READING AGRICULTURAL CONSULTANTS

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University of Reading

Loddon Garden Village:
Agricultural Land Classification and Soil Resources

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Table of Contents

1 Introduction

1.1 Reading Agricultural Consultants Ltd (RAC) is instructed by the University of Reading to investigate the Agricultural Land Classification (ALC) and soil resources of land at Hall Farm to the south of the M4, west of Sindlesham, north of Arborfield and east of Shinfield 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 using ALC 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 049 [2] (TIN049).

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 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] **MAFF (1988).** *Agricultural Land Classification of England and Wales. Revised guidelines and criteria for grading the quality of agricultural land*. Agricultural Land Classification of England and Wales: Revised criteria for grading the quality of agricultural land - ALC011

[2] **Natural England (2012).** *Technical Information Note 049 - Agricultural Land Classification: protecting the best and most versatile agricultural land*, Second Edition. https://publications.naturalengland.org.uk/file/4424325

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 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 Grade 3 with Grade 4 adjacent to the River Loddon and Barkham Brook. 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 ALC guidelines. This survey follows the detailed methodology set out in the ALC guidelines, with an observation density of one boring per two hectares due to the size of the site. An area in the south-west of the site (shown on Figure RAC/9617/1) has been surveyed previously by ADAS on behalf of MAFF[3] and classified as Subgrade 3b.

2 Site and climatic conditions

General features, landform and drainage

2.1 The site is centred on Hall Farm and surrounded by the M4 to the north, the Thames Valley Science Park to the north-west, the A327 to the south-west and Mole Road to the south-east. The Barkham Brook flows through the eastern part of the site from the south-east to the north-west, and the River Loddon flows through the centre of the site from the south-west to the north-east. The site also includes approximately 7 hectares (ha) to the north of the M4 and south of the B3270.

[3] MAFF (1996). Wokingham District Local Plan, Sites SH11, SH13, SH14, SH15 and SH16 - Shinfield, Berkshire. Agricultural Land Classification, Semi-detailed survey, ALC Map and Report Agricultural Land Classification detailed Post 1988 ALC survey, Shinfield (Wokingham Sh11,13,14,15,16 (Additional Work)) - ALCR11796

2.2 The site occupies a valley position at 40 m above Ordnance Datum (AOD) east of the River Loddon, rising to approximately 50 m AOD west of the River Loddon.

2.3 The land surveyed consists of grassland for silage, hay and grazing, as well as arable land growing wheat and maize at the time of survey.

2.4 Land in the Loddon floodplain is mapped within the Environment Agency Flood Zones 2 and 3. A narrow strip of land along the Barkham Brook is also mapped within Flood Zone 3[4].

Agro-climatic conditions

2.5 Agro-climatic data for the site have been interpolated from the Meteorological Office's standard 5 km grid point dataset[5] at a representative altitude of 46 m AOD. This is given in Table 1. The average annual rainfall is moderate for south-east England and the temperature is warm.

2.6 Field Capacity is the maximum amount of water a soil can hold under gravity. Field Capacity Days (FCD) is a measure of the duration of climatic wetness throughout the year and is a key criterion in the assessment of soil wetness and workability. At Field Capacity, soils are considered too wet for cultivation. The number of Field Capacity Days at the site is 138 which is favourable, meaning that there are some opportunities for agricultural field work over winter.

2.7 In addition to potential limitations caused by soil wetness, there are also potential limitations due to drought. Moisture deficits are crop-related meteorological variables which represent the balance between rainfall and potential evapotranspiration calculated over a critical period of the growing season. There are large average moisture deficits for wheat and potatoes at the site. However, there is no overriding climatic limitation to agricultural land quality at this site.

Table 1: Local agro-climatic conditions

Parameter	Value
Grid Reference	SU 755 687
Average Annual Rainfall	660 mm
Accumulated Temperatures >0°C	1,471 day°
Field Capacity Days	138 days
Average Moisture Deficit, wheat	116 mm
Average Moisture Deficit, potatoes	111 mm

[4] **Environment Agency (2025).** *Flood map for planning.* https://flood-map-for-planning.service.gov.uk/location

[5] **Meteorological Office (1989).** *Climatological Data for Agricultural Land Classification (ALC010).* https://publications.naturalengland.org.uk/file/4830386468159488

Soil parent material and soil type

2.8 The bedrock geology is mapped by the British Geological Survey[6] as London Clay to the east of the River Loddon, with superficial river terrace deposits overlying higher ground. Superficial deposits of alluvium are mapped west of the River Loddon, with an area of river terrace deposits mapped in the south-west and an area of brickearth mapped at Rushy Mead to the north-west of the Loddon. Both the river terrace and brickearth deposits are at slightly higher elevations than the alluvium.

2.9 The Soil Survey of England and Wales soil association mapping[7] (1:250,000 scale) indicates the floodplain as part of the Fladbury association. These are grey, clayey, alluvial soils. They are affected by high groundwater and are waterlogged for long periods in winter (Wetness Class (WC) IV). They are commonly slowly permeable within a depth of 40 cm, and have large reserves of available water.

2.10 Soils of the Hurst association are mapped on either side of the floodplain, outside the Fladbury soils. These are gravelly and developed in low-level river terrace deposits over Tertiary strata. Jarvis[8] describes the Hurst soil in the Reading area as non-calcareous, gley soils in loamy drift over River Terrace gravel. Cultivation pans are common, and the upper part of the profile may harden because of moisture loss in the summer. Large seasonal fluctuations in groundwater characterise this series, with much of the profile being saturated in the winter and dry in the summer. Permeable soils in this association with adequate drainage are well drained in WC I.

2.11 The south-east of the site is mapped as the Wickham 4 association, which comprises slowly permeable, fine loamy over clayey soils as well as fine silty over clayey soils, which are associated with similar clayey soils, often with brown subsoils. They are typically poorly drained in WC IV but can be improved to WC III with effective underdrainage.

[6] **British Geological Survey (2025).** *BGS Geology Viewer*, https://www.bgs.ac.uk/map-viewers/bgs-geology-viewer/

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

[8] **Jarvis, R. A.** (1968) *Soils of the Reading District*. Harpenden.

3 Agricultural land quality

Soil survey methods

3.1 In total, 144 soil profiles were examined using a Dutch (Edelman) auger where possible at an observation density of approximately one per two hectares, as shown in Figure RAC/9617/1. Fourteen pits were also excavated to a depth of 60 cm to examine soil structures and stone content. At each observation point, the following characteristics were assessed for each soil horizon up to 120 cm or an impenetrable layer:

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

3.2 Some profiles could not be observed on the river terrace deposits because of particularly dry conditions on stony and hard soils, which meant the profiles were impenetrable to auger. In these instances, an above-ground site inspection was conducted, using information from local, on-site augers and soil pits, along with data from previous surveys[3,7] to infer profile characteristics.

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

3.4 Stone content was also measured by sieving and drying at Observation 14. Results are in Appendix 1.

3.5 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 15 cm thick, in relation to the number of Field Capacity Days at the location.

3.6 Soil droughtiness was investigated by the calculation of moisture balance (MB) equations (values 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.

3.7 Assessment of agricultural land quality has been carried out according to the revised ALC guidelines[1]. Soil profiles have been described according to Hodgson[9] which is the recognised source for describing soil profiles and characteristics according to the revised ALC guidelines.

Agricultural land quality

3.8 Soils east of the River Loddon, over the river terrace gravel, have a sandy loam topsoil texture that is dark brown (10YR3/3 in the Munsell soil colour charts[10]) or dark greyish brown (10YR3/2). Stone content in the topsoil is typically 15% and consists mainly of flint that is subangular or rounded. The topsoil structure is granular, loose and friable.

3.9 The subsoils are either sandy loam or sandy clay loam and are dark yellowish brown (10YR4/4 and 10YR4/6), dark greyish brown (10YR3/2) or brown (10YR4/3) with stone contents ranging from 10% to 20%. The parent material is either sand, sand and gravel or, in some places, London Clay. These soils are limited by droughtiness and are Subgrade 3a.

3.10 Soils west of the River Loddon on the grass floodplain have clay topsoils, which are occasionally organic, and are typically very dark grey (10YR3/1) or dark brown (10YR3/3), with very many iron mottles present along root channels and around 2% stone.

3.11 The subsoils are clayey, typically grey (2.5Y5/1), greyish brown (10YR5/2) or brown (10YR5/3) with a massive consistency and very many iron mottles present. These soils are limited to Subgrade 3b and Grade 4 due to the high probability of flooding, the slowly permeable layers and locally high groundwater.

3.12 Approximately 20 hectares of land in the north-east of the site has a sandy loam topsoil. Within profiles observed in this area, clay content increases with depth. For example, Pit 3 has a dark yellowish brown (10YR3/4) topsoil with fine-sized, loose, granular peds and some well-developed, medium subangular blocky peds as well as approximately 5% hard stone. The subsoil (35 cm – 60 cm) is light yellowish brown (2.5Y6/2) sandy loam with a loose, moderate, fine subangular blocky structure. It contains many iron mottles and approximately 5% hard stone. At

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

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

60 cm - 75 cm, the soil is a light yellowish brown (2.5Y6/2) and yellowish brown (10YR5/8) sandy clay loam. At these depths, there are many iron mottles and manganese nodules and approximately 5% hard stone. At 75 cm – 120 cm, the soil is light yellowish brown (2.5Y6/2) and yellowish brown (10YR5/8) clay with very many iron mottles and approximately 3% hard stones. These soils are limited by wetness and droughtiness to Grade 2.

3.13 Soil profiles surveyed in proximity to Mole Road commonly have a heavy clay loam topsoil which is dark brown (10YR3/3) or brown (10YR4/3), and contains about 8% hard stone. These profiles contain imperfectly draining clay within the subsoil. The subsoil is typically brown (10YR5/3), greyish brown (10YR5/2) or light brownish grey (2.5Y6/2) with very many mottles, a massive consistency and is relatively stone free. Due to these soil properties, profiles are limited to Subgrade 3b from soil wetness.

3.14 The laboratory data in Appendix 1 show that organic matter levels in topsoil are adequate across the site, except at Pit 1, where levels are low, as is typical for a loamy sand (1.7%). Pit 14 has low levels of organic matter (2.9%), although this is adequate for the low clay content (11%). Other pits are in the range 3%-6% except for Pit 9, which has very high soil organic matter (7.9%) and Pits 4 and 6, which are classed as humose (with more than 10% soil organic matter). Pits 4, 6 and 9 correspond to the most flooded sites where organic matter would not decompose as quickly due to waterlogged conditions.

3.15 All soils are non-calcareous with pH varying from slightly acidic (pH 5.9) to alkaline (pH 7.8). Phosphorus levels range from adequate to very high; when stockpiled, care must be taken to prevent run-off into watercourses, especially in fields corresponding to Pits 1, 5 and 10-13. Potassium levels vary from low (pits 1, 4 and 6) to very high on pits 11-13 (due to manure over-application). Magnesium levels vary from moderate to high.

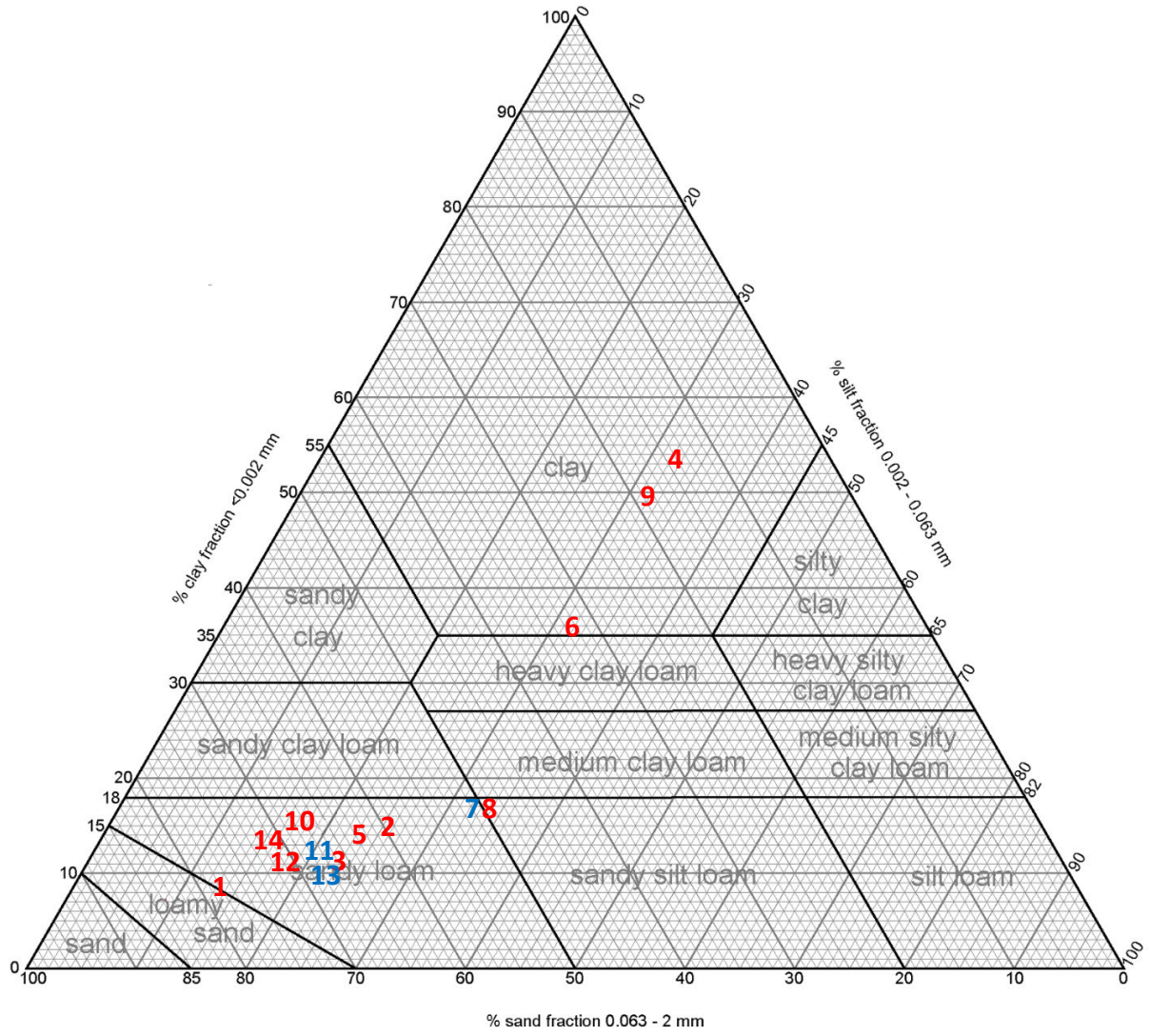
3.16 The distribution of ALC grades is shown in Table 2 and Figure RAC/9617/2.

Table 2: ALC areas

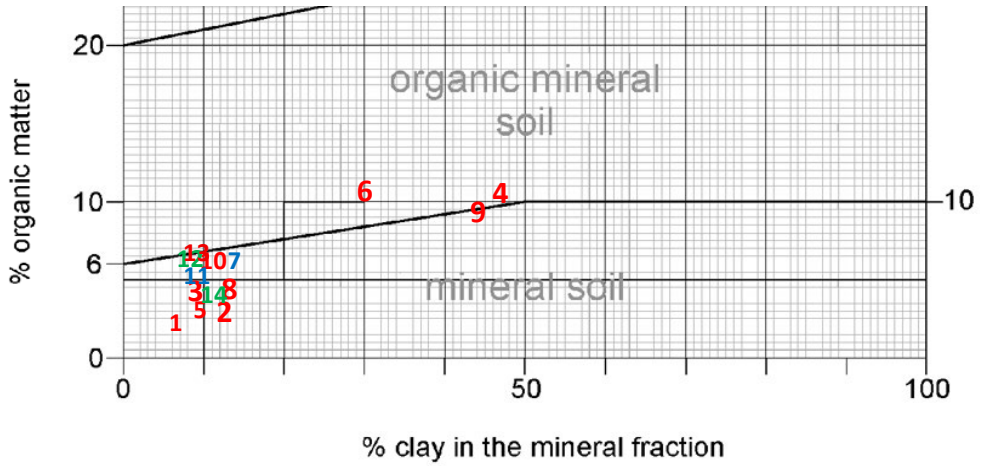
Grade	Description	Area (ha)	%
Grade 2	Very good quality	21.3	5
Subgrade 3a	Good quality	154.9	39
Subgrade 3b	Moderate quality	123.5	31
Grade 4	Poor quality	10.2	3
Non-agricultural		87.5	22
Total		397.4	100

Appendix 1: Laboratory Data

Particle Size Analysis



Organic Matter Class



Laboratory Data: Pits 1-14 (0-25 cm) yellow columns are arable fields, green columns are grass fields

Determinand	1	2	3	4	5	6	7	8	9	10	11	12	13	14	Units
Sand 2-0.063 mm	79	63	67	17	63	35	54	51	22	69	68	71	69	72	% w/w
Silt 0.063-0.002 mm	14	23	23	32	24	31	31	34	31	17	21	19	21	17	% w/w
Clay <0.002 mm	7	14	10	51	13	34	15	15	47	14	11	10	10	11	% w/w
Texture	Loamy sand	Sandy loam	Sandy loam	Organic clay	Sandy loam	Organic heavy clay loam	Sandy loam	Sandy loam	Clay	Sandy loam	Sandy loam	Sandy loam	Sandy loam	Sandy loam	
Soil pH	5.9	6.9	6.1	6.4	7.2	6.3	6.5	7.8	6.1	6.1	6.8	7.1	7.1	6.2	
Phosphorus (P) (ADAS index)	52.2 (4)	34.0 (3)	26.6 (3)	38.0 (3)	84.4 (5)	9.0 (0)	44.2 (3)	38.0 (3)	18.0 (2)	62.0 (4)	93.8 (5)	90.6 (5)	95.8 (5)	28.0 (3)	mg/l (av)
Potassium (K) (ADAS index)	101 (1)	164 (2-)	169 (2-)	111 (1)	230 (2+)	79.8 (1)	177 (2-)	173 (2-)	99.1 (1)	162 (2-)	497 (4)	438 (4)	463 (4)	83.4 (1)	mg/l (av)
Magnesium (Mg) (ADAS index)	74.9 (2)	109 (3)	95.2 (2)	199 (4)	115 (3)	130 (3)	108 (3)	74.5 (2)	334 (5)	119 (3)	193 (4)	178 (4)	184 (4)	104 (3)	mg/l (av)
Organic Matter	1.7	2.8	3.6	10.3	2.9	10.9	5.3	3.6	7.9	5.2	4.5	5.0	5.5	2.9	% w/w
Total Carbon	1.0	1.6	2.1	6.0	1.7	6.3	3.1	2.1	4.6	3.0	2.6	2.9	3.3	1.7	%
Total Nitrogen	0.20	0.19	0.28	0.89	0.20	0.73	0.43	0.32	0.55	0.32	0.28	0.30	0.33	0.19	% w/w
Organic Matter (SOM)	low	mod	mod	v. high	low	v. high	high	mod	v. high	high	high	high	high	low	SSEW [4]

Particle size by Pipette method, Carbon by Skalar machine. Organic Matter = Total Organic Carbon /0.58. Reported on 30°C dry sample basis

Pit 14: Stone measurement

Location	sample depth cm	Gravimetric measurements (oven dry) > 6cm % dry m/m	2-6cm % dry m/m	2mm-2cm % dry m/m	moisture % dry m/m	Hand texture	Measured <2mm density g / cm³	Measured stone density g / cm³	Volumetric calculations >6cm %	2-6cm %	2mm-2cm %	Total Total %
Pit	**0-10**	11.7	19.9	14.6		(o)mSL	0.91	2.39-2.45		5.5	9.4	**15**

Holes was 20 x 20 x 10cm deep = 4.0 litres

% stone weight is % of oven dry material (soil plus stone), moisture is % of <2mm oven dry soil

Subangular and subrounded siliceous stones, some light organic particles < 5mm

Appendix 2: Soil Profile Summaries and 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 (DR), wetness (WE) 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
N/A		

Climate Data	
MDwheat	116
MDpotato	111
FCD	138
AAR	660

Wetness Class (WC) Guidelines	*II*	*III*	*IV*	*V*
SPL within 80cm, gleying within 40cm	>65cm	37-65cm	<37cm	
SPL within 80cm, gleying at 40-70cm	>47cm	<47cm		
No SPL but gleying within 40cm	coarse subsoil	*I*	other cases	*II*

Climate
1471 D°
Limitation
Grade 1

hard flint & pebble

Maximum depth of auger penetration is underlined

46 m

Site No.		Depth cm		Texture	$CaCO_3$	Colour	Mottle colour	Abund-ance	Stone% hard	Stone% N/A	Struct-ure	APwheat mm	AP potato mm	Gley	Slowly perm-eable	WC	Wetness grade (WE)	Final Grade	Limiting Factor(s)
1	T	0	30	SL	n	10YR3/3			12		-	45	45	n	n	*I*	1	**3a**	DR
		30	80	SCL	n	10YR3/4			15			52	52	n	n				
		80	120	SCL	n				15			34	0	n	n				
											Total	**131**	**97**						
											MB	15	-14						
									Droughtiness grade (DR)			2	3a		ploughed and harrowed				
2	T	0	32	SL	n	10YR3/4			8		-	50	50	n	n	*I*	1	**2**	DR
		32	55	SCL	n	10YR3/6			5			31	33	n	n				
		55	100	SL	n	10YR3/6	Fe	many	3			48	22	n	n				
		100	120	LS	n	2.5Y5/4	Fe	many	2			12	0	y	n				
											Total	**141**	**105**						
											MB	25	-6						
									Droughtiness grade (DR)			2	2		ploughed and harrowed				
3	T	0	34	SL	n	10YR3/3			10		-	52	52	n	n	*I*	1	**3a**	DR
		34	90	SCL	n	10YR3/4			15			55	46	n	n				
		90	120	SCL	n				15			26	0	n	n				
											Total	**133**	**99**						
											MB	17	-12						
									Droughtiness grade (DR)			2	3a		ploughed and harrowed				

4	T	0	32	SL	n	10YR3/3			15	-	47	47	n	n	*I*	1	**3a**	DR
		32	85	SCL	n	10YR3/4			17		52	48	n	n				
		85	120	SCL	n				15		30	0	n	n				
										Total	**129**	**95**						
										MB	13	-16						
									Droughtiness grade (DR)		2	3a		ploughed and harrowed				
5	T	0	20	SL	n	10YR3/4			15	-	29	29	n	n	*I*	1	**3a**	DR
		20	120	SCL					15		99	65	n	n				
										Total	**128**	**94**						
										MB	12	-17						
									Droughtiness grade (DR)		2	3a		wheat				
P10	T	0	25	SL	n	10YR3/3			15	-	37	37	n	n	*I*	1	**3a**	DR
		25	55	SL	n	10YR4/4, 10YR4/6			25		33	35	n	n				
		55	120	SC					15		56	19						
										Total	**125**	**90**						
										MB	9	-21						
									Droughtiness grade (DR)		2	3a		wheat				
6	T	0	29	mCL	n	10YR3/4, 2.5Y5/1	Fe, gr	v.many	0	-	52	52	y	n	*IV*	3b	**3b**	WE GW FL
		29	72	hCL	n	10YR3/6, 2.5Y5/1,	Fe, gr	v.many	2		55	64	y	n				
		72	115	C	n	10YR5/2	Mn, Fe	many	2	poor	30	0	y	y				
		115	120	MSt						poor	3	0		y				
										Total	**139**	**117**		WE.wetness due to groundwater grass for silage				
										MB	23	6		GW. WC IV (Table 11)				
									Droughtiness grade (DR)		2	2		FL.Flood Risk			EAFz3	3b
7	T	0	40	SL	n	10YR3/4			15	-	58	58	n	n	*I*	1	**3a**	DR
		40	120	SCL					15		73	39	n	n				
										Total	**131**	**97**						
										MB	15	-14						
									Droughtiness grade (DR)		2	3a		wheat				
8	T	0	40	hCL	n	10YR3/2			10	-	65	65	n	n	*I-II*	3a	**3a**	WE
		40	80	SCL	n	10YR5/3	Fe	v.many	10		41	41	y	n				

		80	120	Mst					8	poor	19	0		y					
										Total	**125**	**106**							
										MB	9	-5							
									Droughtiness grade (DR)		2	2		wheat					
9	T	0	32	hCL	n	10YR3/2			10	-	52	52	n	n	*II*	3a	**3a**	WE		
		32	120	SC	n		Fe		10		88	52	y	n						
										Total	**140**	**104**							
										MB	24	-7							
									Droughtiness grade (DR)		2	2		wheat					
10	T	0								-										
11	T	0								-										
12	T	0								-							**3b**	FL		
														FL.Flood Risk			EAFz3	3b		
13	T	0	21	hCL	n	10YR3/4	Fe, gr	v.many	0	-	38	38	(y)	n	*IV*	3b	**3b**	WE FL		
		21	90	C	n	2.5Y5/1	Fe	v.many	0	poor	66	64	y	y						
		90	120	MSt						poor	15	0		y						
										Total	**118**	**102**		Grass for silage						
										MB	2	-10		FL.Flood Risk			EAFz3	3b		
									Droughtiness grade (DR)		3a	2								
14	T	0	20	SCL	n	10YR3/4			15	-	29	29	n	n	*I*	2	**3a**	DR		
		20	120	SCL					15		99	65	n	n						
										Total	**128**	**94**							
										MB	12	-17							
									Droughtiness grade (DR)		2	3a		wheat					
15	T	0	40	SCL	n	10YR3/4			18	-	56	56	n	n	*I*	2	**3a**	DR		
		40	120	SCL					15		73	39	n	n						
										Total	**129**	**95**							
										MB	13	-16							
									Droughtiness grade (DR)		2	3a		wheat					
16	T	0	40	SCL	n	10YR3/2			18	-	56	56	n	n	*I*	2	**3a**	DR		

		40	120	SCL					15			73	39	n	n					
										Total		**129**	**95**							
										MB		13	-16							
									Droughtiness grade (DR)			2	3a		wheat					
17	T	0								-										
18	T	0								-										
19	T	0	22	hCL	n	10YR3/4	Fe, gr	v.many	0	-		40	40	(y)	n	*IV*	3b	**3b**	WE FL	
		22	70	C	n	2.5Y5/1	Fe	v.many	0	poor		50	62	y	y					
		70	120	MSt						poor		25	0		y					
										Total		**115**	**102**		Grass for silage					
										MB		-1	-9		FL.Flood Risk			EAFz3	3b	
									Droughtiness grade (DR)			3a	2							
20	T	0	35	hCL	n	10YR3/3			4	-		61	61	n	n	*IV*	3b	**3b**	WE GW FL	
		35	60	C	n	10YR3/4, 10YR5/2	Fe	com	5			31	38	y	n					
		60	105	C	n	10YR3/6, 10YR5/2	Fe	many	2	poor		31	13	y	y					
		105	120	C	n				10			11	0	y	n					
										Total		**133**	**112**		WE.wetness due to groundwater grass for silage					
										MB		17	1		GW. WC IV (Table 11)					
									Droughtiness grade (DR)			2	2		FL.Flood Risk			EAFz3	3b	
21	T	0								-										
22	T	0								-										
23	T	0								-										
24	T	0								-										
25	T	0								-										
26	T	0	30	SL	n	10YR3/4			3	-		50	50	n	n	*IV*	3a	**3b**	FL	
		30	58	mCL	n	10YR3/4			5			38	43	n	n					
		58	110	hCL	n	10YR5/3	Fe, Mn	com	2	poor		36	14	y	y					
		110	120	hCL	n	10YR5/3	Fe, Mn	com	10			9	0	y	n					

										Total	**132**	**106**		WE.wetness due to groundwater				Grass for silage	
										MB	16	-5		GW. WC IV (Table 11)					
									Droughtiness grade (DR)		2	2		FL.Flood Risk				EAFz3	3b
27	T	0	30	SCL	n	10YR4/2			10	-	46	46	n	n	*II*	2		**3a**	DR
		30	120	SC	n		Fe		10		91	54	y	n					
										Total	**137**	**101**							
										MB	21	-10							
									Droughtiness grade (DR)		2	3a		grass					
28	T	0								-									
29	T	0								-									
30	T	0								-									
31	T	0	30	ohCL	n	10YR3/3			0	-	84	84	n	n	*IV*	3b		**3b**	WE GW FL
		30	60	C	n	10YR4/4, 10YR5/2	Fe	com	0		40	48	y	n					
		65	115	C	n	10YR4/6, 10YR5/2	Fe,gr,br	many	0	poor	35	7	y	y					
		115	120	MSt	n					poor	3	0		y					
										Total	**162**	**139**		WE.wetness due to groundwater					grass
										MB	46	28		GW. WC IV (Table 11)					
									Droughtiness grade (DR)		1	1		FL.Flood Risk				EAFz3	3b
P6	T	0	25	ohCL	n	10YR3/3	Fe	many	0	-	70	70	y	n	*IV*	3b		**3b**	WE GW FL
		25	40	C	n	10YR5/2	Fe	v.many	0		24	24	y	n					
		40	60	C	n	10YR6/2	Fe, gr, Mn	v.many	0		24	32	y	n					
		60	120	C	n	2.5Y5/1	Fe, Mn, gr	v.many	0	poor	42	13	y	y					
										Total	**160**	**139**		WE.wetness due to groundwater					grass
										MB	44	28		GW. WC IV (Table 11)					
									Droughtiness grade (DR)		1	1		FL.Flood Risk				EAFz3	3b
32	T	0	32	SL	n	10YR3/4			3	-	53	53	n	n	*IV*	3a		**3a**	WE GW FL
		32	65	hCL	n	10YR3/4, 10YR5/2	Fe,gr, Mn	com	5	m/poor	36	44	y	n					
		65	105	hCL	n	10YR5/2	Fe,gr, Mn	many	7	poor	26	6	y	y					

		105	120	MSt	n					poor	8	0		y						
										Total	**123**	**103**		WE.wetness due to groundwater Grass for silage						
										MB	7	-8		GW. WC IV (Table 11)						
									Droughtiness grade (DR)		2	2		FL.Flood Risk				EAFz2		3a
P5	T	0	40	SL	n	10YR3/4			10	-	62	62	n	n	*II*	1		**3a**		FL
		40	60	mCL	n	10YR3/4			10		24	29	n	n						
		60	105	mCL	n	10YR5/6			0		45	16	n	n						
		105	120	SCL	n	10YR5/8			8		14	0	n	n						
										Total	**144**	**107**		Grass for silage Not mottled- wetness in surrounding land. GW- WCII						
										MB	28	-4		FL.Flood Risk				EAFz2/3		3a
									Droughtiness grade (DR)		2	2								
33	T	0								-										
34	T	0	32	mCL	n	10YR3/2	Fe	com	0	-	58	58	(y)	n	*IV*	3b		**3b**		WE FL
		32	92	C	n	10YR5/3	Fe, Mn	many	0	poor	53	49	y	y						
		92	120	MSt	n					poor	14	0		y						
										Total	**124**	**107**		Grazing						
										MB	8	-4		FL.Flood Risk				EAFz3		3b
									Droughtiness grade (DR)		2	2								
35	T	0								-										
36	T	0								-										
P11	T	0	25	SL	n	10YR3/3			15	-	37	37	n	n	*I*	1		**3a**		DR
		25	60	SCL	n	10YR4/4, 10YR4/6			20		39	43	n	n						
		60	90	SC	n	10YR4/6			20		24	12	n	n						
		90	120	SC					20		24	0	n	n						
										Total	**124**	**91**								
										MB	8	-20								
									Droughtiness grade (DR)		2	3a		grass for silage						
37	T	0								-										
38	T	0								-										
39	T	0								-										

40	T	0	31	ohCL	n	10YR3/2			0	-	87	87	n	n	*IV*	3b	**3b**	WE GW FL	
		31	52	C	n	10YR4/4, 10YR5/2	Fe,gr	com	0		32	34	y	n					
		52	110	C	n	10YR6/1	Fe,gr,br	many	0	poor	41	23	y	y					
		110	120	MSt	n					poor	5	0		y					
										Total	**164**	**144**		WE.wetness due to groundwater			grass		
										MB	48	33		GW. WC IV (Table 11)					
									Droughtiness grade (DR)		1	1		FL.Flood Risk			EAFz3	3b	
41	T	0	40	SL	n	10YR3/4			3	-	66	66	n	n	*IV*	3a	**3a**	FL GW	
		40	80	hZCL	n	10YR3/4, 10YR5/2	Fe,gr, Mn	com	5		45	49	y	n					
		80	100	hZCL	n	10YR5/2	Fe,gr, Mn	many	6	poor	11	0	y	y					
		100	120	MSt	n					poor	10	0		y					
										Total	**132**	**115**		WE.wetness due to groundwater			Grass for silage		
										MB	16	4		GW. WC IV (Table 11)					
									Droughtiness grade (DR)		2	2		FL.Flood Risk			EAFz2	3a	
42	T	0	30	oC	n	10YR3/4	Fe	com	0	-	69	69	(y)	n	*IV*	4	**4**	WE	
		30	85	C	n	10YR4/3, 10YR4/1	Fe, gr	many	0	poor	51	52	y	y					
		85	120	MSt						poor	18	0		y					
										Total	**137**	**121**		Cattle grazing					
										MB	21	10		FL.Flood Risk			EAFz3		
									Droughtiness grade (DR)		2	1							
P4	T	0	35	oC	n	10YR3/1	Fe	v.many	2	-	79	79	(y)	n	*IV*	4	**4**	WE	
		35	120	C	n	2.5Y4/1	Fe	v.many	2	poor	67	45	y	y					
										Total	**146**	**124**		Cattle grazing					
										MB	30	13		FL.Flood Risk			EAFz3		
									Droughtiness grade (DR)		1	1							
43	T	0	40	SCL	n	10YR3/2			8	-	63	63	n	n	*III*	3a	**3a**	WE FL	
		40	105	hSCL	n	10YR5/3	br,Fe,gr	many	8		65	42	y	n					
		105	115	SC	n	10YR5/1	Fe	v.many	15		9	0	y	n					

		115	120	MSt						poor	3	0		y						
										Total	**139**	**105**		WE.wetness due to groundwater						
										MB	23	-6		GW. WC III (Table 11)-Edge of FZ3 strongly mottled						
									Droughtiness grade (DR)		2	2		FL.Flood Risk				EAFz2		3a
44	T	0								-										
45	T	0								-										
46	T	0								-										
47	T	0								-										
48	T	0								-										
49	T	0	33	hCL	n	10YR4/3			6	-	56	56	n	n	*IV*	3b	**3b**	WE		
		33	120	C	n	2.5Y5/4, 2.5Y6/2	Fe,br,gr	v.many	2	poor	70	47	y	y						
										Total	**126**	**103**								
										MB	10	-8								
									Droughtiness grade (DR)		2	2		wheat						
50	T	0	40	hCL	n	10YR3/3			3	-	70	70	n	n	*III*	3b	**3b**	WE		
		40	120	C	n	10YR4/4, 2.5Y6/2	Fe,gr,br	v.many	0	poor	62	39	y	y						
										Total	**132**	**109**								
										MB	16	-2								
									Droughtiness grade (DR)		2	2		grass						
51	T	0	24	C	n	10YR3/3			0	-	41	41	n	n	*IV*	3b	**3b**	WE GW FL		
		24	65	C	n	10YR4/4, 10YR5/2	Fe	com	0		54	66	y	n						
		65	100	C	n	10YR6/1	Fe,gr,br	v.many	0	poor	25	7	y	y						
		100	120	MSt	n					poor	10	0		y						
										Total	**129**	**113**		WE.wetness due to groundwater					grass	
										MB	13	2		GW. WC IV (Table 11)						
									Droughtiness grade (DR)		2	2		FL.Flood Risk				EAFz3	3b	
52	T	0								-										
53	T	0								-										
54	T	0								-										
55	T	0								-										
56	T	0								-										

57	T	0	45	SCL	n	10YR3/3			3	-	74	74	n	n	*III*	3a	**3a**	WE	
		45	120	C	n	10YR4/4, 10YR6/2	Fe,gr,br	v.many	2	poor	54	32	y	y					
										Total	**129**	**106**							
										MB	13	-5							
									Droughtiness grade (DR)		2	2		wheat					
58	T	0	35	hCL	n	10YR3/3			3	-	61	61	n	n	*IV*	3b	**3b**	WE	
		35	120	C	n	10YR4/4, 2.5Y6/2	Fe,gr,br	v.many	2	poor	67	45	y	y					
										Total	**128**	**106**							
										MB	12	-5							
									Droughtiness grade (DR)		2	2		grass					
59	T	0	31	hCL	n	10YR3/3			5	-	53	53	n	n	*III*	3b	**3b**	WE GW FL	
		31	60	hCL	n	10YR3/2			5		39	44	n	n					
		60	120	hSCL	n	2.5Y5/4, 2.5Y6/2	Fe,gr, Mn,br	v.many	5	m/poor	51	13	y	n					
										Total	**143**	**111**		WE.wetness due to groundwater					
										MB	27	0		GW. WC III (Table 11)					
									Droughtiness grade (DR)		2	2		FL.Flood Risk			EAFz2/3	3b	
60	T	0	16	C	n	10YR3/2			0	-	27	27	n	n	*IV*	3b	**3b**	WE GW FL	
		16	40	C	n	10YR5/3	Fe	com	2		38	38	y	n					
		40	120	C	n	10YR5/3	Fe,br,Mn	v.many	5	poor	59	37	y	y					
										Total	**124**	**102**		WE.wetness due to groundwater					
										MB	8	-9		GW. WC IV (Table 11)					
									Droughtiness grade (DR)		2	2		FL.Flood Risk			EAFz3	3b	
61	T	0	26	oC	n	10YR2/1			0	-	60	60	(y)	n	*IV*	4	**4**	WE GW	
		26	55	C	n	10YR3/1, 10YR5/2	Fe	com	0		42	46	y	n					
		55	100	C	n	2.5Y3/1, 10YR5/2	Fe	many	0	poor	32	20	y	y					
		100	120	Mst						poor	10	0		y					
										Total	**144**	**126**		WE.wetness due to groundwater		grass, cattle grazing			
										MB	28	15		GW. WC IV (Table 11)					
									Droughtiness grade (DR)		2	1		FL.Flood Risk			EAFz3		

62	T	0								-										
63	T	0								-										
64	T	0	35	SL	n	10YR3/3			6	-	56	56	n	n	*I*	1	**3a**	DR		
		35	53	LS	n	10YR3/4			8		14	15	n	n						
		53	120	S	n	10YR5/8			4		32	11	n	n						
										Total	**103**	**83**								
										MB	-13	-28								
									Droughtiness grade (DR)		3a	3a		wheat					
P14	T	0	30	SL	n	10YR3/3			8	-	47	47	n	n	*I*	1	**3a**	DR		
		30	60	SL	n	10YR4/3			8		38	42	n	n						
		60	85	S	n	10YR6/4	Fe	com	2		12	7	y	n						
		85	115	LS	n	10YR6/6, 5YR4/6	Fe	many	0		18	0	n	n						
		115	120	SC	n	2.5Y6/4			0		5	0	n	n						
										Total	**120**	**96**								
										MB	4	-15								
									Droughtiness grade (DR)		3a	3a		wheat					
65	T	0	37	SCL	n	10YR3/3			3	-	61	61	n	n	*III*	3a	**3a**	WE		
		37	120	C	n	10YR4/4, 10YR6/2	Fe,gr,br	v.many	0	poor	66	43	y	y						
										Total	**127**	**104**								
										MB	11	-7								
									Droughtiness grade (DR)		2	2		wheat					
66	T	0	20	hCL	n	10YR3/3			5	-	34	34	n	n	*II*	3a	**3a**	WE GW		
		20	55	hCL	n	10YR3/2			5		51	53	n	n						
		55	120	hSCL	n	2.5Y5/4, 2.5Y6/2	Fe,gr, Mn,br	v.many	5	m/poor	56	20	y	n						
										Total	**141**	**108**		Signs of fluctuating GW at depth				Grass		
										MB	25	-3		GW.WCII						
									Droughtiness grade (DR)		2	2								
67	T	0								-										
68	T	0								-										
69	T	0								-										
70	T	0								-										

71	T	0	38	SL	n	10YR3/3			8	-	60	60	n	n	*I*	1	**3a**	DR	
		38	60	LS	n	10YR3/4			8		16	18	n	n					
		60	120	S	n	10YR5/8			4		29	7	n	n					
										Total	**104**	**85**							
										MB	-12	-26							
									Droughtiness grade (DR)		3a	3a		wheat				
72	T	0	42	SL	n	10YR3/3			8	-	66	66	n	n	*III*	2	**3a**	DR	
		42	100	SC	n	10YR4/2	Fe,Mn	many	8	poor	47	34	y	y					
		100	120	C	n	2.5Y5/4, 2.5Y6/2	gr, br, Fe	v.many	5	poor	13	0	y	y					
										Total	**126**	**100**							
										MB	10	-11							
									Droughtiness grade (DR)		2	3a		grass				
73	T	0	22	SZL	n	10YR3/4			5	-	40	40	n	n	*I*	1	**2**	DR	
		22	80	mCL	n	2.5Y4/2			8		69	71	n	n					
		80	120	mCL	n	2.5Y4/2			15		34	0							
										Total	**143**	**111**		Edge of FZ2-no mottling					
										MB	27	0		Grass					
									Droughtiness grade (DR)		2	2							
74	T	0	20	C	n	10YR3/2	Fe, gr	many	2	-	33	33	(y)	n	*IV*	3b	**3b**	WE FL	
		20	105	C	n	10YR5/2	Mn, Fe	v.many	2	poor	76	64	y	y					
		105	120	Mst	n					poor	8	0		y					
										Total	**117**	**97**		grass					
										MB	1	-14		FL.Flood Risk			EAFz3	3b	
									Droughtiness grade (DR)		3a	3a							
75	T									-									
76	T	0								-									
77	T	0								-									
78	T	0								-									
79	T	0	50	SL	n	10YR3/3			8	-	79	79	n	n	*III*	2	**2**	WE DR	
		50	100	SC	n	10YR4/2	Fe, Mn	many	8	poor	37	24	y	y					

		100	120	C	n	2.5Y5/4, 2.5Y6/2	gr, br, Fe	v.many	5	poor	13	0	y	y					
										Total	**129**	**103**							
										MB	13	-8							
									Droughtiness grade (DR)		2	2		grass					
80	T	0	30	C	n	10YR4/2	Fe	many	2	-	50	50	y	n	*IV*	3b	**3b**	WE FL		
		30	110	C	n	2.5Y4/4, 5Y4/1	Fe,Mn, br,gr	v.many	2	poor	67	51	y	Y						
		110	120	MSt	n					poor	5	0		Y						
										Total	**122**	**101**		Rough land						
										MB	6	-10		FL.Flood Risk			EAFz3	3b		
									Droughtiness grade (DR)		2	2							
81	T	0	32	SL	n	10YR3/3			7	-	51	51	n	n	*III*	2	**2**	WE DR		
		30	65	SCL	n	10YR6/3	Mn,Fe,br	com	3		44	51	y	n						
		65	120	C	n	10YR5/3	Fe,gr,br	v.many	0	poor	39	7	y	y						
										Total	**133**	**108**							
										MD	17	-3							
									Droughtiness grade (DR)		2	2		ploughed					
P7	T	0	25	SL	n	10YR3/4			3	-	41	41	n	n	*III*	3a	**3b**	FL		
		25	60	hZCL	n	10YR5/2			10		48	54	n	n						
		60	120	C	n	2.5Y6/2	Fe, gr, Mn	v.many	15		41	14	y	n						
										Total	**130**	**109**		WE.wetness due to groundwater			grass			
										MB	14	-2		GW. WC III (Table 11)						
									Droughtiness grade (DR)		2	2		FL.Flood Risk			EAFz3	3b		
82	T	0	31	SL	n	10YR4/3			0	-	53	53	n	n	*IV*	3a	**3b**	FL		
		31	70	hCL	n	10YR5/3	Mn, Fe	com	0		50	62	y	n						
		70	115	C	n	10YR5/2	Fe, Mn	com	0	m/poor	34	0	y	n						
		115	120	MSt						poor	3	0		y						
										Total	**139**	**115**		WE.wetness due to groundwater				grass		
										MB	23	4		GW. WC IV (Table 11)						
									Droughtiness grade (DR)		2	2		FL.Flood Risk			EAFz3	3b		
83	T	0	20	C	n	10YR3/4			0	-	34	34	n	n	*IV*	3b	**3b**	WE GW FL		

		20	55	C	n	10YR3/3, 10YR5/2	Fe	many	0		52	56	y	n						
		55	105	C	n	10YR5/2	Fe, gr	v.many	0	poor	35	20	y	y						
		105	120	Mst	n					poor	8	0		y						
										Total	**128**	**110**		WE.wetness due to groundwater					grass	
										MB	12	-2		GW. WC IV (Table 11)						
									Droughtiness grade (DR)		2	2		FL.Flood Risk				EAFz3	3b	
84	T	0								-										
P12	T	0	10	SL	n	10YR3/2			15	-	15	15	n	n	*I*	1		**3a**	DR	
	T	10	40	SL	n	10YR3/2			20		41	41	n	n						
		40	120	SCL	n				20		69	37	n	n						
										Total	**125**	**93**								
										MB	9	-18								
									Droughtiness grade (DR)		2	3a		grass						
85	T	0								-										
86	T	0								-										
87	T	0								-										
88	T	0								-										
89	T	0	32	hCL	n	10YR3/3			8	-	53	53	n	n	*II*	3a		**3a**	WE GW	
		32	50	hCL	n	10YR4/3			8		27	27	n	n						
		50	120	hSCL	n	2.5Y5/4, 2.5Y6/2	Mn,Fe,br	many	5	m/poor	60	27	y	n						
										Total	**140**	**107**		Signs of fluctuating GW at depth					grass	
										MB	24	-4		GW.WCII						
									Droughtiness grade (DR)		2	2								
90	T	0	38	LS	n	10YR3/4			8	-	46	46	n	n	*I*	1		**3b**	DR	
		30	70	LS	n	10YR5/6			8		28	33	n	n						
		70	120	hSCL	n	10YR5/2	Fe,gr,br	many	5		48	0	y	n						
										Total	**121**	**79**								
										MD	5	-32								
									Droughtiness grade (DR)		2	3b		ploughed						
91	T	0	31	hCL	n	10YR3/3			8	-	52	52	n	n	*IV*	3b		**3b**	WE	

		31	120	C	n	2.5Y4/4, 5Y4/1	Fe,Mn, br,gr	v.many	0	poor	74	51	y	y				
										Total	**125**	**102**						
										MB	9	-9						
									Droughtiness grade (DR)		2	2		ploughed				
92	T	0	32	hCL	n	10YR3/4			5	-	55	55	n	n	*IV*	3b	**3b**	WE
		32	120	C	n	10YR5/4, 10YR6/1	Fe,br,gr	v.many	0	poor	72	49	y	y				
										Total	**127**	**104**						
										MB	11	-7						
									Droughtiness grade (DR)		2	2		ploughed				
P1	T	0	40	LS	n	10YR3/2			10	-	47	47	n	n	*I*	1	**3b**	DR
		40	60	LS	n	10YR6/6			15		13	16	n	n				
		60	100	S	n	10YR5/8			5		19	7	n	n				
		100	120	S	n						10	0	n	n				
										Total	**89**	**70**						
										MB	-27	-42						
									Droughtiness grade (DR)		3b	3b		harrowed				
93	T	0	35	SL	n	10YR3/4			8	-	55	55	n	n	*IV*	3a	**3b**	FL
		35	98	SCL	n	10YR3/4, 10YR5/3	Fe,br	v.many	15		61	45	y	n				
		98	120	MSt	n					poor	11	0		y				
										Total	**127**	**100**		WE.wetness due to groundwater				
										MB	11	-11		GW. WC IV (Table 11)				
									Droughtiness grade (DR)		2	3a		FL.Flood Risk			EAFz3	3b
94	T	0	28	SCL	n	10YR4/2			3	-	46	46	n	n	*IV*	3b	**3b**	WE FL
		28	110	C	n	2.5Y5/3	Mn,Fe, grey	v.many	3	poor	69	53	y	y				
		110	120	MSt						poor	5	0		y				
										Total	**120**	**99**		grass				
										MB	4	-12		FL.Flood Risk			EAFz3	3b
									Droughtiness grade (DR)		3a	3a						
P9	T	0	25	C	n	7.5YR4/6	Fe	v.many	2	-	42	42	(y)	n	*IV*	3b	**3b**	WE FL
		25	110	SC	n	2.5Y5/1	Fe	v.many	2	poor	79	57	y	y				

		110	120	SC	n	10YR5/2	Fe	v.many	2	poor	8	0	y	y						
										Total	**129**	**99**		Grass						
										MB	13	-12		FL.Flood Risk				EAFz3	3b	
									Droughtiness grade (DR)		2	3a								
95	T	0	8	oC	n	10YR2/2			0	-	18	18	n	n	*IV*	4	**4**	WE		
		8	100	C	n	10YR5/1	Fe,br	v.many	0	poor	90	81	y	y						
		100	120	MSt	n					poor	10	0		y						
										Total	**118**	**99**		grass						
										MB	2	-12		FL.Flood Risk				EAFz3		
									Droughtiness grade (DR)		3a	3a								
96	T	0	23	C	n	10YR3/3	Fe	com	0	-	39	39	(y)	n	*IV*	3b	**3b**	WE FL		
		23	105	C	n	10YR3/4, 7.5YR4/1	Fe, Mn, gr	v.many	0	poor	74	61	y	y						
		105	120	MSt						poor	8	0		y						
										Total	**120**	**100**		Grass						
										MB	4	-11		FL.Flood Risk				EAFz3	3b	
									Droughtiness grade (DR)		3a	3a								
97	T	0								-										
98	T	0								-										
99	T	0								-										
100	T	0								-										
101	T	0	30	SCL	n	2.5Y3/3			8	-	47	47	n	n	*II*	2	**3a**	DR		
		30	50	SCL	n	2.5Y4/3			8		28	28	n	n						
		50	110	SC	n	10YR5/2	Fe,gr,br	v.many	5	poor	46	25	y	y						
		110	120	MSt	n					poor	5	0		y						
										Total	**126**	**100**								
										MD	10	-11								
									Droughtiness grade (DR)		2	3a		ploughed						
102	T	0	36	C	n	2.5Y5/1	Fe	v.many	3	-	59	59	y	n	*IV*	3b	**3b**	WE FL		
		36	65	C	n	2.5Y4/3, 2.5Y5/1	Fe,gr	v.many	3	poor	28	37	y	y						

		65	105	C	n	2.5Y5/1	Fe	many	6	m/poor	28	7	y	y						
		105	120	MSt	n					poor	8	0		y						
										Total	**123**	**103**		Grass						
										MB	7	-8		FL.Flood Risk				EAFz3	3b	
									Droughtiness grade (DR)		2	2								
103	T	0	28	hCL	n	10YR3/3	Fe	com	3	-	49	49	y	n	*IV*	3b	**3b**	WE GW FL		
		28	55	hCL	n	10YR3/4, 10YR5/2	Fe	com	3		39	42	y	n						
		55	80	hCL	n	10YR3/4, 10YR5/2	Fe	com	10		23	22	y	n						
		80	120	MSt						poor	20	0		y						
										Total	**131**	**113**		WE.wetness due to groundwater						
										MB	15	2		GW. WC IV (Table 11)						
									Droughtiness grade (DR)		2	2		FL.Flood Risk				EAFz3	3b	
104	T	0								-										
P13	T	0	26	SL	n	10YR3/3			10	-	40	40	n	n	*I*	1	**3a**	DR		
		26	50	SL	n	10YR4/3			10		33	33	n	n						
		50	90	LS	n	10YR4/6			15		21	16	n	n						
		90	120	SCL					15		26	0								
										Total	**119**	**88**								
										MB	3	-23								
									Droughtiness grade (DR)		3a	3a		grass for grazing						
105	T	0								-										
106	T	0								-										
107	T	0	40	LS	n	2.5Y3/3			8	-	48	48	n	n	*I*	1	**3b**	DR		
		40	80	S	n	2.5Y4/4			40		14	14	n	n						
		80	120	S	n				50		11	0	n	n						
										Total	**73**	**62**								
										MD	-43	-49								
									Droughtiness grade (DR)		3b	3b		ploughed						
108	T	0	30	SCL	n	10YR3/4	Fe	com	8	-	47	47	y	n	*IV*	3b	**3b**	WE		
		30	120	C	n	10YR5/4, 10YR6/1	Fe,br,gr	v.many	5	poor	72	50	y	y						

										Total	**119**	**97**							
										MB	3	-14							
									Droughtiness grade (DR)		3a	3a		ploughed					
109	T	0	32	mCL	n	10YR3/4			2	-	57	57	n	n	*IV*	3b	**3b**	WE		
		32	58	C	n	10YR4/4, 10YR5/2	gr,Fe,Mn	many	3	poor	28	33	y	y						
		58	90	hCL	n	10YR4/4, 10YR5/2	Fe,gr	many	30		23	14	y	n						
		90	120	MSt	n					poor	15	0		y						
										Total	**123**	**103**		To be ploughed						
										MB	7	-8		FL.Flood Risk				EAFz2		
									Droughtiness grade (DR)		2	2								
110	T	0	15	C	n	10YR3/2	Fe	many	0	-	26	26	y	n	*IV*	3b	**3b**	WE FL		
		15	60	C	n	10YR4/3, 2.5Y5/1	Fe,gr	v.many	0	poor	53	59	y	y						
		60	87	C	n	10YR5/2	Fe	many	0		22	16	y	n						
		87	105	SZL	n	10YR5/2			40		12	0	y	n						
		105	120	MSt	n					poor	8	0		y						
										Total	**119**	**100**		Grass						
										MB	3	-11		FL.Flood Risk				EAFz3	3b	
									Droughtiness grade (DR)		3a	3a								
111	T	0	20	SL	n	10YR3/4			4	-	33	33	n	n	*IV*	3a	**3b**	FL		
		20	34	mCL	n	10YR5/4			10		20	20	n	n						
		34	61	hCL	n	10YR5/2	Fe	many	10		33	39	y	n						
		61	120	SC		10YR5/2	Fe	many	40		37	8	y	n						
										Total	**123**	**101**		WE.wetness due to groundwater						
										MB	7	-10		GW. WC IV (Table 11)						
									Droughtiness grade (DR)		2	3a		FL.Flood Risk				EAFz3	3b	
112	T	0	12	oC	n	10YR3/3	Fe,gr	many	0	-	28	28	y	n	*IV*	4	**4**	WE		
		12	58	C	n	10YR5/3, 10YR5/1	Fe,gr, Mn,br	v.many	0	poor	55	60	y	y						
		58	92	C	n	10YR6/1	Fe,gr, Mn,br	v.many	0	poor	24	16	y	y						

		92	120	SCL							28	0	n	n					
										Total	**134**	**103**		willow tree plantation					
										MB	18	-8		FL.Flood Risk			EAFz3	3b	
									Droughtiness grade (DR)		2	2							
113	T	0								-									
114	T	0								-									
115	T	0	30	SL	n	10YR3/2			8	-	47	47	n	n	*I*	1	**3a**	DR	
		30	50	SL	n	10YR4/3			10		27	27	n	n					
		50	90	LS	n	10YR4/6			15		21	16	n	n					
		90	120	SCL					15		26	0	n	n					
										Total	**121**	**90**							
										MB	5	-21							
									Droughtiness grade (DR)		2	3a		grass					
116	T	0								-									
117	T	0	40	SL	n	10YR3/3			8	-	63	63	n	n	*I*	1	**3a**	DR	
		40	53	LS	n	2.5Y4/4			5		10	11	n	n					
		53	110	LS	n	2.5Y5/3			8		32	14	n	n					
		110	120	C	n	2.5Y6/2	gr,Fe	v.many	0	poor	7	0	y	y					
										Total	**112**	**88**							
										MB	-4	-23							
									Droughtiness grade (DR)		3a	3a		ploughed					
118	T	0	35	SZL	n	10YR5/4			0	-	67	67	n	n	*I*	1	**2**	DR	
		35	90	SC	n	10YR4/3			20		51	43	n	n					
		90	110	SC	n	10YR5/8			25		15	0	n	n					
		110	120	SC	n	10YR5/8			25		8	0	n	n					
										Total	**140**	**109**							
										MB	24	-2							
									Droughtiness grade (DR)		2	2							
P8	T	0	28	SL	n	10YR3/4			8	-	44	44	n	n	*III*	2	**3a**	FL	
		28	42	SCL	n	10YR3/4, 10YR5/3	Fe	many	0		21	21	y	n					

		42	60	SCL	n	10YR4/3, 10YR5/3	Fe	v.many	0		22	27	y	n						
		60	85	hSCL	n	10YR4/4, 10YR5/3	Fe	v.many	15		21	13	y	n						
		85	120	hSCL			Fe	v.many	15		30	0	y	n						
										Total	**138**	**105**		WE.wetness due to groundwater						
										MB	22	-6		GW. WC III (Table 11)-Edge of functional floodplain						
									Droughtiness grade (DR)		2	2		FL.Flood Risk				EAFz2	3a	
119	T	0	8	hCL	n	10YR3/2	Fe,gr	v.many	0	-	14	14	(y)	n	*IV*	3b	**3b**	WE GW FL		
		8	25	hCL	n	2.5Y4/1	gr,Fe	v.many	3		26	26	y	n						
		25	49	hCL	n	2.5Y6/2	gr,Fe	v.many	3		37	37	y	n						
		49	60	SCL	n	2.5Y5/1	gr,Fe	v.many	40		7	10	y	n						
		60	120	SCL			gr,Fe	v.many	40		37	9	n	n						
										Total	**122**	**98**		WE.wetness due to groundwater						
										MB	6	-13		GW. WC IV (Table 11)						
									Droughtiness grade (DR)		2	3a		FL.Flood Risk				EAFz3	3b	
120	T	0	25	mCL	n	10YR3/2			2	-	44	44	n	n	*IV*	3b	**3b**	WE GW FL		
		25	40	mCL	n	10YR3/4			10		22	22	n	n						
		40	61	hCL	n	10YR5/2	Fe, gr	v.many	10		24	30	y	n						
		61	120	SC			Fe, gr	v.many	40		37	8	y	n						
										Total	**127**	**105**		WE.wetness due to groundwater						
										MB	11	-6		GW. WC IV (Table 11)						
									Droughtiness grade (DR)		2	2		FL.Flood Risk				EAFz3	3b	
121	T	0								-										
122	T	0	28	SL	n	10YR3/2			5	-	45	45	n	n	*I*	1	**3a**	DR		
		28	40	SCL	n	10YR4/2			5		17	17	n	n						
		40	90	LS	n	10YR4/6			15		29	23	n	n						
		90	120	SCL					15		26	0	n	n						
										Total	**117**	**86**								
										MB	1	-25								
									Droughtiness grade (DR)		3a	3a		grass						

123	T	0	32	SL	n	10YR3/3			5	-	52	52	n	n	*I*	1	**2**	DR
		32	78	SL	n	10YR6/6			3		56	55	n	n				
		78	120	C	n	2.5Y6/2	Fe,gr,br	v.many	2	poor	29	0	y	y				
										Total	**137**	**107**						
										MB	21	-4						
									Droughtiness grade (DR)		2	2		ploughed				
124	T	0	38	SL	n	10YR3/3			3	-	63	63	n	n	*I*	1	**2**	DR
		38	75	SL	n	10YR5/2			10		41	44	n	n				
		75	120	S	n	10YR5/4	Fe	com	3		22	0	n	n				
										Total	**126**	**106**						
										MB	10	-5						
									Droughtiness grade (DR)		2	2		ploughed				
125	T	0	30	SL	n	10YR3/3			8	-	47	47	n	n	*I*	1	**2**	DR
		30	45	SL	n	10YR3/3			8		21	21	n	n				
		45	60	SCL	n	2.5Y5/4	Fe,br	many	5		17	21	(y)	n				
		60	120	hZCL	n	10YR5/8, 2.5Y6/2	Fe,br	v.many	5	m/poor	46	14	y	n				
										Total	**130**	**103**						
										MB	14	-8						
									Droughtiness grade (DR)		2	2		ploughed				
126	T	0	32	SL	n	10YR3/3			4	-	52	52	n	n	*I*	1	**2**	DR
		32	110	SCL	n	10YR4/4			5		83	54	n	n				
		110	120	LS	n	10YR3/6			8		6	0	n	n				
										Total	**141**	**107**						
										MB	25	-4						
									Droughtiness grade (DR)		2	2		grass				
127	T	0	28	C	n	10YR3/3	Fe, gr	many	0	-	48	48	(y)	n	*IV*	3b	**3b**	WE GW FL
		28	55	C	n	10YR3/4, 10YR5/2	Fe, Mn	many	0		39	43	y	n				
		55	105	C	n	10YR3/4, 10YR5/2	Fe, gr	v.many	2	poor	34	19	y	y				
		105	120	MSt						poor	8	0		y				

										Total	**129**	**110**		WE.wetness due to groundwater					
										MB	13	-1		GW. WC IV (Table 11)					
									Droughtiness grade (DR)		2	2		FL.Flood Risk			EAFz3	3b	
128	T	0	8	mCL	n	10YR3/2	Fe	com	0	-	14	14	y	n	*IV*	3b	**3b**	WE FL	
	T	8	35	mCL	n	10YR3/2, 10YR4/1	Fe,gr	v.many	0		49	49	y	n					
		35	80	C	n	10YR3/4, 10YR5/3	Fe,br	v.many	0	poor	41	46	y	y					
		80	120	MSt						poor	20	0	n	y					
										Total	**124**	**109**		Rushes in field					
										MB	8	-3		FL.Flood Risk			EAFz3	3b	
									Droughtiness grade (DR)		2	2							
129	T	0	32	SCL	n	10YR3/2			8	-	50	50	n	n	*IV*	3b	**3b**	WE GW FL	
		32	45	hSCL	n	10YR5/3	Fe, gr	com	8		18	18	y	n					
		45	98	SCL		2.5Y6/2, 10YR4/3	Fe,br,gr	v.many	8	m/poor	46	32	y	n					
		98	105	SC		10YR6/2	Fe,gr	v.many	40		4	0	y	n					
		105	120	SC			Fe,gr	v.many	40		9	0	y	n					
										Total	**128**	**101**		WE.wetness due to groundwater					
										MB	12	-10		GW. WC IV (Table 11)					
									Droughtiness grade (DR)		2	3a		FL.Flood Risk			EAFz3	3b	
130	T	0	42	SL	n	10YR3/4			5	-	68	68	n	n	*I*	1	**3a**	DR	
		42	110	LS	n	10YR5/6			8		40	23	n	n					
		110	120	hSCL	n	10YR5/8, 7.5YR5/8			15		9	0	n	n					
										Total	**117**	**91**							
										MB	1	-20							
									Droughtiness grade (DR)		3a	3a		maize					
P3	T	0	35	SL	n	10YR3/4			5	-	57	57	n	n	*III*	2	**2**	WE DR	
		35	60	SL	n	2.5Y6/2	Fe	many	5		32	36	y	n					
		60	75	SCL	n	2.5Y6/2	Fe,Mn,gr	many	5		14	14	y	n					
		75	120	C	n	2.5Y6/2	Fe	v.many	3	poor	31	0	y	y					
										Total	**134**	**107**							

										MB	18	-4							
								Droughtiness grade (DR)			2	2		harrowed					
131	T	0	35	SL	n	10YR3/4			0	-	60	60	n	n	*IV*	3a	**3a**	WE	
		35	120	C	n	2.5Y6/2	Fe,gr,br	v.many	2	poor	67	45	y	y					
										Total	**127**	**104**							
										MB	11	-7							
								Droughtiness grade (DR)			2	2		wheat					
P2	T	0	28	SL	n	10YR3/3			12	-	42	42	n	n	*IV*	3a	**3a**	WE DR	
		28	60	hSCL	n	2.5Y5/4, 10YR5/3	Mn,Fe	v.many	10	poor	33	38	y	y					
		60	120	C	n	2.5Y6/2	Fe	v.many	0	poor	42	13	y	y					
										Total	**117**	**93**							
										MB	1	-18							
								Droughtiness grade (DR)			3a	3a		harrowed					
132	T	0	32	SL	n	10YR3/3			3	-	53	53	n	n	*I*	1	**3a**	DR	
		32	37	SL	n	10YR3/4	Fe	many	5		7	7	n	n					
		37	70	LS	n	10YR5/2			5		23	28	n	n					
		70	120	S	n	10YR5/4	Fe	com	5	m/poor	24	0	n	n					
										Total	**107**	**88**							
										MB	-9	-23							
								Droughtiness grade (DR)			3a	3a		ploughed					
133	T	0	28	SZL	n	10YR3/4			4	-	51	51	n	n	*I*	1	**2**	DR	
		28	65	mCL	n	10YR4/4			4		48	57	n	n					
		65	100	C	n	10YR3/6			4		27	8	n	n					
		100	120	C	n	10YR3/6			4		15	0	n	n					
										Total	**142**	**116**		Edge of FZ3. Not mottling in profile					
										MB	26	5							
								Droughtiness grade (DR)			2	2							
134	T	0	22	C	n	10YR3/3	Fe,gr	com	0	-	37	37	(y)	n	*IV*	3b	**3b**	WE GW FL	
		22	60	C	n	10YR3/4, 10YR5/2	Fe,Mn	v.many	0		53	61	y	n					
		60	120	C	n	10YR3/4, 10YR5/2	Fe,gr	many	0	poor	42	13	y	y					
										Total	**132**	**111**		WE.wetness due to groundwater					

										MB	16	0		GW. WC IV (Table 11)						
									Droughtiness grade (DR)		2	2		FL.Flood Risk				EAFz3	3b	
135	T	0	36	SCL	n	10YR5/2	Mn,Fe,gr	v.many	8	-	57	57	y	n	*IV*	3b		**3b**	WE GW FL	
		36	75	hSCL	n	10YR6/1	Fe, gr	v.many	8		43	47	y	n						
		75	80	SCL	n	10YR6/1, 2.5Y5/4	Fe,gr	v.many	25	m/poor	3	0	y	n						
		80	120	Mst						poor	20	0		y						
										Total	**123**	**104**		WE.wetness due to groundwater						
										MB	7	-7		GW. WC IV (Table 11)						
									Droughtiness grade (DR)		2	2		FL.Flood Risk				EAFz3	3b	
136	T	0	42	SL	n	10YR3/4			5	-	68	68	n	n	*I*	1		**2**	DR	
		42	75	SL	n	10YR5/4			8		37	39	n	n						
		75	80	SC	n	10YR5/8			25		4	0	n	n						
		80	120	SC	n	10YR5/8			25		31	0	n	n						
										Total	**139**	**107**								
										MB	23	-4								
									Droughtiness grade (DR)		2	2		maize						
137	T	0	40	SL	n	10YR3/3			8	-	63	63	n	n	*I*	1		**2**	DR	
		40	65	SL	n	10YR3/4			8		29	35	n	n						
		65	105	SCL	n	10YR3/6			8		37	7	n	n						
		105	120	SC	n	10YR3/4	Fe	v.many	5	poor	11	0	(y)	y						
										Total	**140**	**105**								
										MB	24	-6								
									Droughtiness grade (DR)		2	2		ploughed						
138	T	0	42	SL	n	10YR3/4			5	-	68	68	n	n	*I*	1		**3a**	DR	
		42	80	LS	n	10YR5/6			8		23	23	n	n						
		80	85	LS	n	10YR5/6			25		2	0	n	n						
		85	120	LS	n	10YR5/6			25		16	0								
										Total	**110**	**91**								
										MB	-6	-20								
									Droughtiness grade (DR)		3a	3a		maize						
139	T	0	10	SCL	n	10YR3/3	Fe	com	2	-	17	17	(y)	n	*IV*	3b		**3b**	WE GW	

	T	10	38	SCL	n	2.5Y4/2	Fe	com	2		47	47	y	n							
		38	120	SCL	n	2.5Y6/4	Fe,br	v.many	2		86	47	y	n							
										Total	**150**	**110**		WE.wetness due to groundwater				rushes		
										MB	34	-1		GW. WC IV (Table 11)- Rushes & strong mottling						
									Droughtiness grade (DR)		1	2		FL.Flood Risk				EAFz2/3	3a	
140	T	0	32	SL	n	10YR3/4			15	-	47	47	n	n	*I*	1	**3b**		DR		
		32	90	LS	n	10YR4/6			20		33	28	n	n							
		90	120	S	n	2.5Y6/6			5		14	0	n	n							
										Total	**94**	**75**								
										MB	-22	-36								
									Droughtiness grade (DR)		3b	3b		grass						
141	T	0	32	SZL	n	10YR3/4			0	-	61	61	n	n	*IV*	3a	**3b**		FL		
		32	80	hCL	n	10YR5/2	Fe, Mn	com	8		54	56	y	n							
		80	120	hZCL	n	10YR5/2	Fe,gr	v.many	5	poor	23	0	y	y							
										Total	**138**	**117**		WE.wetness due to groundwater					grass	
										MB	22	6		GW. WC IV (Table 11)						
									Droughtiness grade (DR)		2	2		FL.Flood Risk				EAFz3	3b	
142	T	0	20	SL	n	10YR4/3			5	-	32	32	n	n	*III*	2	**3b**		FL		
		20	70	hCL	n	10YR3/4			10		62	73	n	n							
		70	120	hZCL	n	10YR5/2	Fe,gr	v.many	5	poor	29	0	y	y							
										Total	**123**	**105**		WE.wetness due to groundwater					grass	
										MB	7	-6		GW. WC III (Table 11)-no shallow mottling						
									Droughtiness grade (DR)		2	2		FL.Flood Risk				EAFz3	3b	
143	T	0	15	hCL	n	10YR3/2	Fe	com	2	-	26	26	(y)	n	*IV*	3b	**3b**		WE GW FL		
		15	40	SCL	n	5Y4/1	Fe	many	2		37	37	y	n							
		40	78	SL	n	2.5Y5/2	Fe	many	2		45	44	y	n							
		40	120	C	n	5Y4/1	Fe	v.many	2	poor	61	0	y	y							
										Total	**169**	**107**		WE.wetness due to groundwater					rushes	
										MB	53	-4		GW. WC IV (Table 11)						
									Droughtiness grade (DR)		1	2		FL.Flood Risk				EAFz3	3b	

144	T	0	30	C	n	10YR3/4	Fe,gr	v.many	8	-	47	47	(y)	n	*IV*	3b	**3b**	WE FL	
		30	85	C	n	2.5Y6/1	Fe,br	v.many	15	poor	43	45	y	y					
		85	120	MSt	n					poor	18	0		y					
										Total	**108**	**92**		Rushes					
										MB	-8	-19		FL.Flood Risk			EAFz3	3b	
									Droughtiness grade (DR)		3a	3a							

Appendix 3: Pit Descriptions and Photographs

Pit 1	cm	Description (ploughed and harrowed)
Ap	0-20	Very dark greyish brown (10YR3/2) loamy sand, fine sized granulated peds that are loose and moderately developed with organic matter mixed with mineral matter, few roots throughout, non-calcareous, about 10% hard stones.
Bw	20-60	Brownish yellow (10YR6/6) loamy sand, small and medium-coarse subangular blocky structure, weakly developed with loose consistency, about 15% hard stones.
C	60-100	Yellowish brown (10YR5/8) sand, fine peds, weakly developed, loose consistency, about 5% hard stones.

Geology: River Terrace. ALC Subgrade 3b

Pit 1 structures reassembled

60-100 cm

Pit 2	cm	Description (ploughed and harrowed)
Ap	0-28	Dark brown (10YR3/3) sandy loam, fine sized granulated peds and medium subangular peds that are loose and moderately developed; few roots throughout, non-calcareous, about 12% hard stones.
Bg	28-60	Light olive brown (2.5Y5/4) heavy sandy clay loam, iron mottles present that are yellowish brown (10YR5/8), manganese nodules, massive structure with firm consistence; about 10% hard stones.
Cg	60-120	Light brownish grey (2.5Y6/2) and strong brown (7.5YR5/8) clay, very many iron mottles present, massive consistency.

Geology: London Clay. ALC Subgrade 3b

Pit 2 structures reassembled

60-120 cm

0-60 cm marker every 10 cm

Pit 3	cm	Description (ploughed and harrowed)
Ap	0-35	Dark yellowish Brown (10YR3/4) sandy loam, fine sized granulated peds that are loose and well developed and medium subangular blocky peds; about 5% hard stones.
Bg(i)	35-60	Light yellowish brown (2.5Y6/2) sandy loam, loose moderate fine subangular blocky structure; many iron mottles present, about 5% hard stones.
Bg(ii)	60-75	Light yellowish brown (2.5Y6/2) and yellowish brown (10YR5/8) sandy clay loam, many iron mottles present and manganese nodules about 5% hard stones.
Cg	75-120	Light yellowish brown (2.5Y6/2) and yellowish brown (10YR5/8) clay, very many iron mottles present, about 3% hard stones.

Geology: London Clay ALC Grade 2

Pit 3 structures reassembled

60-120 cm

0-60 cm marker every 10 cm

Pit 4	cm	Description (grassland, water at 90 cm)
A	0-35	Very dark grey (10YR3/1) organic clay, fine and medium sized granulated peds and medium subangular peds that are well developed and firm; very many iron mottles present along root channels, many roots throughout, non-calcareous, about 2% hard stones.
BCg	35-120	Dark grey (2.5Y4/1) and strong brown (7.5YR4/6) clay, very many iron mottles present, massive consistency about 2% hard stones.

Geology: London Clay ALC Subgrade 3b

Pit 4 structures reassembled

60-120 cm

0-60 cm marker every 10 cm

Iron along root channels in topsoil

Pit 5	cm	Description (grass for silage)
Ap	0-40	Dark yellowish brown (10YR3/4) sandy loam, fine sized granulated peds that are loose, dense roots in top 10 cm, about 10% hard stones.
Bw(i)	40-60	Dark yellowish brown (10YR3/4) medium clay loam, fine sized granulated peds that are loose, about 10% hard stones.
Bw(ii)	60-105	Strong brown (10YR5/6) medium clay loam.
C	105-120	Strong brown (10YR5/8) sandy clay loam, about 8% hard stones (sand and gravel).

Geology: River Terrace ALC Subgrade 3b (due to flood risk)

Pit 5 structures reassembled

60-120 cm

0-60 cm marker every 10 cm

Pit 6	cm	Description (grass meadow)
A	0-25	Dark brown (10YR3/3) organic heavy clay loam, fine sized granulated peds and medium subangular peds that are firm and strongly developed; many iron mottles present along roots, many roots throughout, non-calcareous.
Bg(i)	25-40	Yellowish brown (10YR5/8) heavy silty clay loam, medium subangular peds that are firm and strongly developed; very many iron mottles present, few roots throughout, non-calcareous.
Bg(ii)	40-60	Light brownish grey (10YR6/2) and yellowish brown (10YR5/8) clay, very many iron mottles present and manganese nodules, massive consistency.
Cg	60-120	Strong brown (7.5YR5/6) and grey (2.5Y5/1) clay, very many iron mottles present and manganese nodules, massive consistency.

Geology: London Clay ALC Subgrade 3b

Pit 6 structures reassembled

60-120 cm

0-60 cm marker every 10 cm

Pit 7	cm	Description (grass next to weather station)
A	0-25	Dark yellowish brown (10YR3/4) sandy loam, fine sized granulated peds are loose and moderately developed; dense thatch/ roots in top 8 cm, non-calcareous, about 3% hard stones.
Bw	25-60	Yellowish brown (10YR5/6) sandy clay loam, medium sized granulated peds are loose and weakly developed; few roots, non-calcareous, about 10% hard stones.
C	60-110	Light olive brown (2.5Y5/6), light brownish grey (2.5Y6/2) and strong brown (7.5YR5/8) heavy sandy clay loam, very many iron mottles present and manganese nodules, about 15% hard stones.

Geology: River Terrace ALC Subgrade 3b (due to flood risk)

Pit 7 structures reassembled

60-110 cm

0-60 cm marker every 10 cm

Pit 8	cm	Description (ploughed and harrowed)
Ap	0-28	Dark yellowish brown (10YR3/4) sandy loam, small granulated peds and medium sized subangular blocky peds that are firm and moderately developed; non-calcareous, about 8% hard stones.
Bw(i)	28-42	Dark yellowish brown (10YR3/4) and strong brown (10YR5/8) sandy clay loam with many iron mottles.
Bw(ii)	42-60	Brown (10YR4/3) and strong brown (10YR5/8) sandy clay loam with very many iron mottles, coarse subangular blocky peds.
C	60-85	Dark yellowish brown (10YR4/4) and strong brown (7.5YR5/8) heavy sandy clay loam, very many iron mottles present, about 15% gravelly hard stones.

Geology: River Terrace ALC Subgrade 3b

Pit 8 structures reassembled

60-85 cm

0-60 cm marker every 10 cm

Pit 9	cm	Description (grass field with silt deposits from flooding)
A	0-25	Strong brown (7.5YR4/6) clay, dense/ thatched roots in top 8 cm, many roots 8-25 cm, very many iron mottles on root channels, about 2% hard stones.
Bg	25-110	Grey (2.5Y5/1) and strong brown (7.5YR4/6) clay with very many iron mottles, massive consistency, few roots until about 40 cm, about 2% hard stones.
Cg	110-120	Grey (2.5Y5/1) and strong brown (7.5YR4/6) sandy clay loam with very many iron mottles, massive consistency, about 8% hard stones.

Geology: London Clay ALC Subgrade 3b

Pit 9 structures reassembled

60-120 cm

0-60 cm marker every 10 cm

Pit 10	cm	Description (wheat)
Ap	0-35	Dark brown (10YR3/3) sandy loam, friable granular structure, loose consistence, abundant roots, about 15% hard stones.
B	35-55	Dark yellowish brown (10YR4/4 and 10YR4/6) sandy loam, common roots, about 25% hard stones.

Geology: River Terrace ALC Subgrade 3a

Pit 10 soil face 0-55 cm – marker every 10 cm

Pit 10 dense stone layer 35-50 cm

Pit 10 surface and pit spoil

Pit 11	cm	Description (grass)
Ap	0-25	Dark brown (10YR3/3) sandy loam, friable granular structure, loose consistency, many roots, about 15% hard stones.
B	25-60	Dark yellowish brown (10YR4/4 and 10YR4/6) sandy clay loam, about 20% hard stones.
C	60-90	Dark yellowish brown (10YR4/6) sandy loam, about 20% hard stones.

Geology: River Terrace ALC Subgrade 3a

Pit 11 soil face 0-60 cm – marker every 10 cm

60-90 cm

pit spoil

Pit 12	cm	Description (grass)
A	0-10	Dark greyish brown (10YR3/2) sandy loam, friable granular structure, loose consistence, abundant roots, about 15% hard stones.
B	10-40	Dark greyish brown (10YR3/2) sandy loam, friable granular structure, loose consistency, about 20% hard stones.

Geology: River Terrace ALC Subgrade 3a

Pit 12 soil face 0-35 cm

Soil surface beneath turf

pit spoil

Pit 13	Cm	Description (grass)
Ap	0-26	Dark brown (10YR3/3) sandy loam, friable granular structure, loose consistency, many roots, about 10% hard stones.
B	26-50	Brown (10YR4/3) sandy loam, about 10% hard stones.
C	50-90	Dark yellowish brown (10YR4/6) loamy sand, about 15% hard stones.

Geology: River Terrace ALC Subgrade 3a

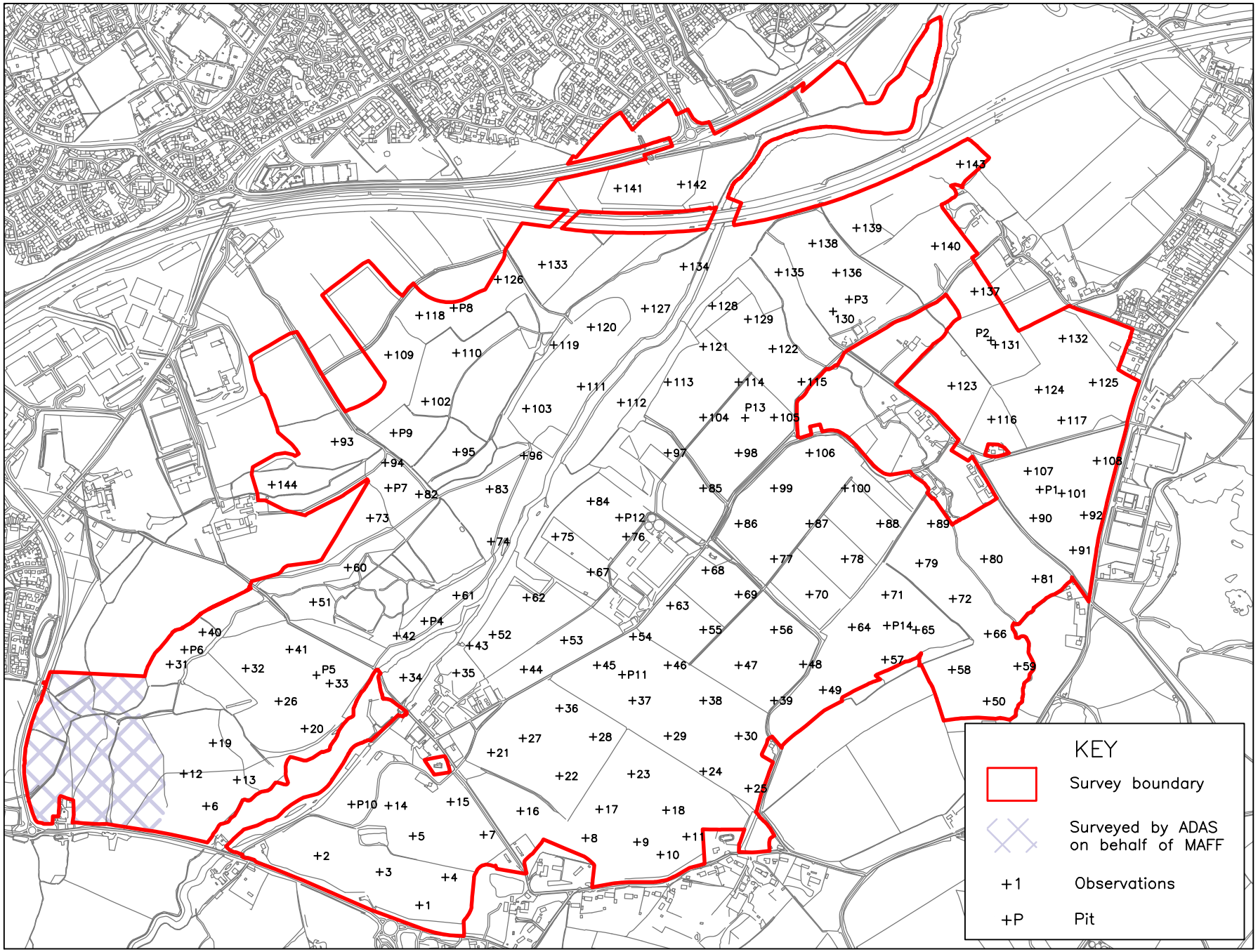
Pit 13 soil face 0-60 cm – marker every 10 cm

Pit 14	cm	Description (wheat)
Ap	0-30	Dark brown (10YR3/3) sandy loam, friable granular structure, loose consistency, common roots, about 8% hard stones.
B(i)	30-60	Brown (10YR4/3) sandy loam about 8% hard stones.
B(ii)	60-85	Light yellowish brown (10YR6/4) sand with iron mottles common, about 2% hard stones.
B(ii)g	85-115	Brownish yellow (10YR6/6) and yellowish red (5YR4/6) loamy sand, many iron mottles.
C	115-120	Light yellowish brown (2.5Y) sandy clay

Geology: River Terrace ALC Subgrade 3a

Pit 14 soil face 0-60 cm – marker every 10 cm

60-90 cm



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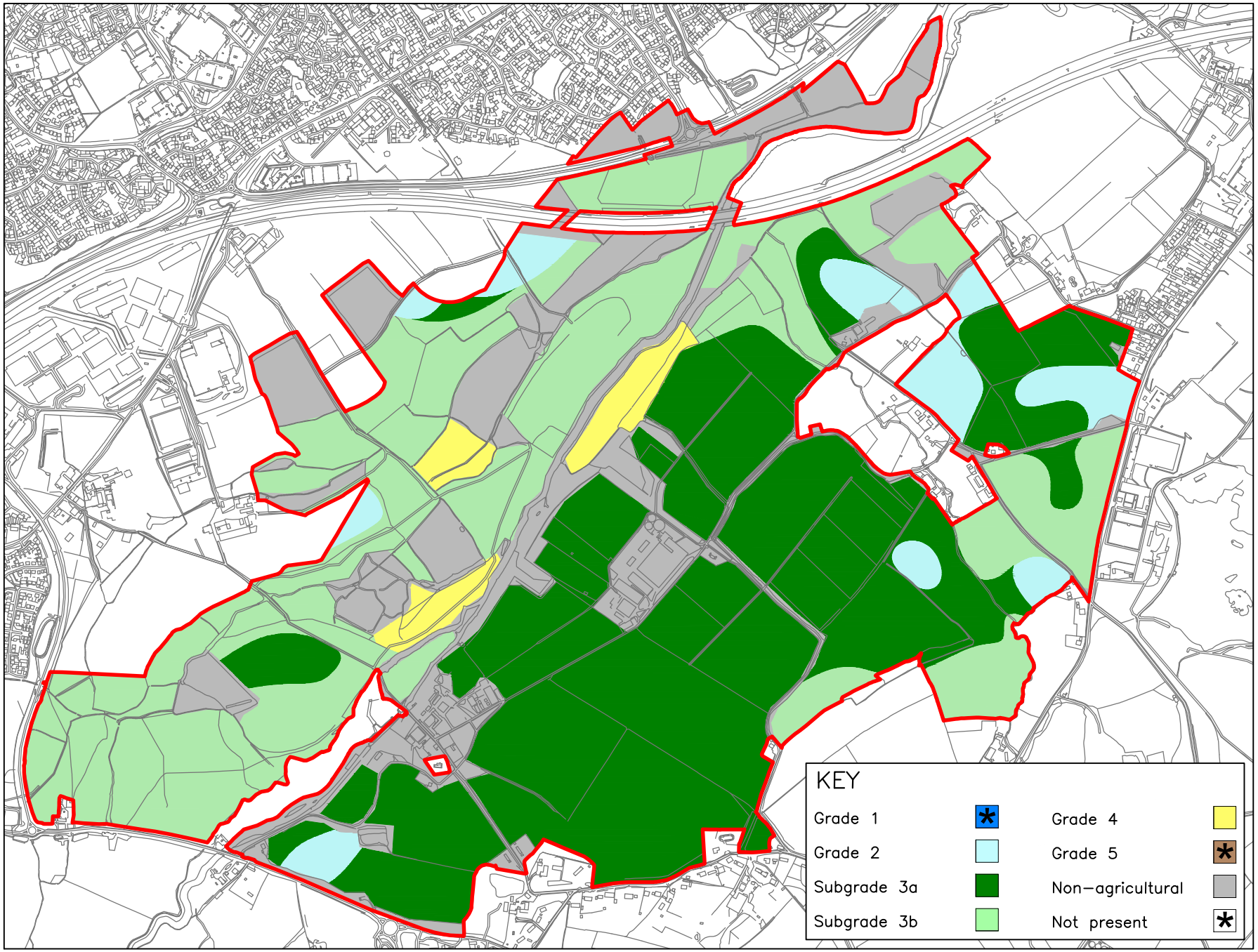

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