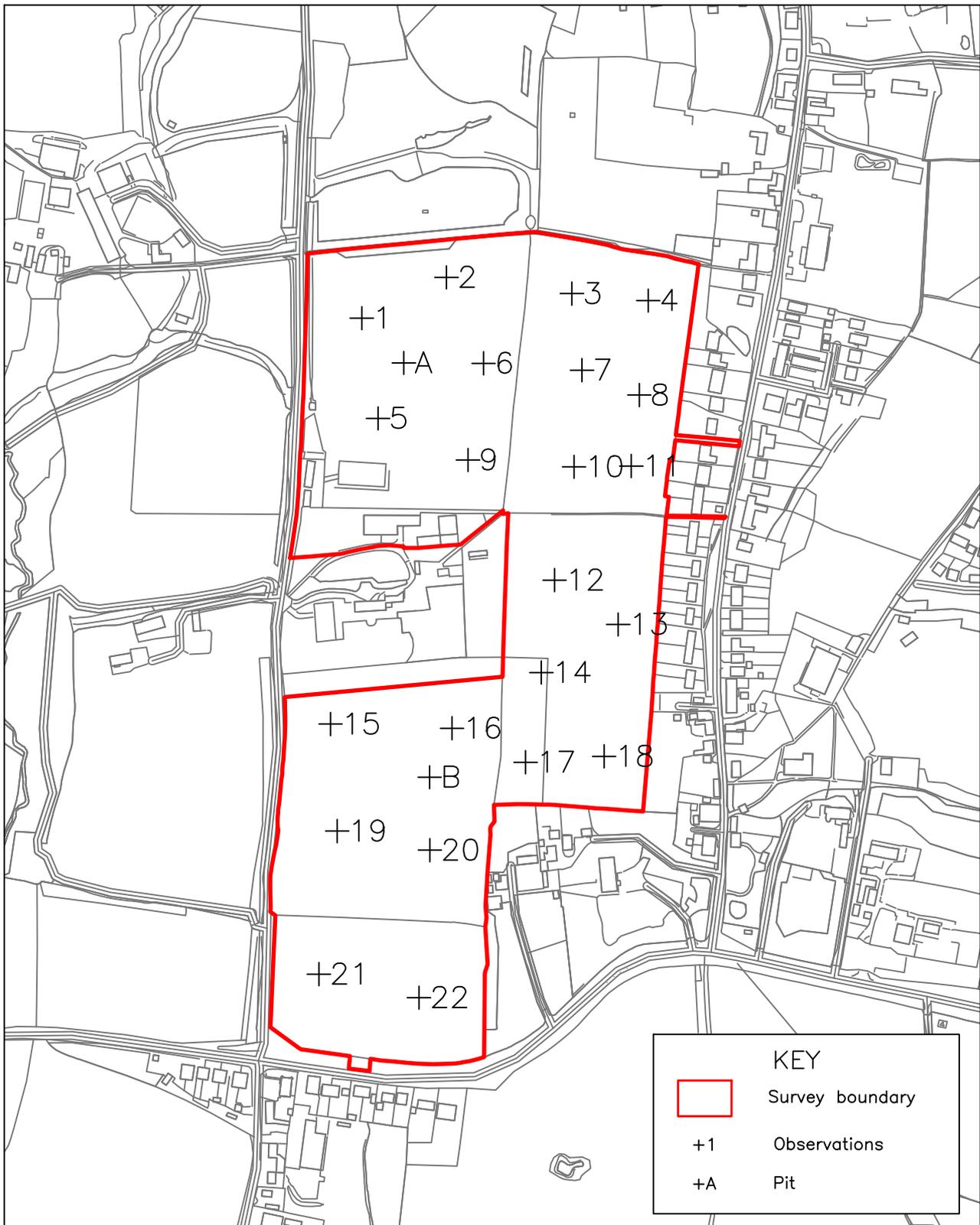
Observation 16 on siltstone	Observation 19 on colluvium	Observation 22 on mudstone
		
<p>Augered soil from the top of the profile on the left, soil on right is 60cm+, tape marks every 10 cm</p>		

Example of poaching between Observation 21 and 22. Common across the site.



View south from soil Pit B (Subgrade 3a), moderate sloping land beyond is Grade 2





**KEY**

- Survey boundary
- +1 Observations
- +A Pit

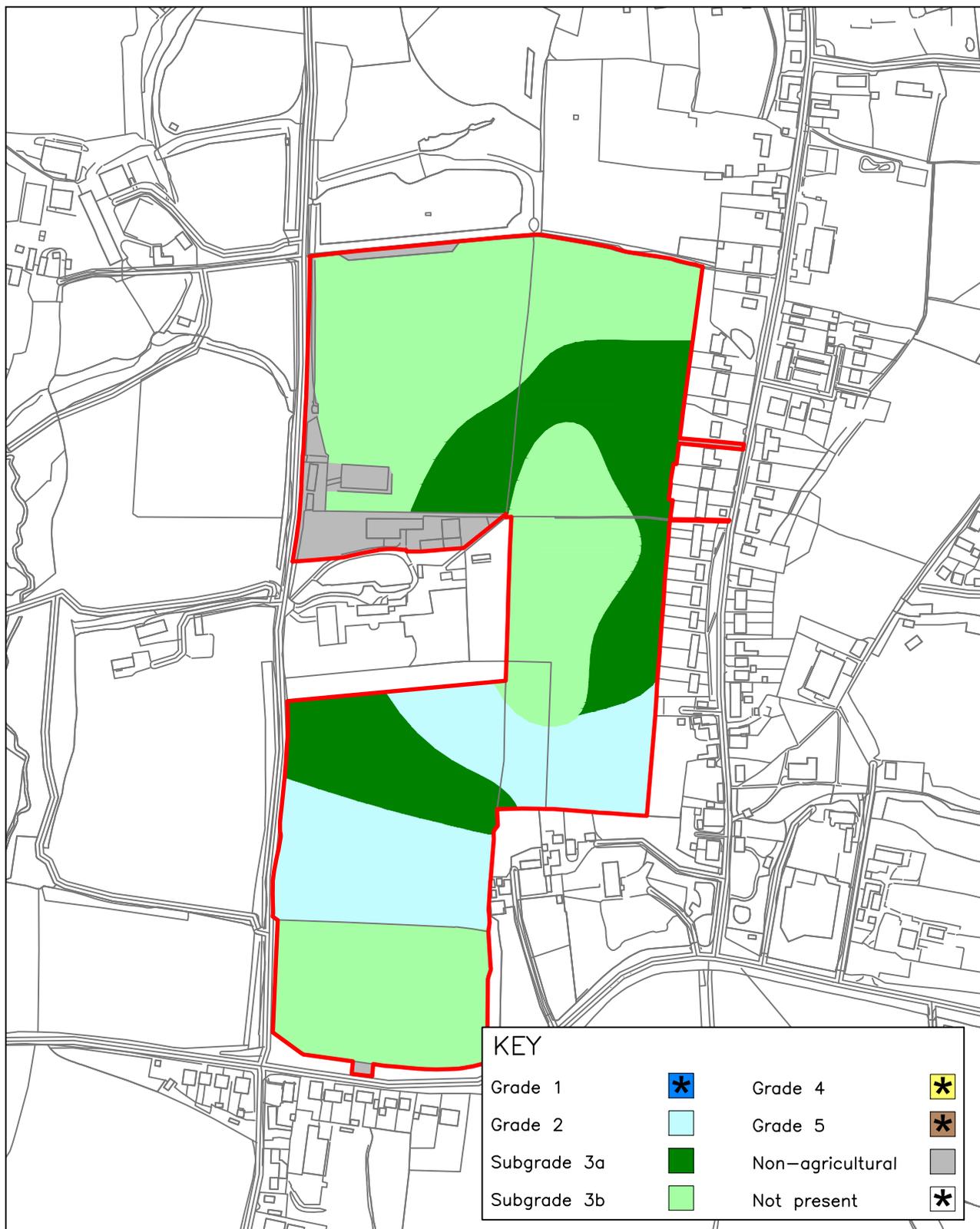
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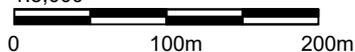
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