

Intermodal Logistics Park North Ltd

INTERMODAL LOGISTICS PARK NORTH (ILPN)

Intermodal Logistics Park North (ILPN) Strategic Rail Freight Interchange (SRFI)

Project reference TR510001

Preliminary Environmental Information Report (PEIR)

Appendix 15.5: Agricultural Land Classification and Soil Resources Report

October 2025

Planning Act 2008

The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017

This document forms a part of a Preliminary Environmental Information Report (PEIR) for the Intermodal Logistics Park North (ILPN) project.

A PEIR presents environmental information to assist consultees to form an informed view of the likely significant environmental effects of a proposed development and provide feedback.

This PEIR has been prepared by the project promoter, Intermodal Logistics Park North Ltd. The Proposed Development is described in Chapter 3 of the PEIR and is the subject of a public consultation.

Details of how to respond to the public consultation are provided at the end of Chapter 1 of the PEIR and on the project website:

<https://www.tritaxbigbox.co.uk/our-spaces/intermodal-logistics-park-north/>

This feedback will be taken into account by Intermodal Logistics Park North Ltd in the preparation of its application for a Development Consent Order for the project.



October 2025

Intermodal Logistics Park North Limited

Agricultural Land Classification and Soil Resources

**Intermodal Logistics Park North Rail Freight Interchange at
Land East of Newton-Le-Willows**

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1. Introduction

- 1.1. Reading Agricultural Consultants Ltd (RAC) is instructed by Intermodal Logistics Park North Limited to investigate the Agricultural Land Classification (ALC) and soil resources of the proposed Intermodal Logistics Park North Rail Freight Interchange at land east of Newton-Le-Willows by means of a detailed survey of site and soil characteristics.
- 1.2. Guidance for assessing the quality of agricultural land in England and Wales is set out in the Ministry of Agriculture, Fisheries and Food (MAFF) revised guidelines and criteria for grading the quality of agricultural land¹, and summarised in Natural England's Technical Information Note (TIN) 049².
- 1.3. Agricultural land in England and Wales is graded between 1 and 5, depending on the extent to which physical or chemical characteristics impose long-term limitations on agricultural use. The principal physical factors influencing grading are climate, site conditions and soil which, together with interactions between them, form the basis for classifying land into one of the five grades.
- 1.4. Grade 1 land is excellent quality agricultural land with very minor or no limitations to agricultural use. Grade 2 is very good quality agricultural land, with minor limitations which affect crop yield, cultivations or harvesting. Grade 3 land has moderate limitations which affect the choice of crops, timing and type of cultivation, harvesting or the level of yield, and is subdivided into Subgrade 3a (good quality land) and Subgrade 3b (moderate quality land). Grade 4 land is poor quality agricultural land with severe limitations which significantly restrict the range of crops and/or level of yields. Grade 5 is very poor quality land, with severe limitations which restrict use to permanent pasture or rough grazing.
- 1.5. Land which is classified as Grades 1, 2 and 3a in the ALC system is defined as best and most versatile (BMV) agricultural land.
- 1.6. As explained in Natural England's TIN049, the whole of England and Wales was mapped from reconnaissance field surveys in the late 1960s and early 1970s, to provide general strategic

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

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

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 undifferentiated Grade 3 or non-agricultural land. 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. An area in the south-west of the site has previously been surveyed by ADAS on behalf of MAFF in 1994³, and the results of that survey have been combined with the current survey.

³ **ADAS (1994).** *Agricultural Land Classification, ALC Map and Data*. Available at: <https://publications.naturalengland.org.uk/publication/5867999444598784>

2. Site and climatic conditions

General features and landform

- 2.1. The surveyed area within the site order limits extends to approximately 174.6 hectares (ha) of land primarily in agricultural use. The majority of the surveyed area is bordered by the M6 to the south-west, Winwick Lane (A579) to the south-east and the Liverpool and Manchester Railway to the north. A small parcel of surveyed land is located to the north of the railway, east of Parkside Road.
- 2.2. Land to the east of Winwick Lane and north of the Manchester Railway has yet to be subject to a detailed survey.
- 2.3. Topography across the site is gently sloping and undulating. Land has an elevation of between 28 m and 39 m above Ordnance Datum (AOD).

Agro-climatic conditions

- 2.4. Agro-climatic data for the site have been interpolated from the Meteorological Office's standard 5 km grid point dataset at a representative altitude of 35 m AOD. The data are given in Table 1. The site has a relatively warm and wet climate. Crop moisture deficits are moderately small to moderate. The number of Field Capacity Days (FCD) is larger than is average for lowland England (150) and is unfavourable for providing opportunities for agricultural field work, although there is no overriding climatic limitation to agricultural land quality.

Table 1: Local agro-climatic conditions

Parameter	Value
Average Annual Rainfall	889 mm
Accumulated Temperatures >0°C	1,411 day°
Field Capacity Days	210 days
Average Moisture Deficit, wheat	84 mm
Average Moisture Deficit, potatoes	69 mm

Soil parent material and soil type

- 2.5. The bedrock geology mapped by the British Geological Survey⁴ across most of the site is the Chester Formation. This formation predominantly comprises varied conglomerate and sandstone with some rare or subordinate mudstones. A small area in the west is underlain by the Kinnerton Sandstone Formation, comprising red-brown to yellow sandstone.
- 2.6. Superficial Till deposits are mapped across the south-west and north-east of the surveyed area, as well as a north-east orientated band through the centre. These deposits comprise unsorted material of varied size. Glaciofluvial ice contact deposits of sand and gravel are mapped in the very north-west and in the north-east, and peat deposits are mapped in a single field in the north-east. There are otherwise no superficial deposits mapped.
- 2.7. The Soil Survey of England and Wales soil association mapping⁵ (1:250,000 scale) shows the Bridgnorth, Newport 1 and the Salop associations at the site.
- 2.8. Soils of the Bridgnorth association are mapped in the west and centre. Profiles are characterised by sandy and coarse loamy soils over soft sandstone and are typically well drained and assessed as Wetness Class (WC) I⁶.
- 2.9. Soils of the Newport 1 association are mapped in the north. Profiles are characterised by deep sandy and coarse loamy soils and are typically well drained, assessed as WC I. Where drainage is poor, soils can remain seasonally waterlogged in WC III or IV.
- 2.10. Soils of the Salop association are mapped in the east and south. Profiles are characterised by reddish, fine loamy over clayey, fine loamy and clayey soils. Where undrained, most soils are waterlogged for long periods in winter and typically assessed as poorly drained in WC IV.

⁴ **British Geological Survey (2024).** *Geology of Britain viewer*, <http://mapapps.bgs.ac.uk/geologyofbritain/home.html>

⁵ **Soil Survey of England and Wales (1984).** *Soils of Northern England* (1:250,000), Sheet 1.

⁶ **Jarvis et al (1984).** *Soils and Their Use in Northern England*. Soil Survey of England and Wales Bulletin 10, Harpenden.

3. Agricultural land quality

Soil survey methods

- 3.1. In total, 163 soil profiles have been examined within the site using an Edelman (Dutch) auger at an observation density of one per hectare in accordance with the established recommendations for ALC surveys². Four observation pits have also been excavated to examine subsoil structures. An area in the south-west was surveyed by ADAS in 1994. The locations of all observations are shown on Figure RAC/10470/1. Land to the east of Winwick Lane and north of the railway line has yet to be subject to a detailed survey.
- 3.2. At each observation point the following characteristics were assessed for each soil horizon up to a maximum of 120 cm or any impenetrable layer:
- soil texture;
 - stone content;
 - colour (including localised mottling);
 - consistency;
 - structural condition;
 - free carbonate; and
 - depth.
- 3.3. Four topsoil samples were submitted for laboratory determination of particle size distribution, pH, organic matter content and nutrient contents (P, K, Mg). Results are presented in Appendix 1.
- 3.4. Soil WC was determined from the matrix colour, presence or absence of, and depth to, greyish and ochreous gley mottling, and slowly permeable subsoil layers at least 15 cm thick, in relation to the number of Field Capacity Days at the location.
- 3.5. Soil droughtiness was investigated by the calculation of moisture balance equations (given in Appendix 2). Crop-adjusted Available Profile Water (AP) is estimated from texture, stoniness and depth, and then compared to a calculated moisture deficit (MD) for the standard crops wheat and potatoes. The MD is a function of potential evapotranspiration and rainfall. Grading of the land can be affected if the AP is insufficient to balance the MD and droughtiness occurs.

Agricultural land classification and site limitations

- 3.6. Assessment of land quality has been carried out according to the revised ALC guidelines¹. Soil profiles have been described according to Hodgson⁷ which is the recognised source for describing soil profiles and characteristics according to the revised ALC guidelines.
- 3.7. There are three soil types present within the surveyed part of the site.

Soil Type 1

- 3.8. The first soil type comprises freely draining profiles with sandy textures. The topsoil comprises very dark grey (10YR3/1 in the Munsell soil colour charts⁸), very dark greyish brown (10YR3/2) or dark greyish brown (10YR4/2) sandy loam, loamy sand or sandy clay loam. Stone content is very slight to slight, at 2-7%. The topsoil has a fine subangular blocky to granular structure and a friable consistency.
- 3.9. The upper subsoil comprises loamy sand, sandy loam or sand, which is predominantly brown (10YR4/3, 7.5YR4/4, 7.5YR5/3) or reddish brown (5YR4/3, 5YR4/4, 5YR5/4). The upper subsoil has a medium granular structure and a friable consistency.
- 3.10. The lower subsoil comprises loamy medium sand or medium sand and is mostly reddish brown (5YR4/3 or 5YR4/4 or 5YR5/3), or brown (7.5YR4/4 or 7.5YR5/3) with some pale brown (10YR6/2). This horizon is stoneless to very slightly stony, up to 5%. The lower subsoil has a granular to single-grain structure and a friable consistency.
- 3.11. Soft sandstone is commonly recorded within the soil profile in central areas and has a reddish-brown colour.
- 3.12. Soils with these characteristics are freely draining in WC I. Where profiles have slight deficits in available water, they are restricted to Grade 2 by droughtiness, profiles with moderate deficits are restricted to Subgrade 3a. Profiles without an overriding limitation are assessed as Grade 1.
- 3.13. In the east of the surveyed area, where deep sandy soils are constrained by slowly permeable clayey soils of Soil Type 2, some permeable sandy profiles of Soil Type 1 contain ochreous mottling, an indication of prolonged periods of wetness. Profiles commonly have brown (10YR5/3) or greyish brown (10YR5/2) colours in the subsoil. These profiles are of WC II, and are

⁷ **Hodgson, J. M. (Ed.) (1997).** *Soil survey field handbook*. Soil Survey Technical Monograph No. 5, Silsoe.

⁸ **Munsell Color (2009).** *Munsell Soil Color Book*. Grand Rapids, MI, USA

limited to Grade 2 by wetness where the topsoil is of sandy loam or Subgrade 3a, where the topsoil is of sandy clay loam.

Soil Type 2

- 3.14. The second soil type comprises profiles with a loam topsoil over a slowly permeable subsoil, commonly clay, at a shallow depth. The topsoil comprises very dark grey (10YR3/1), very dark greyish brown (10YR3/2) and dark greyish brown (10YR4/2) sandy clay loam or medium clay loam, with two recordings of heavy clay loam. Stone content is very slight, at 1-5%. The topsoil has a medium to fine subangular blocky structure and a friable consistency.
- 3.15. The upper subsoil comprises clay, with a smaller number of sandy clay loam, sandy clay and heavy clay loam textures and is predominantly brown (10YR4/3 or 7.5YR4/4, 7.5YR5/2, 7.5YR5/3, 10YR5/3) or reddish brown (5YR5/3, 5YR4/4). Stone content is stoneless to very slight, up to 5%. Where the upper subsoil is clay or sandy clay, it is slowly permeable and has a coarse prismatic structure and a firm consistency. Where sandy clay loam or heavy clay loam, the upper subsoil is permeable with a medium to coarse subangular blocky structure, which is friable to firm. Ochreous mottling is recorded throughout this horizon and indicates prolonged periods of wetness.
- 3.16. The lower subsoil comprises reddish brown (5YR5/3, 5YR4/4) or brown (7.5YR4/4) clay. Stone content is stoneless to very slight, up to 5%. Clay within the lower subsoil is slowly permeable and has a coarse prismatic to massive structure and a very firm consistency. The lower subsoil contains a mixture of ochreous and grey mottling, with ferri-manganiferous nodules also common.
- 3.17. Profiles within this soil type are poorly drained and assessed as WC IV. Profiles are restricted to Subgrade 3b by soil wetness. Soil wetness restricts suitable conditions for machinery to work the land throughout the year and increases the likelihood and occurrence of waterlogging within the soil profile, restricting crop growth. A few profiles have a heavy clay loam topsoil and are further restricted to Grade 4.

Soil Type 3

- 3.18. The third soil type includes observations on the transition from Soil Types 1 to 2. Within these profiles, the topsoil typically comprises sandy loam or sandy clay loam, which lies over an upper subsoil with a varied texture, mostly sandy loam, loamy sand or sandy clay loam. The lower subsoil comprises sandy clay loam, sandy clay or clay, with a few recordings of heavy clay loam or medium sandy loam. Observations are assessed as WC II or III depending on the presence of

and depth to a slowly permeable horizon. Observations of WC II, with a sandy loam topsoil, are restricted to Grade 2 by soil wetness. Observations of WC III are further restricted to Subgrade 3a. Where profiles are relatively shallow over a slowly permeable horizon, they are of WC IV and are limited to Subgrade 3b, similar to profiles characteristic of Soil Type 2.

ADAS survey

- 3.19. Land in the south-west of the site, surveyed by ADAS in 1994, matches the soil types described above.
- 3.20. Profiles in the east of this area match those described as Soil Type 1 and comprise freely draining coarse loamy and sandy soils. These profiles were restricted by ADAS to Grade 2 by droughtiness. However, reanalysis of the primary data shows no overriding limitation with regard to drought within all but one profile. These observations are classified as Grade 1 quality, with one classified as Grade 2.
- 3.21. Profiles in the west of this area fall within Soil Type 2 and are assessed as WC IV. These profiles comprise fine loamy soil over slowly permeable clay and are restricted to Subgrade 3b by wetness.
- 3.22. Between these two main soil types, soil profiles either comprise fine loamy soil with clay at a depth of 70 cm - 78 cm, or variable fine and coarse loamy soils over sandstone at depth. Profiles are assessed as WC III and are restricted to Subgrade 3a by soil wetness.
- 3.23. The ALC distribution across the surveyed area is shown in Figure RAC/10470/2, and the areas of each grade are given in Table 2.

Table 2: ALC areas

Grade	Description	Area (ha)	%
Grade 1	Excellent quality	29.2	17
Grade 2	Very good quality	48.9	28
Subgrade 3a	Good quality	33.6	19
Subgrade 3b	Moderate quality	60.2	34
Grade 4	Poor quality	0.9	1
Non-agricultural		1.8	1
Total		174.6	100

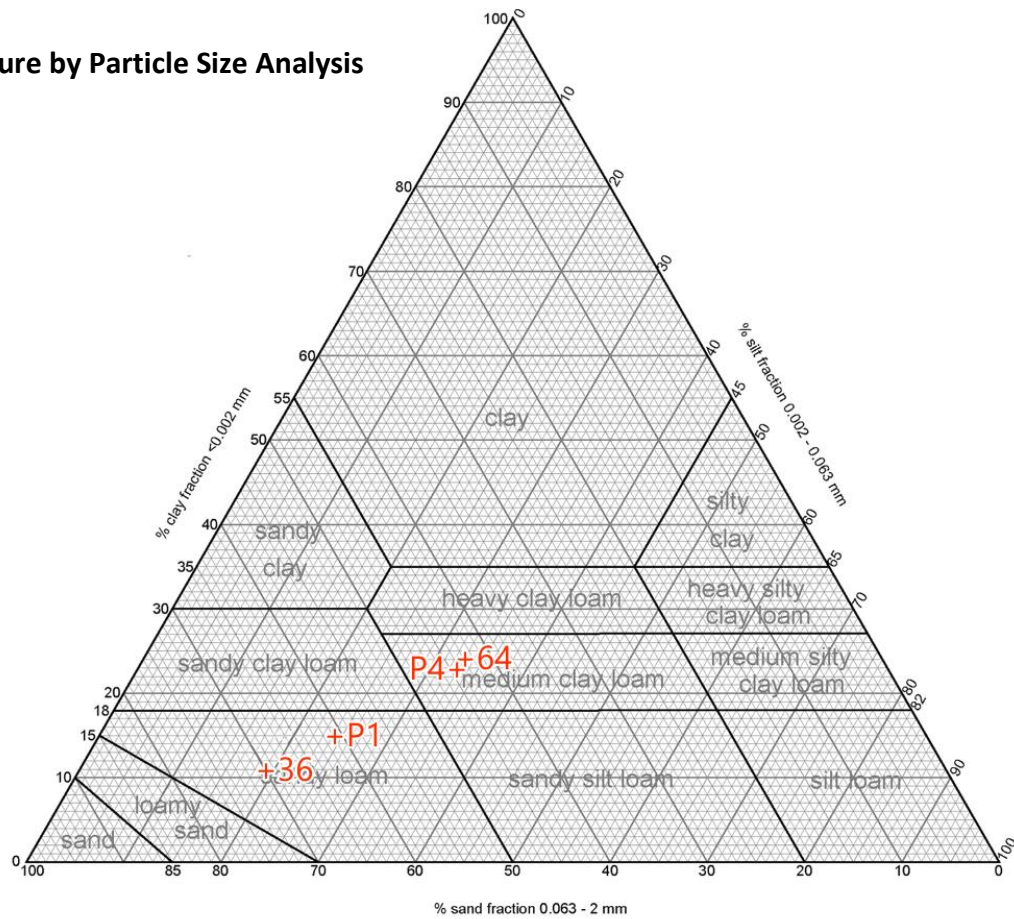
Appendix 1: Laboratory Data

Determinand	Pit 1	36	64	Pit 4	Units
Sand 2.00-0.063 mm	61	70	43	44	% w/w
Silt 0.063-0.002 mm	24	19	33	33	% w/w
Clay <0.002 mm	15	11	24	23	% w/w
Organic Matter	5.5	4.6	4.6	4.0	% w/w
Texture	Sandy loam	Sandy Loam	Medium Clay Loam	Medium clay loam	

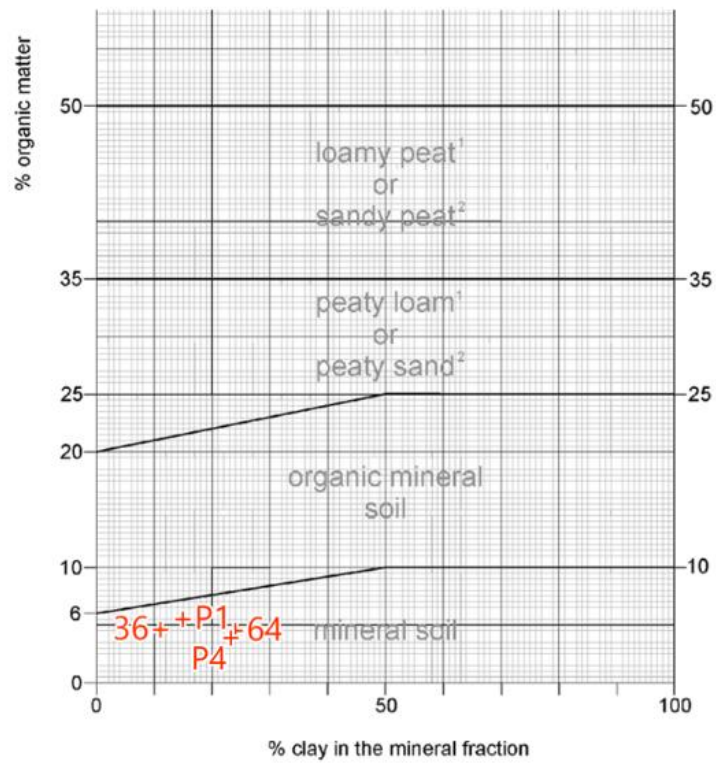
Determinand	Pit 1	36	64	Pit 4	Units
Soil pH	5.8	6.4	6.3	6.8	
Phosphorus (P)	29.6	31.0	36.2	21.4	mg/l (av)
Potassium (K)	143	162	156	171	mg/l (av)
Magnesium (Mg)	73.3	86.3	93.5	75.9	mg/l (av)

Determinand	Pit 1	36	64	Pit 4	Units
Phosphorus (P)	3	3	3	2	ADAS Index
Potassium (K)	2-	2-	2-	2-	ADAS Index
Magnesium (Mg)	2	2	2	2	ADAS Index

Soil Texture by Particle Size Analysis



Organic Matter Class



¹ Less than 50% sand in the mineral fraction

² 50% sand or more in the mineral fraction

Appendix 2: Soil Profile Summaries and Droughtiness Calculations

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

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

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

Stone types			Climate Data		Wetness Class Guidelines				Climate 1,411 D° Limitation Grade 1	
%	TA _v	EA _v	MDwheat	84		II	III	IV		V
Hard	1	0.5	MDpotato	69	SPL within 80cm, gleying within 40cm		>57cm	<57cm		
			FCD	210	SPL within 80cm, gleying at 40-70cm	>77cm	<77cm			
					No SPL but gleying within 40cm	coarse subsoil	II	other cases		III
					No SPL by gleying with 40-70cm	coarse subsoil	I	other cases	II	
					Maximum depth of auger penetration is <u>underlined</u>					

Droughtiness grade (DR)													1	1			
4	T	0	29	mSL	10YR3/1			5		47	47	n	n	/	1	2	DR
		29	44	LmS	5YR4/3			3		13	13	n	n				
		44	60	LmS	5YR4/4			0		11	14	n	n				
		60	120	mSston						12	3	n	n				
Total										84	78						
MB										84	9						
Droughtiness grade (DR)													1	2			
5	T	0	30	mSL	10YR3/1			3		50	50	n	n	/	1	2	DR
		30	42	LmS	7.5YR4/3			5		10	10	n	n				
		42	58	LmS	5YR4/4			0		12	14	n	n				
		58	120	mSston						12	4	n	n				
Total										84	78						
MB										84	9						
Droughtiness grade (DR)													1	2			
6	T	0	27	mSL	10YR3/1			7		43	43	n	n	//	2	2	WE
		27	70	mSL	10YR6/3	Fe	com	7		53	60	y	n				
		70	105	SCL	7.5YR4/4	Fe	com	5		33	0	n	n				
		105	120	mSston						3	0	n	n				
Total										132	103	subsoil mottling faint					
MB										132	34						
Droughtiness grade (DR)													1	1			
7	T	0	30	SCL	10YR3/1			3		50	50	n	n	IV	3b	3b	WE
		30	42	SC	5YR5/3	Fe	many	0	poor	16	16	y	y				
		42	120	C	5YR5/3	Fe/gr	com	0	poor	59	36	y	y				
Total										125	102						
MB										125	33						
Droughtiness grade (DR)													1	1			
8	T	0	32	mSL	10YR3/1			3		53	53	n	n	III	3a	3a	WE
		32	40	LmS	10YR5/3			5		7	7	n	n				

		40	60	LmS	10YR5/3		10		14	16	n	n					
		60	120	C	5YR5/3	Fe/gr	com	0	poor	42	13	y	y				
									Total	115	89						
									MB	115	20						
									Droughtiness grade (DR)	1	1						
9	T	0	29	mCL	10YR3/1			3		51	51	n	n	/V	3b	3b	WE
		29	70	C	10YR6/2	Fe	com	0	poor	41	53	y	y				
		70	120	C	5YR5/3	Fe	many	0	poor	35	0	y	y				
									Total	127	104						
									MB	127	35						
									Droughtiness grade (DR)	1	1						
10	T	0	30	mSL	10YR3/2			5		49	49	n	n	/	1	2	DR
		30	59	LmS	5YR5/4			0		23	26	n	n				
		59	120	mSston						12	3	n	n				
									Total	84	78						
									MB	84	9						
									Droughtiness grade (DR)	1	2						
11	T	0	28	mSL	10YR3/2			3		46	46	n	n	/	1	1	
		28	45	LmS	7.5YR4/4			0		15	15	n	n				
		45	60	LmS	5YR4/4			0		11	14	n	n				
		60	120	mS	5YR4/4			0		30	7	n	n				
									Total	102	82						
									MB	102	13						
									Droughtiness grade (DR)	1	1						
12	T	0	30	mSL	10YR3/2			3		50	50	n	n	/	1	1	
		30	105	LmS	5YR4/4			0		51	36	n	n				
		105	120	mS	5YR4/4			0		8	0	n	n				
									Total	108	86						
									MB	108	17						
									Droughtiness grade (DR)	1	1						

13	T	0	32	mSL	10YR3/2			5		52	52	n	n	/	1	2	DR
			32	52	LmS	5YR4/4			3		17	18	n	n			
			52	57	LmS	5YR4/4			0		3	5	n	n			
			57	120	mSston						13	4	n	n			
									Total	84	78						
								MB	84	9							
								Droughtiness grade (DR)		1	2						
14	T	0	30	mSL	10YR3/1			3		50	50	n	n	I-II	2	2	WE
			30	56	LmS	5YR4/3	mn	com	3		21	23	n	n			
			56	120	SCL	10YR5/2	Fe	com	0		64	21	y	n			
										Total	135	93					
									MB	135	24						
								Droughtiness grade (DR)		1	1						
15	T	0	30	mSL	10YR3/1			3		50	50	n	n	I-II	2	2	WE
			30	50	LmS	5YR4/4	mn	com	5		17	17	n	n			
			50	120	SCL	10YR5/2	Fe	com	0		70	30	y	n			
										Total	137	97					
									MB	137	28						
								Droughtiness grade (DR)		1	1						
16	T	0	30	mSL	10YR3/2			3		50	50	n	n	/	1	2	DR
			30	46	LmS	10YR6/3			0		14	14	n	n			
			46	120	mSston						15	7	n	n			
										Total	79	71					
									MB	79	2						
								Droughtiness grade (DR)		1	2						
17	T	0	27	mSL	10YR3/2			3		45	45	n	n	/	1	1	
			27	62	LmS	10YR6/3			7		26	30	n	n			
			62	85	LmS	10YR6/2			3		13	7	n	n			
			85	120	mS	10YR6/2, 5YR4/4			0		18	0	n	n			
									Total	102	81						

									MB	102	12						
									Droughtiness grade (DR)	1	1						
18	T	0	32	mSL	10YR3/2			3		53	53	n	n	///	3a	3a	WE
		32	50	mSL	10YR6/3			7		25	25	n	n				
		50	120	SC	5YR5/3	Femn	com	0	poor	56	26	y	y				
									Total	134	104						
									MB	134	35						
									Droughtiness grade (DR)	1	1						
19	T	0	26	mSL	10YR3/2			3		43	43	n	n	///	3a	3a	WE
		26	50	mSL	10YR6/2			5		34	34	n	n				
		50	120	C	5YR5/3	Fe/gr	com	0	poor	49	26	y	y				
									Total	126	103						
									MB	126	34						
									Droughtiness grade (DR)	1	1						
20	T	0	29	mSL	10YR3/2			3		48	48	n	n	///	3a	3a	WE
		29	62	LmS	10YR4/3			5		25	28	n	n				
		62	120	C	5YR5/3	Femn/gr	many	0	poor	41	10	y	y				
									Total	113	87						
									MB	113	18						
									Droughtiness grade (DR)	1	1						
21	T	0	27	SCL	10YR3/2			5		44	44	n	n	/V	3b	3b	WE
		27	45	hCL	7.5YR5/3	Fe	com	3		28	28	y	n				
		45	120	C	5YR5/3	Femn/gr	com	3	poor	54	32	y	y				
									Total	126	103						
									MB	126	34						
									Droughtiness grade (DR)	1	1						
22	T	0	28	mSL	10YR3/2			3		46	46	n	n	/	1	1	
		28	58	LmS	10YR4/3			3		24	26	n	n				
		58	120	LmS	5YR4/4			0		37	11	n	n				
									Total	107	83						

										MB	107	14					
										Droughtiness grade (DR)	1	1					
23	T	0	30	mSL	10YR3/2				2	50	50	n	n	/	1	1	
		30	70	LmS	10YR4/3				5	29	34	n	n				
		70	120	mS	5YR4/4				0	25	0	n	n				
										Total	104	84					
										MB	104	15					
										Droughtiness grade (DR)	1	1					
Pit 1	T	0	31	mSL	10YR3/2				3	51	51	n	n	/	1	1	
		31	54	LmS	7.5YR5/3				5	19	20	n	n				
		54	70	LmS	5YR4/4				0	10	14	n	n				
		70	120	mS	5YR4/4				0	25	0	n	n				
										Total	104	85					
										MB	104	16					
										Droughtiness grade (DR)	1	1					
24	T	0	35	mSL	10YR3/2				5	57	57	n	n	/	1	1	
		35	60	LmS	10YR4/3				5	19	22	n	n				
		60	77	LmS	7.5YR5/3	Fe	com	3	10	9	n	n					
		77	120	mSston				9	0	n	n						
										Total	94	87					
										MB	94	18					
										Droughtiness grade (DR)	1	1					
25	T	0	31	mSL	10YR3/2				3	51	51	n	n	I-II	2	2	WE
		31	46	LmS	7.5YR5/3				5	13	13	n	n				
		46	56	SCL	5YR4/3				3	12	15	n	n				
		56	75	mSL	5YR4/4				0	21	21	n	n				
		75	120	C	5YR5/3	Fe	com	0	poor	32	0	y	y				
										Total	128	100					
										MB	128	31					
										Droughtiness grade (DR)	1	1					

26	T	0	28	mSL	10YR3/2	3	46	46	n	n	/	1	2	DR
		28	60	LmS	7.5YR5/3	0	26	29	n	n				
		60	120	mSston			12	3	n	n				
							Total	84	78					
							MB	84	9					
							Droughtiness grade (DR)		1	2				
27	T	0	30	mSL	10YR3/2	3	50	50	n	n	/	1	2	DR
		30	50	LmS	7.5YR5/3	3	18	18	n	n				
		50	62	mS	7.5YR5/3	0	6	8	n	n				
		62	120	mSston			12	2	n	n				
							Total	85	78					
							MB	85	9					
							Droughtiness grade (DR)		1	2				
28	T	0	29	mSL	10YR3/2	3	48	48	n	n	/	1	2	DR
		29	60	LmS	5YR4/4	0	25	28	n	n				
		60	120	mSston			12	3	n	n				
							Total	85	79					
							MB	85	10					
							Droughtiness grade (DR)		1	2				
29	T	0	32	mSL	10YR3/2	2	53	53	n	n	/	1	1	
		32	46	LmS	5YR4/2	5	12	12	n	n				
		46	120	LmS	5YR4/3	0	46	22	n	n				
							Total	111	87					
							MB	111	18					
							Droughtiness grade (DR)		1	1				
30	T	0	27	mSL	10YR3/2	3	45	45	n	n	/	1	1	
		27	82	LmS	5YR4/3	0	40	39	n	n				
		82	100	mS	5YR4/4	0	9	0	n	n				
		100	120	mSston			4	0	n	n				
							Total	98	83					

						MB	98	14							
						Droughtiness grade (DR)	1	1							
31	T	0	29	mSL	10YR3/2	3	48	48	n	n	/	1	1		
		29	61	LmS	5YR4/4	0	26	29	n	n					
		61	75	mS	5YR4/4	0	7	6	n	n					
		75	120	mSston			9	0	n	n					
						Total	89	83							
						MB	89	14							
						Droughtiness grade (DR)	1	1							
32	T	0	30	mSL	10YR3/2	3	50	50	n	n	/	1	1	DR	
		30	53	LmS	5YR4/4	3	19	20	n	n					
		53	80	mS	5YR4/4	0	14	12	n	n					
		80	120	mSston			8	0	n	n					
						Total	90	82							
						MB	90	13							
						Droughtiness grade (DR)	1	1							
33	T	0	30	mSL	10YR3/2	3	50	50	n	n	/	1	1		
		30	65	LmS	7.5YR5/3	3	26	31	n	n					
		65	100	LmS	5YR4/4	0	21	5	n	n					
		100	120	mSston			4	0	n	n					
						Total	101	85							
						MB	101	16							
						Droughtiness grade (DR)	1	1							
34	T	0	30	mSL	10YR3/2	2	50	50	n	n	/	1	1		
		30	72	LmS	7.5YR5/3	0	31	36	n	n					
		72	120	LmS	5YR4/4	0	29	0	n	n					
						Total	110	86							
						MB	110	17							
						Droughtiness grade (DR)	1	1							
35	T	0	30	mSL	10YR3/2	2	50	50	n	n	/	1	2	DR	

			30	57	LmS	7.5YR5/3	5	21	23	n	n			
			57	60	mS	5YR4/4	0	2	2	n	n			
			60	120	mSston			12	3	n	n			
								Total	85	78				
								MB	85	9				
								Droughtiness grade (DR)	1	2				
36	T	0	30	mSL	10YR3/2	2		50	50	n	n	/	1	1
			30	120	LmS	10YR4/3	7	56	34	n	n			
								Total	106	84				
								MB	106	15				
								Droughtiness grade (DR)	1	1				
37	T	0	32	mSL	10YR3/2	2		53	53	n	n	/	1	1
			32	80	LmS	5YR4/4	5	33	33	n	n			
			80	120	LmS	5YR4/4	0	24	0	n	n			
								Total	110	86				
								MB	110	17				
								Droughtiness grade (DR)	1	1				
38	T	0	34	mSL	10YR3/2	3		56	56	n	n	/	1	1
			34	70	LmS	5YR4/4	5	25	31	n	n			
			70	120	mSston			10	0	n	n			
								Total	91	87				
								MB	91	18				
								Droughtiness grade (DR)	1	1				
39	T	0	33	mSL	10YR3/2	3		55	55	n	n	/	1	1
			33	45	LmS	7.5YR5/3	5	10	10	n	n			
			45	80	LmS	5YR4/4	3	22	22	n	n			
			80	120	mS	5YR4/4	0	20	0	n	n			
								Total	107	87				
								MB	107	18				
								Droughtiness grade (DR)	1	1				

40	T	0	31	mSL	10YR3/2			3		51	51	n	n	/	1	2	DR
			31	58	LmS	7.5YR4/3		3		21	24	n	n				
			58	120	mSston					12	4	n	n				
									Total	85	78						
									MB	85	9						
									Droughtiness grade (DR)	1	2						
41	T	0	33	mSL	10YR3/2			2		55	55	n	n	/	1	2	DR
			33	50	LmS	7.5YR4/3		2		15	15	n	n				
			50	120	mSston					14	6	n	n				
									Total	84	76						
									MB	84	7						
									Droughtiness grade (DR)	1	2						
42	T	0	30	mSL	10YR3/2			2		50	50	n	n	/	1	1	
			30	66	LmS	7.5YR5/3		2		27	32	n	n				
			66	120	LmS	5YR4/4		0		32	4	n	n				
									Total	110	85						
									MB	110	16						
									Droughtiness grade (DR)	1	1						
43	T	0	28	SCL	10YR3/2			2		47	47	n	n	/V	3b	3b	WE
			28	40	SCL	10YR6/2	Fe	com	5	17	17	y	n				
			40	120	C	5YR5/3	Mn	com	2	poor	61	38	y	y			
									Total	125	102						
									MB	125	33						
									Droughtiness grade (DR)	1	1						
44	T	0	27	SCL	10YR3/2			1		45	45	n	n	/V	3b	3b	WE
			27	43	C	7.5YR5/2	Fe	com	3	poor	20	20	y	y			
			43	120	C	5YR5/3	Fe	com	3	poor	56	34	y	y			
									Total	122	100						
									MB	122	31						
									Droughtiness grade (DR)	1	1						

45	T	0	30	mCL	10YR3/2			2		53	53	n	n	IV	3b	3b	WE
Pit 2		30	45	C	7.5YR5/2	Fe	many	2	poor	19	19	y	y				
		45	120	C	5YR5/3	Femn	com	1	poor	55	32	y	y				
										Total	127	104					
										MB	127	35					
										Droughtiness grade (DR)		1	1				
46	T	0	30	SCL	10YR3/2			2		50	50	n	n	IV	3b	3b	WE
		30	72	SC	10YR5/2	Fe	com	2	poor	43	51	y	y				
		72	90	SCL	10YR5/2	Fe	com	5		17	0	y	n				
		90	120	C	5YR5/3	mn/gr	com	0	poor	21	0	y	y				
										Total	131	101					
										MB	131	32					
										Droughtiness grade (DR)		1	1				
47	T	0	29	SCL	10YR3/2			1		49	49	n	n	IV	3b	3b	WE
		29	40	C	7.5YR5/2	Fe/gr	many	0	poor	14	14	y	y				
		40	120	C	5YR5/3	Fe/gr	com	0	poor	62	39	y	y				
										Total	125	102					
										MB	125	33					
										Droughtiness grade (DR)		1	1				
48	T	0	32	mSL	10YR3/2			3		53	53	n	n	I	1	2	DR
		32	50	LmS	7.5YR4/3			3		16	16	n	n				
		50	120	mSston						14	6	n	n				
										Total	83	75					
										MB	83	6					
										Droughtiness grade (DR)		1	2				
49	T	0	33	mSL	10YR3/2			3		55	55	n	n	I	1	1	
		33	72	LmS	7.5YR4/3			5		27	32	n	n				
		72	120	mS	5YR4/4			0		24	0	n	n				
										Total	106	86					
										MB	106	17					

Droughtiness grade (DR)										1	1						
50	T	0	30	mSL	10YR3/2	3				50	50	n	n	/	1	2	DR
		30	60	LmS	7.5YR5/3	5				23	26	n	n				
		60	120	mSston					12	3	n	n					
Total										84	78						
MB										84	9						
Droughtiness grade (DR)										1	2						
51 Pit 3	T	0	33	mSL	10YR3/2	2				55	55	n	n	/	1	2	DR
		33	63	mS	10YR5/6	0				18	21	n	n				
		63	120	mSston					11	2	n	n					
Total										85	78						
MB										85	9						
Droughtiness grade (DR)										1	2						
52	T	0	35	mSL	10YR3/2	2				58	58	n	n	///	3a	3a	WE
		35	70	mSL	10YR6/3	Fe	few	2	44	52	n	n					
		70	120	C	5YR5/3	Fe/gr	com	0	poor	35	0	y	y				
Total										137	110						
MB										137	41						
Droughtiness grade (DR)										1	1						
53	T	0	30	SCL	10YR3/2	3				50	50	n	n	/V	3b	3b	WE
		30	38	SCL	7.5YR5/3	Fe	com	3	12	12	y	n					
		38	120	C	5YR5/3	Femn	com	0	poor	65	42	y	y				
Total										126	103						
MB										126	34						
Droughtiness grade (DR)										1	1						
54	T	0	25	mCL	10YR4/2	5				43	43	n	n	/V	3b	3b	WE
		25	60	C	5YR5/3	Femn/gr	com	0	poor	40	46	y	y				
		60	120	C	5YR5/3	gr	com	0	poor	42	13	y	y				
Total										124	101						
MB										124	32						

										MB	84	8						
										Droughtiness grade (DR)	1	2						
60	T	0	31	mSL	10YR3/2				3		51	51	n	n	/	1	1	
		31	55	LmS	7.5YR5/3				3		20	21	n	n				
		55	73	mS	5YR5/3				0		9	11	n	n				
		73	120	mSston						9	0	n	n					
										Total	89	83						
										MB	89	14						
										Droughtiness grade (DR)	1	1						
61	T	0	33	mSL	10YR3/2				3		55	55	n	n	/	1	2	DR
		33	45	LmS	5YR4/4				3		11	11	n	n				
		45	53	mS	5YR4/4				0		5	6	n	n				
		53	120	mSston						13	5	n	n					
										Total	83	76						
										MB	83	7						
										Droughtiness grade (DR)	1	2						
62	T	0	30	SCL	10YR4/2				5		49	49	n	n	/V	3b	3b	WE
		30	42	SCL	10YR4/2, 10YR6/2	Fe	com	7		17	17	y	n					
		42	120	SC	5YR5/3	Femn/gr	com	10	poor	60	33	y	y					
												Total	126	98				
										MB	126	29						
										Droughtiness grade (DR)	1	1						
63	T	0	34	mCL	10YR4/2				5		58	58	n	n	/V	3b	3b	WE
		34	70	C	7.5YR5/3	Fe/gr	many	5	poor	33	45	y	y					
		70	120	C	5YR5/3	mn/gr	many	5	poor	33	0	y	y					
												Total	125	103				
										MB	125	34						
										Droughtiness grade (DR)	1	1						
64	T	0	33	mCL	10YR4/2				5		57	57	n	n	/V	3b	3b	WE
		33	120	C	5YR5/3	Femn/gr	com	5	poor	68	46	y	y					

										Total	124	102					
										MB	124	33					
										Droughtiness grade (DR)	1	1					
65	T	0	32	mSL	10YR3/2			3		53	53	n	n	/	1	1	
		32	50	LmS	7.5YR5/3			3		16	16	n	n				
		50	66	C	5YR5/3	Fe	few	0		13	26	n	n				
		66	75	SCL	5YR4/4			0		9	6	n	n				
		75	85	LmS	5YR4/4			0		6	0	n	n				
		85	120	mSston						7	0	n	n				
										Total	103	100					
										MB	103	31					
										Droughtiness grade (DR)	1	1					
66	T	0	34	mSL	10YR3/2			3		56	56	n	n	/	1	1	
		34	55	LmS	7.5YR5/3			3		17	18	n	n				
		55	80	mSL	5YR4/4			0		28	23	n	n				
		80	120	LmS	5YR4/4			0		24	0	n	n				
										Total	125	97					
										MB	125	28					
										Droughtiness grade (DR)	1	1					
67	T	0	34	mSL	10YR3/2			5		55	55	n	n	//	2	2	WE
		34	50	mSL	5YR4/4			7		22	22	n	n				
		50	73	SC	5YR5/3			5		22	29	n	n				
		73	120	C	5YR5/3	mn/gr	com	5	poor	31	0	y	y				
										Total	131	106					
										MB	131	37					
										Droughtiness grade (DR)	1	1					
68	T	0	30	SCL	10YR4/2	Fe	many	0	-	51	51	y	n	/V	3b	3b	WE
		30	50	SCL	7.5YR5/3	Fe	many	0		30	30	y	n				
		50	120	C	7.5YR5/3	Fe	many	0	poor	49	26	y	y				
										Total	130	107					

										MD	46	38					
										Droughtiness grade (DR)	1	1					
69	T	0	30	mSL	10YR4/2	Fe	many	0	-	51	51	y	n	///	3a	3a	WE
		30	120	hCL	7.5YR5/3	Fe	many	0		102	64	y	n				
										Total	153	115					
										MD	69	46					
										Droughtiness grade (DR)	1	1					
70	T	0	30	mSL	10YR4/2	Fe	many	0	-	51	51	y	n	//	2	2	WE DR
		30	120	LmS	10YR5/3	Fe	many	0		60	36	y	n				
										Total	111	87					
										MD	27	18					
										Droughtiness grade (DR)	1	1					
71	T	0	30	SCL	10YR4/2	Fe	many	2	-	50	50	y	n	IV	3b	3b	WE
		30	50	C	7.5YR5/3	Fe	many	10		29	29	y	n				
		50	120	C	7.5YR5/3	Fe	many	0	poor	49	26	y	y				
										Total	128	105					
									MD	44	36						
									Droughtiness grade (DR)	1	1						
72	T	0	30	SCL	10YR3/2	Fe	many	2	-	50	50	(y)	n	IV	3b	3b	WE
		30	60	C	7.5YR5/3	Fe/grey	com	0	poor	33	39	y	y				
		60	120	C	5YR4/4	grey	com	0	poor	42	13	n	y				
										Total	125	102					
									MD	41	33						
									Droughtiness grade (DR)	1	1						
73	T	0	25	SCL	10YR3/2	Fe	many	2	-	42	42	(y)	n	///	3a	3a	WE
		25	60	SCL	10YR5/3	Fe/grey	com	0		48	53	y	n				
		60	120	C	7.5YR4/4	grey	com	0	poor	42	13	n	y				
										Total	131	107					
									MD	47	38						
									Droughtiness grade (DR)	1	1						

74	T	0	30	mCL	10YR3/2	Fe	many	2	-	53	53	(y)	n	IV	3b	3b	WE
		30	60	C	10YR5/3	Fe	com	0	poor	33	39	y	y				
		60	120	C	10YR5/1	Fe	com	0	poor	42	13	y	y				
									Total	128	105	Some sand in USS					
									MD	44	36						
Droughtiness grade (DR)										1	1						
75	T	0	30	SCL	10YR3/2	Fe	few	0	-	51	51	n	n	II	3a	3a	WE
		30	120	mSL	10YR5/3, 7.5YR4/4	Fe	many	0		107	60	y	n				
									Total	158	111						
									MD	74	42						
		Droughtiness grade (DR)										1	1				
76	T	0	25	mCL	10YR3/2			0	-	45	45	n	n	III	3a	3a	WE
		25	70	mSL	10YR5/3	Fe	com	0		60	68	y	n				
		70	120	C	7.5YR4/4	Fe	com	0	poor	35	0	n	y				
									Total	140	113						
									MD	56	44						
Droughtiness grade (DR)										1	1						
77	T	0	30	mCL	10YR3/2	Fe	few	0	-	54	54	n	n	IV	3b	3b	WE
		30	120	C	7.5YR5/3	Fe	many	0	poor	88	64	y	y				
									Total	142	118						
									MD	58	49						
		Droughtiness grade (DR)										1	1				
78	T	0	30	mSL	10YR3/2			2	-	50	50	n	n	I	1	2	DR
		30	60	mS	7.5YR4/4			5		18	20	n	n				
		60	120	mS	7.5YR4/4			5		29	7	n	n				
									Total	97	77						
									MD	13	8						
Droughtiness grade (DR)										2	2						
79	T	0	30	mSL	10YR3/2			2	-	50	50	n	n	I	1	2	DR

		30	120	mS	7.5YR4/4		5		47	27	n	n					
								Total	97	77							
								MD	13	8							
								Droughtiness grade (DR)	2	2							
80	T	0	30	mSL	10YR3/2		2	-	50	50	n	n	/	1	2	DR	
		30	120	mS	7.5YR4/4		5		47	27	n	n					
								Total	97	77							
								MD	13	8							
								Droughtiness grade (DR)	2	2							
81	T	0	30	mSL	10YR3/2		2	-	50	50	n	n	/	1	2	DR	
		30	120	mS	7.5YR4/4		5		47	27	n	n					
								Total	97	77							
								MD	13	8							
								Droughtiness grade (DR)	2	2							
82	T	0	30	SCL	10YR3/2		2	-	50	50	n	n	/	2	2	WE	
		30	120	mSL	7.5YR4/4		5		102	57	n	n					
								Total	152	107							
								MD	68	38							
								Droughtiness grade (DR)	1	1							
83	T	0	35	mSL	10YR3/2		2	-	58	58	n	n	/	1	2	DR	
		35	120	mS	7.5YR4/4		5		43	23	n	n					
								Total	102	82							
								MD	18	13							
								Droughtiness grade (DR)	2	1							
84	T	0	30	mSL	10YR3/2		2	-	50	50	n	n	/	1	2	DR	
		30	120	LmS	10YR5/3	Fe	few	5	57	34	n	n					
								Total	107	84							
								MD	23	15							
								Droughtiness grade (DR)	2	1							
85	T	0	30	mSL	10YR3/2	Fe	few	2	-	50	50	n	n	/	1	2	DR

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		30	40	LmS	7.5YR4/4	Fe	few	5		9	9	n	n				
		40	120	LmS	7.5YR4/4	Fe	few	5		49	26	n	n				
									Total	107	84						
									MD	23	15						
									Droughtiness grade (DR)	2	1						
86	T	0	30	hCL	10YR4/2			2	-	53	53	n	n	///	3b	3b	WE
		30	120	hCL	7.5YR5/3	Fe	many	5		97	61	y	n				
									Total	150	114						
									MD	66	45						
									Droughtiness grade (DR)	1	1						
87	T	0	30	mCL	10YR3/2			2	-	53	53	y	n	///	3a	3a	WE
		30	40	C	10YR6/4	Fe	com	5		15	15	y	n				
		40	120	C	10YR5/2	Fe	com	5		69	46	y	n				
									Total	137	114		Some sand in LSS				
									MD	53	45						
									Droughtiness grade (DR)	1	1						
88	T	0	30	mCL	10YR3/2	Fe	few	2	-	53	53	n	n	IV	3b	3b	WE
		30	120	C	5YR4/4, 10YR5/3	Fe	com	5	poor	72	50	y	y				
									Total	125	103		Some sandy lenses in subsoil-sandy clay				
									MD	41	34						
									Droughtiness grade (DR)	1	1						
89	T	0	30	mCL	10YR3/2	Fe	few	2	-	53	53	n	n	IV	3b	3b	WE
		30	50	C	10YR5/3	Fe	com	5		31	31	y	n				
		50	120	C	5YR4/4	Fe	com	5	poor	47	25	n	y				
									Total	130	108						
									MD	46	39						
									Droughtiness grade (DR)	1	1						
90	T	0	30	mCL	10YR4/2	Fe	few	2	-	53	53	n	n	IV	3b	3b	WE
		30	120	C	7.5YR5/3	Fe	many	5	poor	72	50	y	y				

										Total	125	103						
										MD	41	34						
										Droughtiness grade (DR)	1	1						
91	T	0	30	SCL	10YR4/2	Fe	few	2	-	50	50	n	n	//	3a	3a	WE	
		30	120	mSL	10YR5/3, 7.5YR4/4	Fe	com	5		102	57	y	n					
											Total	152	107					
											MD	68	38					
											Droughtiness grade (DR)	1	1					
92	T	0	30	SCL	10YR4/2	Fe	few	2	-	50	50	n	n	/	2	2	WE DR	
		30	120	LmS	7.5YR4/4	Fe	few	5		57	34	n	n					
											Total	107	84					
											MD	23	15					
											Droughtiness grade (DR)	2	1					
93	T	0	25	SCL	10YR4/2	Fe	few	2	-	42	42	n	n	/	2	2	WE	
		25	35	mSL	7.5YR4/3	Fe	few	5		14	14	n	n					
		35	120	mSL	7.5YR4/3	Fe	few	5		95	50	n	n					
											Total	151	106					
											MD	67	37					
										Droughtiness grade (DR)	1	1						
94	T	0	25	mSL	10YR4/2	Fe	few	2	-	42	42	n	n	/	1	1		
		25	40	SCL	7.5YR4/3	Fe	few	5		21	21	n	n					
		40	120	SCL	7.5YR4/3	Fe	few	5		81	43	n	n					
											Total	144	106					
										MD	60	37						
										Droughtiness grade (DR)	1	1						
95	T	0	30	mSL	10YR4/2	Fe	many	2	-	50	50	y	n	//	2	2	WE	
		30	60	mSL	10YR5/3, 7.5YR4/4	Fe	many	5		39	43	y	n					
		60	120	mSL	10YR5/3, 7.5YR4/4	Fe	many	5		63	14	y	n					

										Total	152	107							
										MD	68	38							
										Droughtiness grade (DR)	1	1							
96	T	0	35	SCL	10YR4/2	Fe	many	2	-	58	58	y	n	IV	3b	3b	WE		
		35	120	C	10YR5/2	Fe/grey	com	5	poor	65	43	y	y						
											Total	124	102						
											MD	40	33						
											Droughtiness grade (DR)	1	1						
97	T	0	30	SCL	10YR4/2			2	-	50	50	n	n	I	2	2	WE		
		30	120	SCL	7.5YR4/4			5		95	57	n	n						
											Total	145	107						
											MD	61	38						
											Droughtiness grade (DR)	1	1						
98	T	0	30	SCL	10YR4/2	Fe	few	2	-	50	50	n	n	I	2	2	WE		
		30	120	mSL	5YR4/4			5		102	57	n	n						
											Total	152	107						
											MD	68	38						
											Droughtiness grade (DR)	1	1						
99	T	0	30	SCL	10YR4/2	Fe	many	2	-	50	50	y	n	II	3a	3a	WE		
		30	50	mSL	10YR5/3	Fe	many	5		29	29	y	n						
		50	120	mSL	5YR4/4	Fe	many	5		73	29	n	n						
											Total	152	107						
											MD	68	38						
										Droughtiness grade (DR)	1	1							
100	T	0	30	SCL	10YR4/2	Fe	few	2	-	50	50	n	n	IV	3b	3b	WE		
		30	50	C	7.5YR4/4	red	many	5	poor	25	25	n	y						
		50	120	mS	5YR4/4			5		33	13	n	n						
											Total	108	88	Wetness assessed - ALC Guidelines P38- vi) Non-gley SPL reddish soils- Figure 7					
											MD	24	19						
										Droughtiness grade (DR)	2	1							

Wetness assessed - ALC Guidelines P38- vi)
Non-gley SPL reddish soils- Figure 7

101	T	0	30	mSL	10YR3/2			2	-	50	50	n	n	//	2	2	WE DR
		30	120	mS	10YR5/2	Fe	many	5		47	27	y	n				
										Total	97	77					
										MD	13	8					
		Droughtiness grade (DR)									2	2					
102	T	0	25	mSL	10YR3/2	Fe	few	2	-	42	42	n	n	//	2	2	WE DR
		25	120	mS	10YR5/2	Fe	many	5		50	30	y	n				
										Total	92	72					
										MD	8	3					
		Droughtiness grade (DR)									2	2					
103	T	0	25	mSL	10YR3/2	Fe	few	2	-	42	42	n	n	//	2	2	WE DR
		25	120	mS	10YR5/2	Fe	many	5		50	30	y	n				
										Total	92	72					
										MD	8	3					
		Droughtiness grade (DR)									2	2					
104	T	0	25	mSL	10YR3/2	Fe	few	2	-	42	42	n	n	//	2	2	WE DR
		25	120	mS	10YR5/2	Fe	many	5		50	30	y	n				
										Total	92	72					
										MD	8	3					
		Droughtiness grade (DR)									2	2					
105	T	0	30	SCL	10YR3/2	Fe	few	2	-	50	50	n	n	/	2	2	WE DR
		30	45	LmS	10YR4/3	Fe	few	5		13	13	n	n				
		45	120	mS	7.5YR5/3	Fe	many	5		37	17	y	n				
										Total	100	80					
										MD	16	11					
Droughtiness grade (DR)									2	1							
106	T	0	30	mCL	10YR3/2	Fe	few	2	-	53	53	n	n	/V	3b	3b	WE
		30	40	C	10YR5/2	Fe,red	many	5	poor	12	12	y	y				
		40	120	C	5YR4/4	Fe,red	com	5	poor	59	37	n	y				
										Total	125	103					

										MD	41	34						
										Droughtiness grade (DR)	1	1						
107	T	0	30	SCL	10YR3/2	Fe	few	2	-	50	50	n	n	I-II	3a	3a	WE	
		30	40	mSL	7.5YR5/3	Fe	many	5		14	14	y	n					
		40	60	mSL	5YR4/4	red	many	5		25	29	n	n					
		40	120	LmS	7.5YR4/4	grey	many	5		49	26	n	n					
										Total	138	119						
										MD	54	50						
										Droughtiness grade (DR)	1	1						
108	T	0	30	SCL	10YR3/2			2	-	50	50	n	n	II-III	3a	3a	WE	
		30	60	mSL	10YR5/1	Fe	many	5		39	43	y	n					
		60	65	SC	10YR5/2	Fe	many	10		5	7	y	n					
		65	120	SC	10YR5/2	Fe	many	5		52	7	y	n					
										Total	146	107						
										MD	62	38						
										Droughtiness grade (DR)	1	1						
109	T	0	30	SCL	10YR3/1	Fe	few	2	-	50	50	n	n	IV	3b	3b	WE	
		30	35	mSL	10YR5/1	Fe	many	5		7	7	y	n					
		35	120	C	5YR4/4	Fe	many	5	poor	65	43	n	y					
											Total	123	101					
											MD	39	32					
										Droughtiness grade (DR)	1	1						
110	T	0	30	SCL	10YR3/1	Fe	few	2	-	50	50	n	n	IV	3b	3b	WE	
		30	50	mSL	10YR5/2	Fe	com	5		29	29	y	n					
		50	120	C	5YR4/4			5	poor	47	25	n	y					
											Total	125	103					
											MD	41	34					
										Droughtiness grade (DR)	1	1						
111	T	0	30	SCL	10YR3/2	Fe	few	2	-	50	50	n	n	IV	3b	3b	WE	
		30	120	C	5YR4/4			5	poor	72	50	n	y					

													Some sand in subsoil					
													Wetness assessed - ALC Guidelines P38- vi)					
													Non-gley SPL reddish soils- Figure 7					
										Total	122	100						
										MD	38	31						
										Droughtiness grade (DR)	1	1						
112	T	0	30	mCL	10YR3/2	Fe	many	2	-	53	53	(y)	n	IV	3b	3b	WE	
		30	120	C	10YR5/3	Fe	com	5	poor	72	50	y	y					
											Total	125	103					
											MD	41	34					
											Droughtiness grade (DR)	1	1					
113	T	0	30	mSL	10YR3/2	Fe	few	2	-	50	50	n	n	II	2	2	WE DR	
		30	120	mS	10YR5/2	Fe	com	5		47	27	y	n					
											Total	97	77					
											MD	13	8					
											Droughtiness grade (DR)	2	2					
114	T	0	30	SCL	10YR3/2	Fe	many	2	-	50	50	(y)	n	III	3a	3a	WE	
		30	60	C	10YR5/3	Fe	few	5		38	46	n	n					
		60	120	C	5YR4/4	Fe	com	5	poor	40	12	n	y					
											Total	128	108	Figure 7-Mottling within 40cm (Topsoil)				
											MD	44	39	& Wetness assessed - ALC Guidelines P38- vi)				
										Droughtiness grade (DR)	1	1	Non-gley SPL reddish soils- Figure 7					
115	T	0	30	mCL	10YR4/2	Fe	few	2	-	53	53	n	n	III	3a	3a	WE	
		30	45	mSL	10YR5/2	Fe	many	5		21	21	y	n					
		45	120	C	7.5YR4/4	Fe	many	5	poor	53	31	n	y					
											Total	127	105					
											MD	43	36					
										Droughtiness grade (DR)	1	1						
116	T	0	30	hCL	10YR4/2	Fe	few	2	-	53	53	n	n	IV	4	4		WE
		30	120	C	5YR5/3	Fe	many	5	poor	72	50	y	y					
											Total	125	103					
											MD	41	34					
											Droughtiness grade (DR)	1	1					

117	T	0	30	mCL	10YR4/2	Fe	few	2	-	53	53	n	n	IV	3b	3b	WE		
		30	40	mSL	10YR5/2	Fe	many	5		14	14	y	n						
		40	50	mSL	10YR5/2	Fe	many	5		14	14	y	n						
		50	120	C	7.5YR4/4	Fe	many	5	poor	47	25	n	y						
									Total	128	106								
									MD	44	37								
Droughtiness grade (DR)										1	1								
118	T	0	30	SCL	10YR3/2	Fe	few	2	-	50	50	n	n	III	3a	3a	WE		
		30	60	LmS	10YR5/2	Fe	many	5		23	26	y	n						
		60	120	C	7.5YR4/4	Fe	few	5	poor	40	12	n	y						
									Total	113	88								
									MD	29	19								
									Droughtiness grade (DR)	2	1								
119	T	0	30	mCL	10YR3/2	Fe	few	2	-	53	53	n	n	IV	3b	3b	WE		
		30	40	C	10YR5/3	Fe	many	5		15	15	y	n						
		40	120	C	10YR5/3	Fe	many	5	poor	59	37	y	y						
									Total	127	105								
									MD	43	36								
									Droughtiness grade (DR)	1	1								
120	T	0	30	mCL	10YR3/2	Fe	few	2	-	53	53	n	n	IV	3b	3b	WE		
		30	120	C	10YR5/3	Fe	com	5	poor	72	50	y	y						
									Total	125	103								
									MD	41	34								
									Droughtiness grade (DR)	1	1								
121	T	0	25	mCL	10YR3/2	Fe	few	2	-	44	44	n	n	IV	3b	3b	WE		
		25	50	LmS	10YR5/2	Fe	many	5		22	22	y	n						
		50	120	C	7.5YR4/4	Fe	com	5	poor	47	25	n	y						
									Total	112	90								
									MD	28	21								
									Droughtiness grade (DR)	2	1								

122	T	0	30	mCL	10YR3/2	Fe	few	2	-	53	53	n	n	IV	3b	3b	WE
		30	120	C	5YR4/4	Fe	com	5	poor	72	50	n	y				
									Total	125	103			Wetness assessed - ALC Guidelines P38- vi) Non-gley SPL reddish soils- Figure 7			
									MD	41	34						
									Droughtiness grade (DR)	1	1						
123	T	0	30	mCL	10YR3/2	Fe	few	2	-	53	53	n	n	III	3a	3a	WE
		30	60	SCL	10YR6/4	Fe	com	5		38	43	y	n				
		60	120	C	7.5YR4/4	Fe	com	5	poor	40	12	n	y				
									Total	131	108			USS-mixed sand and clay			
									MD	47	39						
									Droughtiness grade (DR)	1	1						
124	T	0	30	hCL	10YR3/2	Fe	many	2	-	53	53	(y)	n	IV	4	4	WE
		30	120	C	7.5YR5/3	Fe	many	5	poor	72	50	y	y				
									Total	125	103						
									MD	41	34						
									Droughtiness grade (DR)	1	1						
125	T	0	30	mCL	10YR3/2	Fe	many	2	-	53	53	(y)	n	IV	3b	3b	WE
		30	45	SCL	10YR5/3	Fe	com	5		21	21	y	n				
		45	120	C	5YR4/4	Fe	com	5	poor	53	31	n	y				
									Total	127	105						
									MD	43	36						
									Droughtiness grade (DR)	1	1						
126	T	0	30	mCL	10YR3/2	Fe	many	10	-	49	49	(y)	n	IV	3b	3b	WE
		30	50	C	10YR4/2	Fe	com	10		29	29	y	n				
		50	120	C	7.5YR4/4	Fe	com	10	poor	44	24	n	y				
									Total	122	102						
									MD	38	33						
									Droughtiness grade (DR)	1	1						
127	T	0	30	mCL	10YR3/2	Fe	few	2	-	53	53	n	n	IV	3b	3b	WE
		30	45	C	10YR5/3	Fe	com	2		24	24	y	n				

		45	120	C	7.5YR4/4	Fe	many	2	poor	54	32	n	y				
									Total	131	108						
									MD	47	39						
									Droughtiness grade (DR)	1	1						
128	T	0	30	mSL	10YR3/2	Fe	few	2	-	50	50	n	n	IV	3b	3b	WE
		30	45	mS	10YR5/3	Fe	com	2		10	10	y	n				
		45	120	C	5YR4/4	red	many	2	poor	54	32	n	y				
									Total	115	92						
									MD	31	23						
									Droughtiness grade (DR)	1	1						
129	T	0	30	mCL	10YR4/2	Fe	many	2	-	53	53	y	n	IV	3b	3b	WE
		30	45	SCL	10YR5/3	Fe	com	2		22	22	y	n				
		45	120	C	5YR4/4	red	many	2	poor	54	32	n	y				
									Total	130	107						
									MD	46	38						
									Droughtiness grade (DR)	1	1						
130	T	0	40	mCL	10YR3/2	Fe	many	2	-	71	71	(y)	n	IV	3b	3b	WE
		40	60	C	7.5YR5/3	Fe	com	2	poor	20	26	y	y				
		60	120	C	5YR4/4	Fe	com	2	poor	41	13	n	y				
									Total	131	109						
									MD	47	40						
									Droughtiness grade (DR)	1	1						
131	T	0	30	SCL	10YR3/2	Fe	few	2	-	50	50	n	n	IV	3b	3b	WE
		30	50	SCL	10YR4/2	Fe	many	2		29	29	y	n				
		50	120	C	10YR5/3	Fe	com	2	poor	48	26	y	y				
									Total	128	105						
									MD	44	36						
									Droughtiness grade (DR)	1	1						
132	T	0	30	SCL	10YR3/2	Fe	few	2	-	50	50	n	n	IV	3b	3b	WE
		30	50	LmS	10YR5/3	Fe	many	2		18	18	y	n				

		50	120	C	5YR4/4	red	many	2	poor	48	26	n	y				
									Total	116	93						
									MD	32	24						
									Droughtiness grade (DR)	1	1						
133	T	0	30	SCL	10YR4/2	Fe	few	2	-	50	50	n	n	III	3a	3a	WE
		30	60	C	10YR5/2	Fe	com	2		39	47	y	n				
		60	120	C	5YR4/4	red	many	2	poor	41	13	n	y				
									Total	131	110						
									MD	47	41						
									Droughtiness grade (DR)	1	1						
134	T	0	30	SCL	10YR3/2	Fe	few	2	-	50	50	n	n	IV	3b	3b	WE
		30	55	C	10YR5/3	Fe	many	2		35	39	y	n				
		55	120	C	7.5YR4/4	red	many	2	poor	45	19	n	y				
									Total	130	108						
									MD	46	39						
									Droughtiness grade (DR)	1	1						
135	T	0	30	SCL	10YR3/2	Fe	few	2	-	50	50	n	n	IV	3b	3b	WE
		30	45	mSL	10YR5/3	Fe	many	2		22	22	y	n				
		45	120	C	7.5YR5/3	Fe	com	2	poor	54	32	y	y				
									Total	127	104						
									MD	43	35						
									Droughtiness grade (DR)	1	1						
136	T	0	30	SCL	10YR4/2	Fe	few	2	-	50	50	n	n	I	2	2	WE DR
		30	40	mS	10YR5/3	Fe	few	2		7	7	n	n				
		40	120	mS	7.5YR4/4	Fe	few	10		38	19	n	n				
									Total	95	76						
									MD	11	7						
									Droughtiness grade (DR)	2	2						
137	T	0	30	mCL	10YR3/2	Fe	many	2	-	53	53	(y)	n	IV	3b	3b	WE
		30	50	C	10YR5/2	Fe	com	2		31	31	y	n				

		50	120	C	7.5YR4/4	Fe	many	2	poor	48	26	n	y				
									Total	132	110						
									MD	48	41						
									Droughtiness grade (DR)	1	1						
138	T	0	30	SCL	10YR4/2	Fe	many	2	-	50	50	y	n	IV	3b	3b	WE
		30	50	C	10YR5/2	Fe	few	2		31	31	n	n				
		50	120	C	5YR4/4	Fe	many	2	poor	48	26	n	y				
									Total	130	107						
									MD	46	38						
									Droughtiness grade (DR)	1	1						
139	T	0	30	SCL	10YR3/2	Fe	many	2	-	50	50	(y)	n	IV	3b	3b	WE
		30	120	C	10YR5/3	Fe	com	2	poor	74	51	y	y				
									Total	124	101						
									MD	40	32						
									Droughtiness grade (DR)	1	1						
140	T	0	30	SCL	10YR4/2	Fe	few	2	-	50	50	n	n	//	3a	3a	WE
		30	45	LmS	10YR5/3	Fe	many	2		13	13	y	n				
		45	120	mS	7.5YR4/4	Fe	many	2		38	17	n	n				
									Total	101	81						
									MD	17	12						
									Droughtiness grade (DR)	2	1						
141	T	0	30	SCL	10YR3/2	Fe	few	2	-	50	50	n	n	//	3a	3a	WE
		30	120	LmS	10YR5/3	Fe	com	2		59	35	y	n				
									Total	109	85						
									MD	25	16						
									Droughtiness grade (DR)	2	1						
142/P4	T	0	30	mCL	10YR3/2	Fe	many	2	-	53	53	(y)	n	IV	3b	3b	WE
		30	120	C	10YR5/3	Fe	com	2	poor	74	51	y	y				
									Total	127	104						
									MD	43	35						

Figure 7-Mottling within 40cm (Topsoil)
& Wetness assessed - ALC Guidelines P38- vi)
Non-gley SPL reddish soils- Figure 7

Droughtiness grade (DR)										1	1							
143	T	0	30	SCL	10YR4/2	Fe	many	2	-	50	50	y	n	IV	3b	3b	WE	
		30	45	SCL	10YR4/2	Fe	com	2		22	22	y	n					
		45	120	C	10YR5/2	Fe	com	2	poor	54	32	y	y					
		Total								127	104							
		MD								43	35							
Droughtiness grade (DR)										1	1							
144	T	0	35	SCL	10YR4/2	Fe	many	2	-	58	58	y	n	//	3a	3a	WE	
		35	40	mSL	10YR5/3	Fe	com	2		7	7	y	n					
		40	120	mS	5YR4/4	Fe	many	2		41	21	n	n					
		Total								107	86							
		MD								23	17							
Droughtiness grade (DR)										2	1							
145	T	0	35	mSL	10YR4/2			2	-	58	58	n	n	/	1	2	DR	
		35	120	LmS	10YR4/4			2		54	31	n	n					
		Total								113	89							
		MD								29	20							
		Droughtiness grade (DR)										2	1					
146	T	0	30	mSL	10YR4/2	Fe	many	2	-	50	50	y	n	IV	3b	3b	WE	
		30	50	C	7.5YR4/4	Fe	many	2		31	31	n	n					
		50	120	C	5YR4/4	Fe	many	2	poor	48	26	n	y	Figure 7-Mottling within 40cm (Topsoil) & Wetness assessed - ALC Guidelines P38- vi) Non-gley SPL reddish soils- Figure 7				
		Total								130	107							
		MD								46	38							
Droughtiness grade (DR)										1	1							
147	T	0	30	SCL	10YR4/2	Fe	many	2	-	50	50	y	n	IV	3b	3b	WE	
		30	120	C	5YR4/4	red	many	2	poor	74	51	n	y	Figure 7-Mottling within 40cm (Topsoil) & Wetness assessed - ALC Guidelines P38- vi) Non-gley SPL reddish soils- Figure 7				
		Total								124	101							
		MD								40	32							
		Droughtiness grade (DR)										1	1					
148	T	0	30	mSL	10YR4/2			2	-	50	50	n	n	/	1	2	DR	

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Figure 7-Mottling within 40cm (Topsoil)
& Wetness assessed - ALC Guidelines P38- vi)
Non-gley SPL reddish soils- Figure 7

Figure 7-Mottling within 40cm (Topsoil)
& Wetness assessed - ALC Guidelines P38- vi)
Non-gley SPL reddish soils- Figure 7

						MD	2	-3							
						Droughtiness grade (DR)	3a	2							
154	T	0	30	SCL	10YR4/2	2	-	50	50	n	n	/	2	2	WE
		30	40	mSL	7.5YR4/3	2		15	15	n	n				
		40	<u>50</u>	LmS	7.5YR4/4	2		9	9	n	n				
		50	120	LmS	7.5YR4/4	2		41	18	n	n				
						Total		115	91						
						MD		31	22						
						Droughtiness grade (DR)		1	1						
155	T	0	30	mSL	10YR4/2	2	-	50	50	n	n	/	1	1	
		30	<u>60</u>	SCL	7.5YR4/4	2		39	44	n	n				
		60	120	mSL	7.5YR4/4	2		65	15	n	n				
						Total		154	109						
						MD		70	40						
						Droughtiness grade (DR)		1	1						
156	T	0	35	mSL	10YR4/2	2	-	58	58	n	n	/	1	2	DR
		35	50	LmS	7.5YR4/4	2		13	13	n	n				
		50	120	mS	7.5YR5/3	2		34	14	n	n				
						Total		106	85						
						MD		22	16						
						Droughtiness grade (DR)		2	1						
157	T	0	30	SCL	10YR4/2	2	-	50	50	n	n	/	2	2	WE DR
		30	50	LmS	7.5YR4/3	2		18	18	n	n				
		50	120	mS	5YR4/4	2		34	14	n	n				
						Total		102	81						
						MD		18	12						
						Droughtiness grade (DR)		2	1						
158	T	0	30	LmS	10YR4/2	2	-	38	38	n	n	/	1	3a	DR
		30	120	mS	5YR4/4	2		48	28	n	n				
						Total		86	66						
						MD		2	-3						

						Droughtiness grade (DR)		3a	2							
159	T	0	<u>30</u>	mSL	10YR4/2	2	-	50	50	n	n	/	1	2	DR	
			30	120	LmS	5YR4/4	2		59	35	n	n				
							Total	109	85							
							MD	25	16							
								Droughtiness grade (DR)		2	1					
160	T	0	30	mSL	10YR4/2	2	-	50	50	n	n	/	1	2	DR	
			30	50	LmS	10YR4/3	2		18	18	n	n				
		50	120	mS	5YR4/4	2		34	14	n	n					
							Total	102	81							
							MD	18	12							
						Droughtiness grade (DR)		2	1							
161	T	0	30	LmS	10YR4/2	2	-	38	38	n	n	/	1	3a	DR	
			30	60	mS	7.5YR4/3	2		19	21	n	n				
		60	120	mS	7.5YR4/4	2		29	7	n	n					
							Total	86	66							
							MD	2	-3							
						Droughtiness grade (DR)		3a	2							
162	T	0	30	LmS	10YR4/2	2	-	38	38	n	n	/	1	3a	DR	
			30	<u>50</u>	mS	7.5YR4/4	2		14	14	n	n				
		50	120	mS	7.5YR4/4	2		34	14	n	n					
							Total	86	66							
							MD	2	-3							
						Droughtiness grade (DR)		3a	2							
163	T	0	30	LmS	10YR4/2	2	-	38	38	n	n	/	1	2	DR TX	
			30	<u>50</u>	LmS	7.5YR4/4	2		18	18	n	n				
		50	120	mS	7.5YR4/4	2		34	14	n	n					
							Total	90	70							
							MD	6	1							
						Droughtiness grade (DR)		2	2							

Appendix 3: Site Photographs



Pit 1, deep coarse loamy and sandy soil.



Sandy loam topsoil.



Loamy sand upper subsoil.



Sand lower subsoil.



Pit 2, clay loam over SPL clay.



Coarse mottled clay upper subsoil.



Pit 2, coarse loamy and sandy over sandstone.



Sand upper subsoil.



Observation 5: typical auger arisings Soil Type 1.



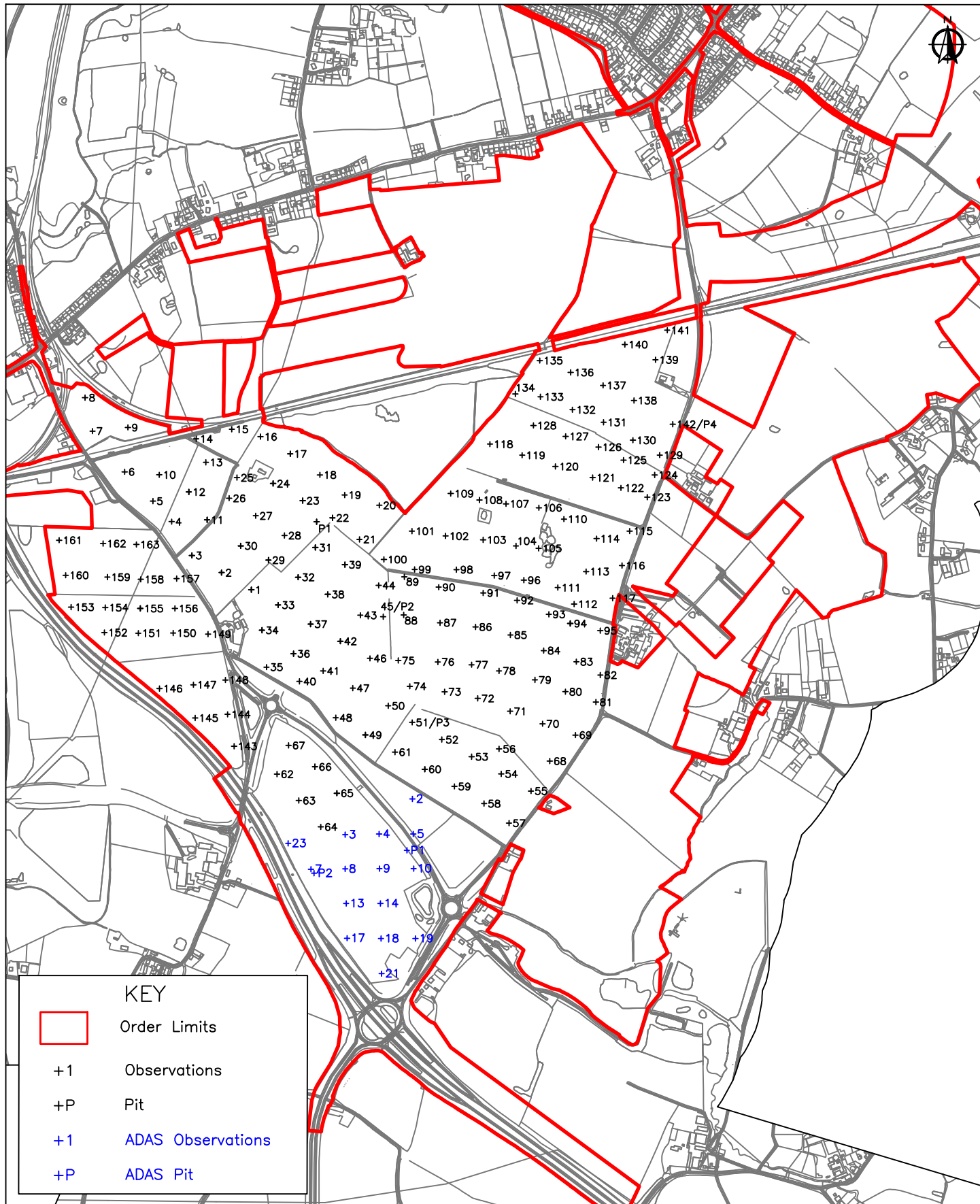
Observation 56: typical auger arisings Soil Type 2.



Pit 4 topsoil over clay



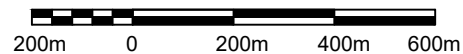
Pit 4 mottled clay subsoil



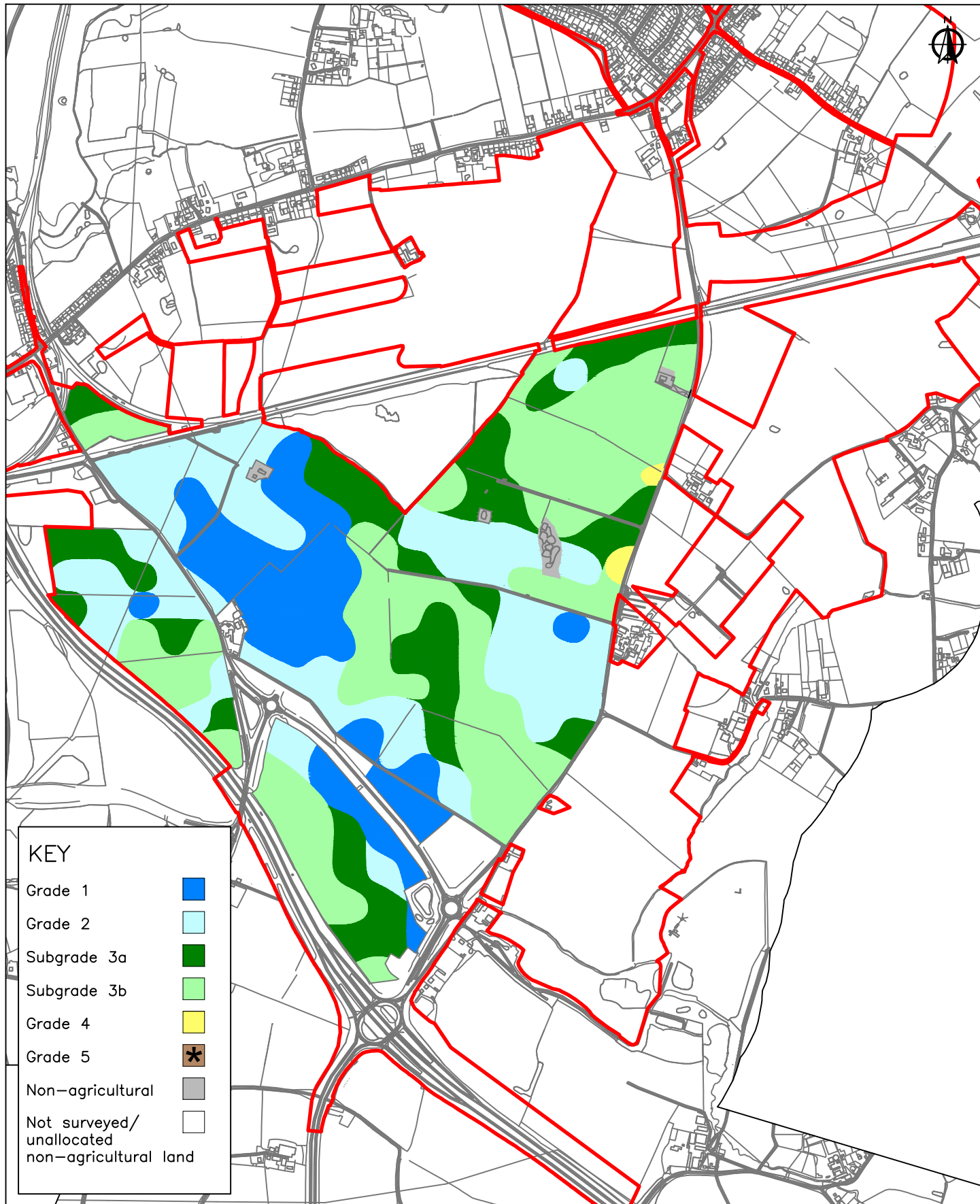
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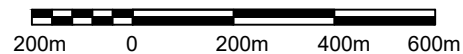
Drawing title OBSERVATION MAPPING	Ref. RAC/10470/1	Rev. C				Reading Agricultural Consultants Ltd Gate House Beechwood Court Long Toll Woodcote RGS ORR 01491 684233 www.reading-ag.com  READING AGRICULTURAL CONSULTANTS
Contract INTERMODAL LOGISTICS PARK NORTH RAIL FREIGHT INTERCHANGE AT LAND EAST OF NEWTON—LE—WILLOWS	Drawn by AGM	Checked by AIF	C	Compound	1025	
			B	Survey Phase 2	0825	
			A	Survey Phase 1	0824	
			Rev.	Comment	Date	
	Scales 1:15,000@A4	Date 10/2025				



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Contract INTERMODAL LOGISTICS PARK NORTH RAIL FREIGHT INTERCHANGE AT LAND EAST OF NEWTON-LE-WILLOWS	Drawn by AGM	Checked by AIF	C	Compound	1025	
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			Rev.	Comment	Date	
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