Ashfield Land Management Ltd and

Gazeley GLP Northampton s.à.r.l.

Rail Central,

Milton Malsor,

Northamptonshire

Agricultural Land Classification

and

Soil Resources

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1. Introduction

1.1. Instruction

1.1.1. Reading Agricultural Consultants Ltd (RAC) is instructed by Turley on behalf of Ashfield Land Management Ltd and Gazeley GLP Northampton s.à.r.l.to investigate the Agricultural Land Classification (ALC) and soil resources of land at Milton Malsor, Northamptonshire. The main site area is to the south of the settlement with additional land associated with proposed junction improvements at Junction 15a of the M1. Land within the associated highway works is not assessed within this study as no agricultural land is required.

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

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

1.1.4. Grade 1 land is excellent quality agricultural land with very minor or no limitations to agricultural use, and Grade 5 is very poor quality land, with severe limitations due to adverse soil, relief, climate or a combination of these. Grade 3 land is subdivided into Subgrade 3a (good quality land) and Subgrade 3b (moderate quality land). Land which is classified as Grades 1, 2 and 3a in the ALC system is defined as best and most versatile agricultural land.

1.1.5. As explained in Natural England's TIN049, the whole of England and Wales was mapped from reconnaissance field surveys in the late 1960s and early 1970s, to provide general strategic guidance on agricultural land quality for planners. This Provisional Series of maps was published on an Ordnance Survey base at a scale of One Inch to One Mile (1:63,360). The Provisional ALC map shows both the main site and the land at Junction 15a to be of undifferentiated Grade 3 quality, with the main site bordering on Grade 2 to the south. 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*

[1] **MAFF (1988).** *Agricultural Land Classification of England and Wales. Revised guidelines and criteria for grading the quality of agricultural land.* MAFF Publications.
[2] **Natural England (2012**). *Technical Information Note 049 - Agricultural Land Classification: protecting the best and most versatile agricultural land*, Second Edition 19th December 2012.

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 …"

2. Site and Climatic Conditions

2.1. General Features, Land Form and Drainage

Main SRFI Site

2.1.1. The site extends to around 291ha of which a majority (266ha) is agricultural land predominantly in arable use. The site is located at the southern edge of the settlement of Milton Malsor, with Collingtree Road and Rectory Lane marking the northern boundary. The site is bounded to the west by the A43, to the south-west by the Grand Union Canal, to the south by the West Coast Main Line (WCML) and to the east by other agricultural land. The Northampton Loop of the WCML separates a strip of land from the bulk of the main site in the east.

2.1.2. Topography is undulating across the area, predominantly between altitudes of around 80m and 85m above Ordnance Datum (AOD). The east of the site has gentle to moderate slopes with altitudes up to around 95m AOD. Drainage is via a small number of peripheral field ditches.

Junction 15a

2.1.3. Agricultural land around Junction 15a extends to approximately 8ha in total, comprising two land parcels separated by the A43. The Grand Union Canal is aligned north to south and runs to the west of the A43.

2.1.4. Topography is level to gently sloping with gradients up to around 3° at altitudes between 70m and 80m AOD.

2.2. Agro-climatic Conditions

2.2.1. Agro-climatic data for both site areas have been interpolated from the Meteorological Office's standard 5km grid point data set at representative altitudes of 85m and 75m AOD for the Main SRFI Site and Junction 15a site respectively, and are given in Table 1. Rainfall is relatively low and temperatures are mild. Crop moisture deficits are moderate to moderately large. The Field Capacity Day (FCD) regimes are relatively short and are considered to be favourable for providing opportunities for agricultural field work.

Table 1: Local agro-climatic conditions

Criterion	Main SRFI Site	Junction 15a
Average Annual Rainfall	641mm	631mm
Accumulated Temperatures >0°C	1,390 day°	1,400 day°
Field Capacity Days	137 days	136 days
Average Moisture Deficit, wheat	106mm	108mm
Average Moisture Deficit, potatoes	97mm	101mm

2.3. Soil Parent Material and Soil Type

2.3.1. The principal underlying geology mapped by the British Geological Survey[3] is of the Whitby Mudstone Formation, comprising mudstone and siltstone. In the west of the Main SRFI Site, and to the east and south-west of Junction 15a, the Marlstone Rock and Dyrham Formations are also mapped. The Marlstone Rock Formation includes sandy limestone interbedded with calcareous sandstone whilst the Dyrham Formation includes silty and sandy mudstone.

2.3.2. Superficial deposits of the Oadby Member overlie the east of the Main SRFI Site and a majority of the Junction 15a area and are characterised by rock fragments with lenses of sand, gravel, clay and silt. The north of the main site is overlain by glaciofluvial sand and gravel. Alluvial deposits are mapped in conjunction with the present day ditches and may include clay, silt, sand and gravel.

2.3.3. The Soil Survey of England and Wales soil association mapping[4] (1:250,000 scale) shows soils of the Denchworth, Hanslope and Wick 1 associations to present across the Main SRFI Site and Junction 15a.

2.3.4. Denchworth soils are dominant at the main site and are also mapped to the west of Junction 15a. The soils are clayey throughout and have slowly permeable subsoils. They are waterlogged for prolonged periods and commonly assessed as Wetness Class (WC) IV or V.

2.3.5. Hanslope soils are similarly clayey throughout and although are slowly permeable in subsoil horizons, are seldom seriously waterlogged, typically of WC III. Hanslope soils are also typically calcareous.

[3] **British Geological Survey (2018).** *Geology of Britain viewer, http://mapapps.bgs.ac.uk/geologyofbritain/home.html*
[4] **Soil Survey of England and Wales (1984).** *Soils of Eastern England (1:250,000), Sheet 4*

2.3.6. The Wick 1 association contrastingly comprises coarse loamy and sandy profiles, locally over gravel. They are freely draining, of WC I, and can be slightly droughty[5].

3. Agricultural Land Quality

3.1. Soil Survey Methods

3.1.1. A majority of the west of the Main SRFI site was surveyed in detail by MAFF in 1997. Survey has not been repeated in this area.

3.1.2. A total of 171 soil profiles were examined across the Main SRFI site, and 21 across the Junction 15a site, using an Edelman (Dutch) or gauge auger at an observation density of one per hectare in accordance with the recommendations set out in Natural England's TIN0492. Three pits were at the main site and one at Junction 15a excavated with a spade to examine subsoil structures. The locations of observations are indicated on Figures RAC6640-1. The following characteristics were assessed for each observable soil horizon up to a maximum of 120cm or any impenetrable layer:

- soil texture;
- significant stoniness;
- colour (including local gley and mottle colours);
- consistency;
- structural condition;
- free carbonate; and
- depth.

3.1.2. Five topsoil samples from across the two sites were submitted for laboratory determination of particle size distribution, pH, organic matter content and nutrient contents (P, K, Mg). Results are given in Appendix 1.

3.1.3. Soil Wetness Class (WC) was inferred from the matrix colour, presence or absence of, and depth to, greyish and ochreous gley mottling and/or poorly permeable subsoil layers at least 15cm thick, in relation to the number of Field Capacity Days at the location.

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

[5] **Hodge *et al.* (1984).** *Soils and Their Use in Eastern England, Soil Survey of England and Wales,* Bulletin 13. Harpenden

evapotranspiration and rainfall. Grading of the land can be affected if the AP is insufficient to balance the MD and droughtiness occurs.

3.2. Agricultural Land Classification and Site Limitations

3.2.1. Assessment of quality has been carried out according to the MAFF revised guidelines1. Soil profiles have been described according to Hodgson[6] which is the recognised source for describing soil profiles and characteristics according to the MAFF revised ALC guidelines.

3.2.2. Agricultural land quality at the main site and at Junction 15a is most affected by soil wetness and workability, though smaller areas are affected by drought.

Main SRFI Site

3.2.3. The primary soil type at the main site is largely characteristic of the Denchworth association. Topsoil is of clay or heavy clay loam of 31cm average depth. The colour is dark greyish brown (10YR3/2, 4/2, 5/2, 2.5Y3/2 in the Munsell soil colour charts[7]) or olive brown (2.5Y4/3). The topsoil is stoneless or very slightly stony and non-calcareous. The structure is moderately well developed with medium subangular blocky peds, though few roots are observed in the topsoil. The consistency was friable at the time of survey.

3.2.4. Subsoil layers comprise clay of variable colour, including grey (10YR5/1), greyish brown (10YR5/2, 2.5Y5/2), brown or light olive brown (10YR5/3, 2.5Y5/3), dark grey (2.5Y3/1, 5Y4/1) and greenish grey (10Y5/1, 10GY5/1, 10G5/1). The subsoil displays ochreous mottles and is gleyed. The structure is weakly developed with a massive or coarse angular blocky structure. Permeability is hindered and the profiles are commonly poorly drained, of WC IV, or less commonly of WC III. Pit 1 is representative of this soil type, which is limited by wetness and workability to Subgrade 3b.

3.2.5. A variant of this soil type occurs in which the topsoil texture is medium loamy, including medium clay loam, sandy clay loam or occasionally silty clay loam. Where of WC IV, these profiles are also of Subgrade 3b, however where of WC III, they are less severely limited, to Subgrade 3a. This soil type is represented by Pit 2. The topsoil structure is also moderately well developed with medium subangular blocky peds. Upper subsoil is moderately permeable with a moderate fine angular blocky structure to around 45cm depth. There is an abrupt smooth boundary to lower subsoil which comprises massively structured, slowly permeable clay.

3.2.6. The second identified soil type is similar to the dominant type in comprising fine loamy and clayey textures, but becomes slowly permeable at greater depth or is

[6] **Hodgson, J. M. (Ed.) (1997).** *Soil survey field handbook*. Soil Survey Technical Monograph No. 5, Silsoe.
[7] **Munsell Color (2009).** *Munsell Soil Color Book,* Grand Rapids, MI, USA

permeable throughout. The subsoil is often but not always gleyed and subsequently the profiles are mostly of WC II and occasionally WC I. The limitation to agricultural land quality is workability due to heavy topsoil textures: profiles of WC II with medium or heavy loamy topsoils are limited to Grade 2 or Subgrade 3a respectively. Where the topsoil texture is of clay, the limitation is to Subgrade 3b. These respective grades improve by one where the profiles are of WC I, resulting in rare instances of Grade 1 quality land.

3.2.7. A contrasting, third soil type similar to the Wick 1 association is identified in the north-east of the main SFRI site and includes sandy loam or sandy clay loam topsoil of 35cm average depth. The colour is very dark grey or very dark greyish brown (10YR3/1, 3/2 or 2.5Y3/2). The topsoil is slightly stony with a granular structure.

3.2.8. Upper subsoil is sandy loam, loamy sand or occasionally sandy clay loam which is mostly yellowish brown (10YR4/4, 5/6, 5/8). Stone content is slight to moderate and the structure is medium granular. Lower subsoil is of light brown, yellowish brown or pale brown medium sand. The profiles are freely draining, of WC I. The main limitation is droughtiness which limits profiles to Grade 2 or Subgrade 3a.

Junction 15a

3.2.9. The three soil types identified at the Main SRFI site are also present at Junction 15a. The dominant heavy loamy and clayey soil type is found to the south-west and south-east of the junction, aligned with the M1. These areas are limited by wetness and workability to Subgrade 3b.

3.2.10. Also to the south-east of the junction, aligned more with the A43, the better draining medium loamy soil type is present. Profiles are of WC I or II depending on the presence of or depth to the slowly permeable layer and are limited to Grade 2 or Subgrade 3a respectively.

3.2.11. The coarse loamy soil variant is found to the east of the A43, in the south of the survey area. Profiles are of WC I and are limited to Grade 2 or Subgrade 3a by droughtiness (as set out in Appendices 3 and 4).

3.2.12. The areas of each ALC grade are set out in Table 2 and are shown in Figure RAC6640-2.

Table 2: ALC Areas

Grade	Description	Main SRFI Site		Junction 15a	
		Area (ha)	**Area (% of agric. land)**	**Area (ha)**	**Area (% of agric. land)**
1	Excellent quality	2	1	-	-
2	Very good quality	28	11	1	13
3a	Good quality	36	14	4	50
3b	Moderate quality	200	75	3	37
	Total Agricultural	266	100	8	100
	Non Agricultural	26	-	14	-

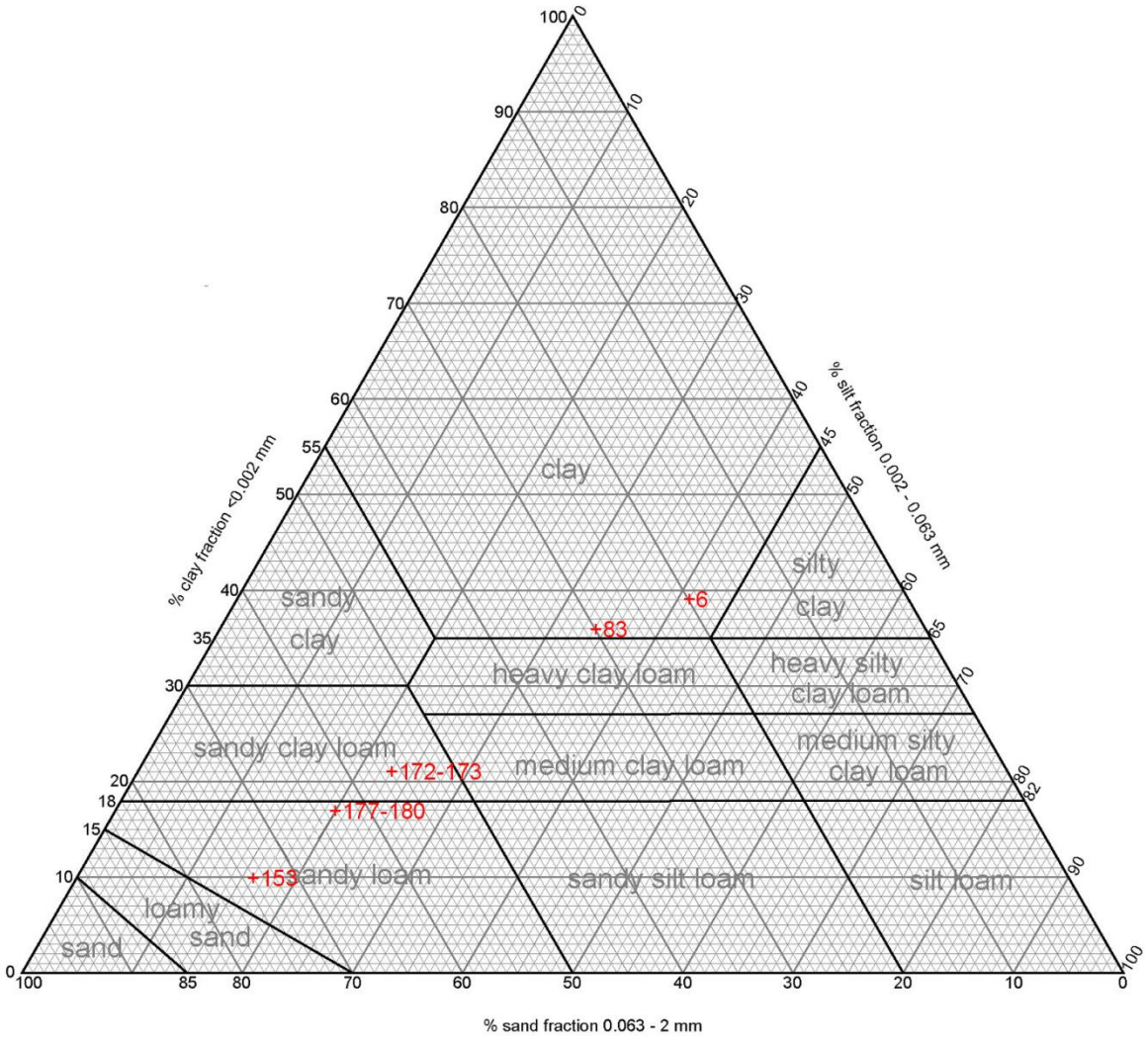
Appendix 1: Laboratory Data

Determinand	Site 6	Site 83	Site 153	Site 172-173	Site 177-180	Units
Sand 2.00-0.063 mm	20	30	74	56	63	% w/w
Silt 0.063-0.002 mm	41	34	15	23	20	%w/w
Clay <0.002 mm	39	36	11	21	17	% w/w
Organic Matter WB	4.0	5.4	2.4	3.0	2.5	% w/w
Texture	Clay	Clay	Sandy Loam	Sandy Clay Loam	Sandy Loam	% w/w

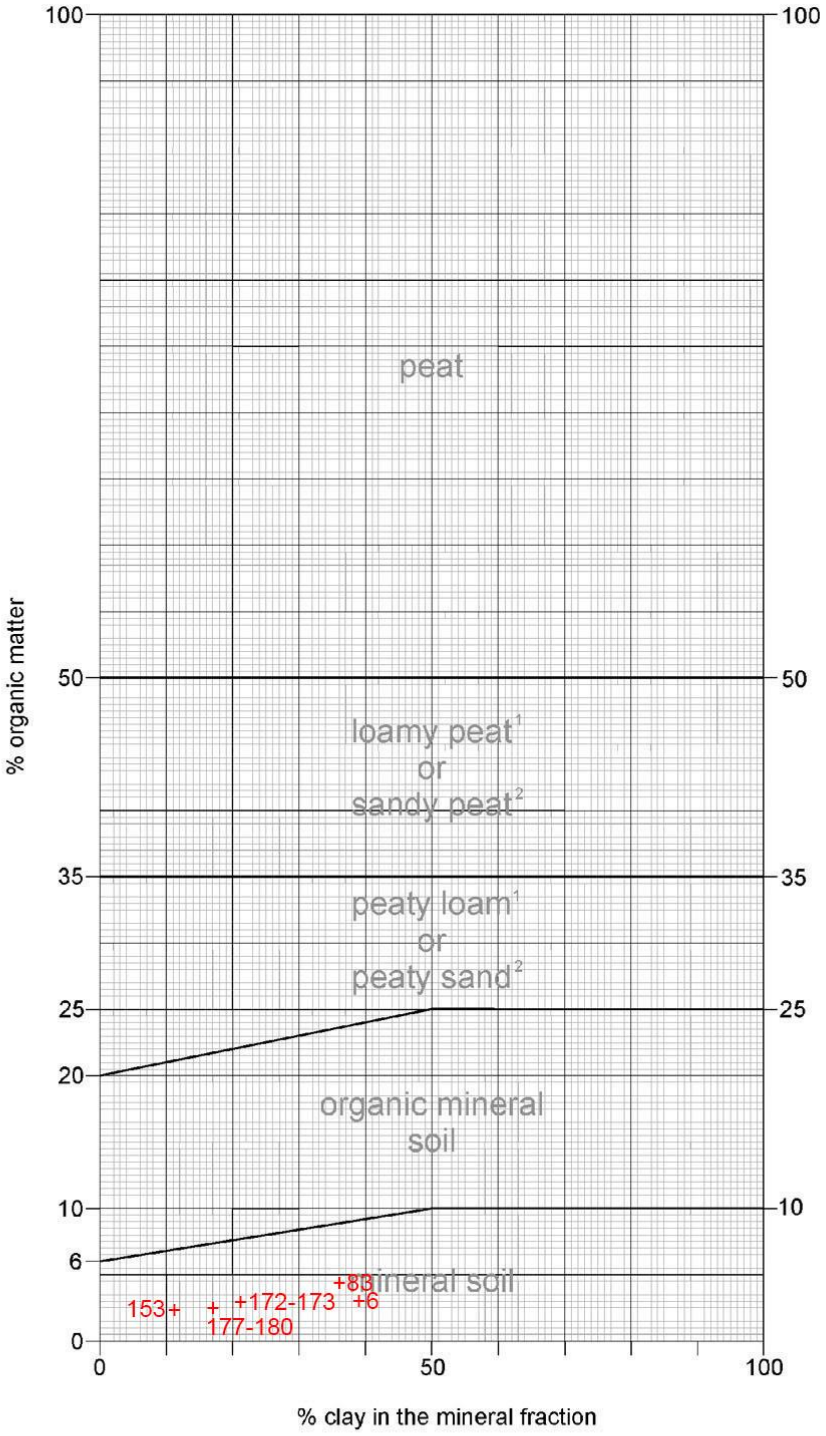
Determinand	Site 6	Site 83	Site 153	Site 172-173	Site 177-180	Units
Soil pH	7.4	7.3	7.3	7.6	7.1	
Phosphorus (P)	32.0	39.6	30.2	21	25	mg/l (av)
Potassium (K)	245	168	20.6	146	147	mg/l (av)
Magnesium (Mg)	104	98.9	44.4	54	80	mg/l (av)

Determinand	Site 6	Site 83	Site 153	Site 172-173	Site 91-94, 96	Units
Phosphorus (P)	3	3	3	2	2	ADAS Index
Potassium (K)	3	2-	0	2-	2-	ADAS Index
Magnesium (Mg)	3	2	1	2	2	ADAS Index

Soil Texture by Particle Size Distribution



Organic Matter Class



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

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

Appendix 2: Soil Profile Summaries and Droughtiness Calculations

Wetness / workability limitations are determined according to the methodology given in Appendix 3 of the ALC guidelines, MAFF 1988
Droughtiness calculations are made according to the methodology given in Appendix 4 of the ALC guidelines, MAFF 1988.
Grades are shown for drought, wetness and any other soil or site factors which are relevant. The overall Grade is set by the most limiting factor and shown on the right.

Stone types		
%	TAv	Eav
hard	1	0.5
Chalk	10	7

Climate Data	
MDwheat	106
MDpotato	97
FCD	137

Wetness Class 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*
No SPL but gleying within 40-70cm	coarse subsoil	*I*	other cases	*I*

hard flint & pebble

Maximum depth of auger penetration is underlined

Site No.		Depth cm		Texture	Colour	Mottle colour	abund-ance	stone% hard	stone% Chalk	Struct-ure	APwheat mm	AP potato mm	Gley	SPL	WC	Wetness grade WE	Final Grade	Limiting Factor(s)
1	T	0	40	mCL	10YR4/2			1			71	71	n	n	*III*	3a	**3a**	WE
		40	65	C	10YR5/3	och	cff			poor	24	33	y	y				
		65	100	C	10YR5/2	och	cmf			poor	25	7	y	y				
		100	105	SCL	10YR5/4	och	cff				5	0	y	n				
		105	120	C	5GY4/1	och	mfd			poor	11	0	y	y				
										Total	**135**	**110**						
										MD	29	13						
								Droughtiness grade(DR)			2	1						
2	T	0	35	hCL	10YR4/2			1		-	62	62	n	n	*II*	3a	**3a**	WE
		35	60	C	10YR5/3	och	cff				32	40	y	n				
		60	120	C	10YR5/3	och	cff				48	16	y	n				
										Total	**142**	**118**						
										MD	36	21						

								Droughtiness grade(DR)		1	1							
3	T	0	32	hZCL	10YR4/2			1	-	60	60	n	n	*II*	3a	**3a**	WE	
		32	50	C	10YR5/2	och	cff			29	29	y	n					
		50	70	C	10Y4/1	och	cfd		poor	14	26	y	y					
		70	80	C	10YR5/3	och	cfd			8	0	y	n					
		80	100	C	10Y5/1	och	mfp		poor	14	0	y	y					
		100	120	LmS	10YR5/3	och	cff			12	0	y	n					
									Total	**137**	**115**							
									MD	31	18							
								Droughtiness grade(DR)		1	1							
4	T	0	35	hZCL	10YR4/2			1	-	66	66	n	n	*IV*	3b	**3b**	WE	
		35	60	C	10YR5/3	och	cff		poor	27	33	y	y					
		60	85	C	10Y5/1	och	mfp		poor	18	13	y	y					
		85	120	SCL	10YR5/3	och	cfff			35	0	y	n					
									Total	**145**	**111**							
									MD	39	14							
								Droughtiness grade(DR)		1	1							
5	T	0	40	C	10YR4/2			1	-	67	67	n	n	*IV*	3b	**3b**	WE	
		40	60	C	10YR5/3	och	cff		poor	20	26	y	y					
		60	120	C	10GY5/1	och	cfd		poor	42	13	y	y					
									Total	**129**	**106**							
									MD	23	9							
								Droughtiness grade(DR)		2	2							
6	T	0	32	C	10YR5/2			1	-	54	54	n	n	*IV*	3b	**3b**	WE	
		32	75	C	10YR5/3	och	cfd		poor	41	49	y	y					
		75	120	C	10G5/1	och	mfp		poor	32	0	y	y					
									Total	**126**	**103**							
									MD	20	6							

								Droughtiness grade(DR)		2	2							
7	T	0	40	hCL	10YR5/2			1	-	71	71	n	n	*IV*	3b	**3b**	WE	
		40	75	C	10YR5/2	och	cfd		poor	31	39	y	y					
		75	120	C	10G5/1	och	mfp		poor	32	0	y	y					
									Total	**133**	**110**							
									MD	27	13							
								Droughtiness grade(DR)		2	1							
8	T	0	40	hCL	10YR5/2			1	-	71	71	n	n	*IV*	3b	**3b**	WE	
		40	120	C	10YR5/2	och	cfd		poor	62	39	y	y					
									Total	**133**	**110**							
									MD	27	13							
								Droughtiness grade(DR)		2	1							
9	T	0	40	hCL	10YR3/2	yellow	mmd	1	-	71	71	n	n	*II*	3a	**3a**	WE	
		40	70	C	10YR5/3	och	cmp	1		32	48	y	n					
		70	120	C	10YR3/2	och	cmp	1	poor	35	0	y	y					
									Total	**138**	**119**							
									MD	32	22							
								Droughtiness grade (DR)		1	1							
10	T	0	30	hCL	10YR3/2			1	-	53	53	n	n	*IV*	3b	**3b**	WE	
		30	55	C	10YR4/2	och	cmd	1	poor	29	32	y	y					
		55	120	C	10YR3/2	och	cmd	10	poor	41	18	y	y					
									Total	**124**	**103**							
									MD	18	6							
								Droughtiness grade (DR)		2	2							
11	T	0	30	C	10YR4/2			1	-	51	51	n	n	*IV*	3b	**3b**	WE	
		30	70	C	2.5Y3/1	och	mcp	1	poor	40	52	y	y					
		70	120	C	10YR5/6	och	ccp	1		40	0	n	n					
									Total	**130**	**102**		Sandy Inclusions in SS					
									MD	24	5							

								Droughtiness grade (DR)		2	2								
12	T	0	33	C	10YR4/2	yellow	fmd	1	-	56	56	n	n	*III*	3b	**3b**	WE		
		33	60	C	2.5Y3/1	och	mmd	1	poor	29	35	y	y						
		60	85	C	2.5Y3/1	och	ccp	1		20	16	y	n						
		85	120	C	2.5Y3/1	och	mmd	1	poor	24	0	y	y						
									Total	**128**	**106**		Sandy Inclusions in SS						
									MD	22	9								
								Droughtiness grade (DR)		2	2								
13	T	0	28	hCL	10YR3/2	grey	fmd	1	-	50	50	n	n	*III*	3b	**3b**	WE		
		28	60	C	2.5Y3/1	och	cmd	1		43	51	y	n						
		60	120	C	2.5Y3/1	och	cmd	1	poor	42	13	y	y						
									Total	**134**	**114**		Sandy Inclusions in SS						
									MD	28	17								
								Droughtiness grade (DR)		2	1								
14	T	0	30	hCL	10YR3/2			1	-	50	50	n	n	*I*	2	**2**	WE		
		30	40	C	2.5Y3/1	och	mmd	1		43	51	y	n						
		40	120	SL	10YR6/8	och	mmd	1		42	13	y	n						
									Total	**134**	**114**								
									MD	28	17								
								Droughtiness grade (DR)		2	1								
15	T	0	25	C	10YR3/2	och	fmd	1	-	42	42	n	n	*IV*	3b	**3b**	WE		
		25	65	C	2.5Y3/1	och	mmd	1	poor	43	52	y	y						
		65	120	C	10YR6/8	grey	cmp	10		40	7	n	n						
									Total	**125**	**101**								
									MD	19	4								
								Droughtiness grade (DR)		2	2								
16	T	0	33	C	10YR3/2	och	fmd	1	-	56	56	n	n	*II*	3b	**3b**	WE		
		33	80	C	10YR4/2	och	ccd	1		51	59	y	n						
		80	120	C	10YR4/2	och	ccd	1	poor	28	0	y	y						

									Total	**134**	**114**							
									MD	28	17							
								Droughtiness grade (DR)		2	1							
17	T	0	35	C	2.5Y4/3	och	fmd	1	-	59	59	n	n	*IV*	3b	**3b**	WE	
		35	120	C	10YR5/3	och	cmd	1	poor	68	45	y	y					
									Total	**127**	**104**							
									MD	21	7							
								Droughtiness grade (DR)		2	2							
18	T	0	30	C	2.5Y4/3	och	fmd	1	-	51	51	n	n	*IV*	3b	**3b**	WE	
		30	120	C	10YR5/3	och	cmd	1	poor	74	52	y	y					
									Total	**125**	**102**							
									MD	19	5							
								Droughtiness grade (DR)		2	2							
19	T	0	38	C	2.5Y4/3			1	-	64	64	n	n	*III*	3b	**3b**	WE	
		38	45	C	10YR5/3	och	mmd	1		11	11	y	n					
		45	120	C	10YR5/3	och	cmd	1	poor	55	32	y	y					
									Total	**130**	**107**							
									MD	24	10							
								Droughtiness grade (DR)		2	1							
20	T	0	38	hSCL	2.5Y4/3	och	ffd	1	-	64	64	n	n	*III*	3b	**3b**	WE	
		38	45	SC	10YR5/3	och	cmd	1		10	10	y	n					
		45	120	SC	10YR5/3	och	cfd	1	poor	62	32	y	y					
									Total	**136**	**107**							
									MD	30	10							
								Droughtiness grade (DR)		1	2							
21	T	0	30	hSCL	2.5Y4/3		Femns	1	-	51	51	n	n	*IV*	3b	**3b**	WE	
		30	120	C	10YR5/3	och	cmd	1	poor	99	59	y	y					
									Total	**150**	**110**							
									MD	44	13							

								Droughtiness grade (DR)		1	1							
22	T	0	28	hCL	2.5Y4/2			2	-	49	49	n	n	*IV*	3b	**3b**	WE	
		28	90	C	10YR5/2	och	mmd	2	poor	56	54	y	y					
		90	120	C	10YR5/1	och	mmd	2	poor	21	0	y	y					
									Total	**126**	**103**							
									MD	20	6							
								Droughtiness grade (DR)		2	2							
23	T	0	30	hCL	2.5Y4/2	och	fmd	2	-	53	53	n	n	*IV*	3b	**3b**	WE	
		30	120	C	10YR5/2	grey	ccp	2	poor	74	51	y	y					
									Total	**127**	**104**							
									MD	21	7							
								Droughtiness grade (DR)		2	2							
24	T	0	30	hCL	2.5Y4/2	och	fmd	2	-	53	53	n	n	*IV*	3b	**3b**	WE	
		30	120	C	10YR5/2	och	cmd	2	poor	74	51	y	y					
									Total	**127**	**104**							
									MD	21	7							
								Droughtiness grade (DR)		2	2							
25	T	0	38	hCL	2.5Y4/2	och	fmd	2	-	67	67	n	n	*IV*	3b	**3b**	WE	
		38	120	C	10YR5/3	och	mmd	2	poor	63	41	y	y					
									Total	**131**	**108**							
									MD	25	11							
								Droughtiness grade (DR)		2	2							
26	T	0	30	hCL	10YR4/2			2	-	53	53	n	n	*IV*	3b	**3b**	WE	
		30	120	C	10YR4/2	och	mmd	2		86	63	y	y					
									Total	**139**	**116**		poss disturbed, mixed profile clay and sand					
									MD	33	19		poss organic t/s					
								Droughtiness grade (DR)		3a	2							
27	T	0	25	hCL	2.5Y4/2	och	fmd	2	-	44	44	n	n	*IV*	3b	**3b**	WE	
		25	120	C	10YR5/2	och	cmd	2	poor	80	57	y	y					

									Total	**124**	**102**							
									MD	18	5							
								Droughtiness grade (DR)		1	2							
28	T	0	35	hCL	2.5Y4/2	och	fff	2	-	62	62	n	n	*IV*	3b	**3b**	WE	
		35	120	C	10YR5/3	och	cmd	2	poor	67	45	y	y					
									Total	**129**	**106**		hill					
									MD	23	9							
								Droughtiness grade (DR)		3a	2							
29	T	0	30	hCL	2.5Y4/2	och	fff	2	-	53	53	n	n	*IV*	3b	**3b**	WE	
		30	120	C	10YR5/3	och	cmd	2	poor	74	51	y	y					
									Total	**127**	**104**		top of hill					
									MD	21	7							
								Droughtiness grade (DR)		1	2							
30	T	0	30	C	2.5Y4/2	och	fff	2	-	50	50	n	n	*IV*	3b	**3b**	WE	
		30	120	C	10YR5/3	och	cmd	2	poor	74	51	y	y					
									Total	**124**	**101**							
									MD	18	4							
								Droughtiness grade (DR)		3a	2							
31	T	0	32	C	2.5Y4/2	och	fff	2	-	53	53	n	n	*IV*	3b	**3b**	WE	
		32	120	C	10YR5/3	och	cmd	2	poor	71	48	y	y					
									Total	**124**	**102**							
									MD	18	5							
								Droughtiness grade (DR)		1	2							
32	T	0	30	C	2.5Y4/2			2	-	50	50	n	n	*III*	3b	**3b**	WE	
		30	60	C	10YR5/3	och	mmf	5		38	46	y	n					
		60	120	C	10YR5/3	och	mmf	2	poor	41	13	y	y					
									Total	**129**	**109**							
									MD	23	12							
								Droughtiness grade (DR)		3a	2							

33	T	0	30	C	10YR4/2			2	-	50	50	n	n	*IV*	3b	**3b**	WE
		30	120	C	10YR4/2	och	mmf	2		41	13	y	y				
									Total	**129**	**109**		disturbed, mixed layers				
									MD	23	12						
								Droughtiness grade (DR)		1	2						
34	T	0	30	C	10YR4/2	och	mmp	2	-	50	50	y	n	*III*	3b	**3b**	WE
		30	50	C	10YR4/2	och	mmp	2		41	13	y	n				
		50	120	C	10YR3/1	och	mmd	2	poor	41	13	y	y				
									Total	**129**	**109**		disturbed, mixed layers				
									MD	23	12						
								Droughtiness grade (DR)		3a	2						
35	T	0	30	C	2.5Y4/2	och	fff	2	-	50	50	n	n	*IV*	3b	**3b**	WE
		30	120	C	10YR5/3	och	mmd	2	poor	74	51	y	y				
									Total	**124**	**101**						
									MD	18	4						
								Droughtiness grade (DR)		1	2						
36	T	0	32	hCL	10YR4/2			1	-	57	57	n	n	*IV*	3b	**3b**	WE
		32	105	C	10YR5/2	och	cfd		poor	62	49	y	y				
		105	120	C	10Y5/1	och	cfp		poor	11	0	y	y				
									Total	**129**	**106**						
									MD	23	9						
								Droughtiness grade(DR)		2	2						
37	T	0	30	hCL	10YR4/2			1	-	53	53	n	n	*IV*	3b	**3b**	WE
		30	75	C	10YR5/3	och	cfd		poor	44	52	y	y				
		75	120	C	10Y5/1	och	cfp		poor	32	0	y	y				
									Total	**128**	**105**						
									MD	22	8						
								Droughtiness grade(DR)		2	2						
38	T	0	30	hCL	10YR4/2			1	-	53	53	n	n	*IV*	3b	**3b**	WE

		30	100	C	10YR5/3	och	cfd		poor	61	52	y	y						
		100	120	C	10Y5/1	och	cfp		poor	14	0	y	y						
									Total	**128**	**105**								
									MD	22	8								
								Droughtiness grade(DR)		2	2								
Pit 1	T	0	30	hCL	10YR4/2			1	-	53	53	n	n	*IV*	3b	**3b**	WE		
		30	75	C	10YR5/3	och	cfd		poor	44	52	y	y						
		75	120	C	10Y5/1	och	cfp		poor	32	0	y	y						
									Total	**128**	**105**								
									MD	22	8								
								Droughtiness grade(DR)		2	2								
39	T	0	35	hCL	10YR4/2			1	-	62	62	n	n	*I*	2	**2**	WE		
		35	120	C	10YR5/3	och	fff			80	56	n	n						
									Total	**142**	**118**								
									MD	36	21								
								Droughtiness grade(DR)		1	1								
40	T	0	30	hCL	10YR4/2			1	-	53	53	n	n	*IV*	3b	**3b**	WE		
		30	65	C	10YR5/3	och	cff	2	poor	36	45	y	y						
		65	120	C	10Y5/1	och	cfd		poor	39	7	y	y						
									Total	**128**	**105**								
									MD	22	8								
								Droughtiness grade(DR)		2	2								
41	T	0	40	hCL	2.5Y3/2		Femns	1	-	51	51			*III*	3b	**3b**	WE		
		40	120	C	2.5Y5/3	och	cfd	1	poor	99	59	y	y					Black organic layer at trans	
									Total	**150**	**110**								
									MD	44	13								
								Droughtiness grade (DR)		1	1								
42	T	0	35	hCL	2.5Y3/2	och	fmd	1	-	62	62	n	n	*IV*	3b	**3b**	WE		
		35	50	C	2.5Y3/2	och	mmd	1	poor	19	19	y	y						

		50	120	C		5Y4/1	och	cmd	1	poor	49	26	y	y					
										Total	**130**	**107**							
										MD	24	10							
										Droughtiness grade (DR)	2	1							
43	T	0	38	mCL		2.5Y3/2	och	fmd	1	-	68	68	n	n	*III*	3a	**3a**	WE	
		38	45	hCL		2.5Y3/2	och	mmd	1		11	11	y	n					
		45	120	C		5Y4/1	och	cmd	1	poor	55	32	y	y					
										Total	**134**	**111**							
										MD	28	14							
										Droughtiness grade (DR)	2	1							
44	T	0	30	hCL		2.5Y3/2	och	fff	1	-	53	53	n	n	*IV*	3b	**3b**	WE	
		30	70	C		2.5Y5/3	och	cfd	1	poor	40	52	y	y					
		70	120	C		10YR5/2	och	cmd	1	poor	35	0	y	y					
										Total	**128**	**105**							
										MD	22	8							
										Droughtiness grade (DR)	2	2							
45	T	0	30	mCL		10YR4/2			1	-	53	53	n	n	*IV*	3b	**3b**	WE	
		30	50	C		10YR5/3	och	cff	2	poor	26	26	y	y					
		50	120	C		10Y5/1	och	cfd		poor	49	26	y	y					
										Total	**128**	**105**							
										MD	22	8							
										Droughtiness grade(DR)	2	2							
46	T	0	30	C		10YR4/2			1	-	51	51	n	n	*IV*	3b	**3b**	WE	
		30	55	C	slight	10YR5/2	och	cff		poor	30	33	y	y					
		55	120	C	mod	10YR5/1	och	cff	5		50	23	y	y/n					
										Total	**130**	**106**							
										MD	24	9							
										Droughtiness grade(DR)	2	2							
47	T	0	30	hCL		10YR4/2			1	-	53	53	n	n	*IV*	3b	**3b**	WE	

		30	65	C		10YR5/3	och	cff			poor	37	46	y	y					
		65	85	C		10YR5/3	och	cf-mf		10		16	8	y	n					
		85	120	C		10Y4/1	och	cff			poor	25	0	y	y					
											Total	**130**	**107**							
											MD	24	10							
										Droughtiness grade(DR)		2	2							
48	T	0	25	hCL		10YR4/2			1		-	45	45	n	n	*IV*	3b	**3b**	WE	
		25	90	C		10YR5/3	och	cff			poor	61	59	y	y					
		90	105	C	slight	10YR5/4	och	cfd				12	0	n	n					
		105	120	C	slight	10YR5/4	och	cfd				12	0	n	n					
											Total	**129**	**103**							
											MD	23	6							
										Droughtiness grade(DR)		2	2							
49	T	0	30	SCL		2.5Y3/2	och	fmp	1		-	51	51	n	n	*II*	2	**2**	WE	
		30	70	C		2.5Y5/3	och	cff	1			48	63	y	n					
		70	120	SC		2.5Y5/3	och	cff	1		poor	40	0	y	y					
											Total	**138**	**114**							
											MD	32	17							
										Droughtiness grade (DR)		1	1							
50	T	0	30	SCL		2.5Y3/2			1		-	51	51	n	n	*III*	3a	**3a**	WE	
		30	50	C		2.5Y5/3	och	cmd	1			32	32	y	n					
		50	120	C		2.5Y5/3	grey	fmd	1		poor	49	26	y	y					
											Total	**131**	**108**							
											MD	25	11							
										Droughtiness grade (DR)		2	1							
51	T	0	30	SZL		2.5Y3/2			1		-	56	56	n	n	*III*	2	**2**	WE	
		30	50	SCL		2.5Y5/3	och	mff	1			30	30	y	n					
		50	75	SC		2.5Y5/3	grey	fmd	1		poor	20	26	y	y					
		75	120	C		10YR5/3	grey	mmd	1		poor	31	0	y	y					

											Total	**137**	**112**						
											MD	31	15						
										Droughtiness grade (DR)		1	1						
52		T	0	30	hCL		10YR4/2			1	-	53	53	n	n	*IV*	3b	**3b**	WE
			30	100	C	slight	10YR5/2	och	cff		poor	61	52	y	y				
			100	120	C	mod	10YR5/1	och	cff	5		15	0	y	y/n				
											Total	**130**	**105**						
											MD	24	8						
										Droughtiness grade(DR)		2	2						
53		T	0	30	C		10YR4/2			1	-	51	51	n	n	*II*	3b	**3b**	WE
			30	50	C		10YR5/3	och	fff			32	32	n	n				
			50	90	SCL		10YR5/3	och	cff		poor	32	26	y	y				
			90	120	C		10Y5/1	och	cfd		poor	21	0	y	y				
											Total	**136**	**109**						
											MD	30	12						
										Droughtiness grade(DR)		1	1						
54		T	0	30	SCL		2.5Y3/2			1	-	51	51	n	n	*II*	2	**2**	WE DR
			30	120	hSCL		2.5Y5/2	och	mfd	1		69	59	y	n				
											Total	**120**	**110**						
											MD	14	13						
										Droughtiness grade (DR)		2	1						
55		T	0	40	SCL		2.5Y3/2			1	-	67	67	n	n	*I*	1	**1**	
			40	120	SL		2.5Y5/3			1		91	45	n	n				
											Total	**158**	**112**						
											MD	52	15						
										Droughtiness grade (DR)		1	1						
56		T	0	40	SCL		2.5Y3/2			1	-	67	67	n	n	*II*	1-2	**2**	WE
			40	120	SC		2.5Y5/3	och	mff	1		84	45	y	n				
											Total	**152**	**112**						

										MD	46	15							
								Droughtiness grade (DR)			1	1							
57	T	0	30	ZCL	2.5Y3/2			1	-		56	56	n	n	*I*	1	**1**		
		30	50	C	2.5Y5/2			1			32	32	n	n					
		50	120	C	2.5Y5/2	och	mff	10			51	29	y	n					
										Total	**139**	**117**							
										MD	33	20							
								Droughtiness grade (DR)			1	1							
58	T	0	35	SCL	2.5Y3/2			1	-		59	59	n	n	*II*	2	**2**	WE	
		35	70	SC	2.5Y5/2	och	fff	1			42	52	n	n					
		70	120	C	2.5Y5/2	och	fff	1		poor	35	0	n	y					
										Total	**136**	**111**							
										MD	30	14							
								Droughtiness grade (DR)			1	1							
59	T	0	30	SCL	2.5Y3/2			1	-		51	51	n	n	*III*	3a	**3a**	WE	
		30	55	SC	2.5Y5/3	och	mmd	1			35	37	y	n					
		55	120	C	2.5Y5/3	och	cmd	1		poor	45	19	y	y					
										Total	**130**	**107**							
										MD	24	10							
								Droughtiness grade (DR)			2	2							
60	T	0	30	SCL	2.5Y3/2			1	-		51	51	n	n	*I*	1	**2**	DR	
		30	50	SL	2.5Y5/3			1			30	30	n	n					
		50	120	mS	10YR5/8			1			35	14	n	n					
										Total	**115**	**94**							
										MD	9	-3							
								Droughtiness grade (DR)			2	2							
61	T	0	40	SCL	2.5Y3/2			1	-		67	67	n	n	*I*	1	**2**	DR	
		40	75	SL	2.5Y5/3	och	mff	1			42	45	y	n					
		75	120	mS	10YR5/8			1			22	0	n	n					

											Total	**132**	**112**						
											MD	26	15						
										Droughtiness grade (DR)		2	1						
62	T	0	30	SCL		2.5Y3/2			1	-		51	51	n	n	*I*	1	**2**	DR
		30	55	SL		2.5Y5/3			1			35	37	n	n				
		55	120	mS		10YR5/8			1			32	10	n	n				
											Total	**118**	**98**						
											MD	12	1						
										Droughtiness grade (DR)		2	2						
63	T	0	40	SL		2.5Y3/2			1	-		67	67	n	n	*I*	1	**2**	DR
		40	50	LS		10YR5/7			1			9	9	n	n				
		50	120	mS		7.5YR6/4			1			35	14	n	n				
											Total	**111**	**90**						
											MD	5	-7						
										Droughtiness grade (DR)		2	2						
64	T	0	30	SL		2.5Y3/2			3	-		50	50	n	n	*I*	1	**3a**	DR
		30	50	LS		10YR5/7			10			16	16	n	n				
		50	120	mS		10YR5/7			10			32	13	n	n				
											Total	**98**	**79**						
											MD	-8	-18						
										Droughtiness grade (DR)		3a	3a						
65	T	0	30	hCL		10YR4/2			1	-		53	53	n	n	*IV*	3b	**3b**	WE
		30	100	C		10YR5/3	och	cff		poor		61	52	y	y				
		100	120	C	slight	10YR5/1	och	cfd	5			16	0	y	n				
											Total	**130**	**105**						
											MD	24	8						
										Droughtiness grade(DR)		2	2						
66	T	0	45	C		10YR4/2			1	-		76	76	n	n	*III*	3b	**3b**	WE
		45	80	C		10YR5/2	och	cff		poor		28	33	y	y				

		80	120	C	slight	10YR5/1	och	cfd		5		32	0	y	n					
											Total	**135**	**108**							
											MD	29	11							
											Droughtiness grade(DR)	2	1							
67	T	0	35	hCL		10YR4/2			1		-	62	62	n	n	*I*	2	**2**	WE DR	
		35	60	C		10YR5/3	och	fff	5			31	38	n	n					
		60	120	C		10YR5/3	och	fff	20			39	13	n	n					
											Total	**132**	**114**							
											MD	26	17							
											Droughtiness grade(DR)	2	1							
68	T	0	35	hCL		10YR4/2			1		-	62	62	n	n	*IV*	3b	**3b**	WE	
		35	60	C		10YR5/2	och	cff			poor	27	33	y	y					
		60	120	C	slight	10Y4/1	och	cmf		2	poor	42	13	y	y					
											Total	**131**	**108**							
											MD	25	11							
											Droughtiness grade(DR)	2	1							
69	T	0	32	C		10YR3/2			8		-	50	50	n	n	*IV*	3b	**3b**	WE	
		32	80	C		10YR5/2	och	cmf	10		poor	40	45	y	y					
		80	120	C	slight	10Y4/1	och	cmf	20		poor	23	0	y	y					
											Total	**113**	**95**							
											MD	7	-2							
											Droughtiness grade(DR)	2	2							
70	T	0	35	C		10YR3/2			2		-	58	58	n	n	*IV*	3b	**3b**	WE	
		35	75	C		10YR5/2	och	cmf	2		poor	36	45	y	y					
		75	85	C		10YR5/1	och	cmf	5			8	0	y	n					
		85	120	C		10YR5/1	och	cmf	20			23	0	y	n					
											Total	**125**	**103**							
											MD	19	6							
											Droughtiness grade(DR)	2	2							

71	T	0	35	mCL	10YR4/2			10	-	57	57	n	n	/	1	**1**	
		35	95	SCL	10YR5/4	och	cmf			68	53	n	n				
		95	120	SCL	10YR5/2	och	cmf			25	0	y	n				
									Total	**150**	**110**						
									MD	44	13						
								Droughtiness grade(DR)		1	1						
72	T	0	25	C	10YR4/3			10	-	39	39	n	n	/	1	**3a**	WK
		25	40	SCL	10YR5/4			20		18	18	n	n				
		40	120	SCL	10YR5/2			20		69	37	y	n				
									Total	**126**	**93**						
									MD	20	-4						
								Droughtiness grade(DR)		2	2						
73	T	0	38	mSL	10YR3/2			1	-	64	64	n	n	/	1	**3a**	DR
		38	60	LmS	10YR4/4			15		15	17	n	n				
		60	120	LmS	10YR4/4			20		29	7	n	n				
									Total	**108**	**89**						
									MD	2	-8						
								Droughtiness grade(DR)		3a	2						
74	T	0	38	mSL	10YR3/2			1	-	64	64	n	n	/	1	**1**	
		38	80	SCL	10YR4/4	och	fff	1		48	48	n	n				
		80	104	SCL	10YR4/1	och	fff	1		24	0	n	n				
		104	120	LmS	10YR4/6			1		10	0	n	n				
									Total	**145**	**112**						
									MD	39	15						
								Droughtiness grade(DR)		1	1						
75	T	0	30	mSL	10YR3/1				-	51	51	n	n	/	1	**3a**	DR
		30	70	LmS	10YR4/1	och	fff			30	36	n	n				
		70	85	mS	10YR4/6	och	fff			8	0	n	n				
		85	120	mS	10YR6/3	och	cff			18	0	y	n				

										Total	**106**	**87**							
										MD	0	-10							
									Droughtiness grade(DR)		3a	2							
76	T	0	35	SCL	10YR3/1			2	-		58	58	n	n	*I*	1	**2**	DR	
		35	70	SCL	10YR4/1	och	cff	10			39	48	y	n					
		70	120	LmS	10YR4/4						30	0	n	n					
										Total	**127**	**106**							
										MD	21	9							
									Droughtiness grade(DR)		2	2							
77	T	0	28	hCL	10YR4/2			1	-		50	50	n	n	*III*	3b	**3b**	WE	
		28	50	C	10YR5/3	och	cff				35	35	y	n					
		50	80	C	2.5Y5/3	och	cfd			poor	21	26	y	y					
		80	120	C	10Y5/1	och	mfd			poor	28	0	y	y					
										Total	**134**	**111**							
										MD	28	14							
									Droughtiness grade(DR)		2	1							
78	T	0	32	hCL	10YR4/2			1	-		57	57	n	n	*IV*	3b	**3b**	WE	
		32	65	C	2.5Y5/3	och	cff				41	53	y	y					
		65	120	C	10Y5/1	och	mfd			poor	39	7	y	y					
										Total	**136**	**116**							
										MD	30	19							
									Droughtiness grade(DR)		1	1							
79	T	0	25	SCL	10YR4/3			1	-		42	42	n	n	*II*	2	**2**	WE DR	
		25	55	C	7.5YR5/4	och	cff				44	48	n	n					
		55	90	C	10YR5/3	och	cfd			poor	25	20	y	y					
		90	120	C	10Y6/1	och	cfp			poor	21	0	y	y					
										Total	**132**	**110**							
										MD	26	13							
									Droughtiness grade(DR)		2	1							

80	T	0	28	SCL	10YR4/3			2	-	47	47	n	n	*III*	3a	**3a**	WE
		28	60	C	10YR5/3	och	cfd			43	51	y	n				
		60	80	C	10YR5/3	och	cfd		poor	14	13	y	y				
		80	120	C	10Y6/1	och	cfp		poor	28	0	y	y				
									Total	**132**	**111**						
									MD	26	14						
								Droughtiness grade(DR)		2	1						
81	T	0	30	hCL	10YR4/3			2	-	53	53	n	n	*IV*	3b	**3b**	WE
		30	60	C	10YR5/3	och	cff		poor	33	39	y	y				
		60	120	C	2.5Y5/3	och	cfd		poor	42	13	y	y				
									Total	**128**	**105**						
									MD	22	8						
								Droughtiness grade(DR)		2	2						
82	T	0	28	hCL	10YR4/3			2	-	49	49	n	n	*III*	3b	**3b**	WE
		28	60	C	10YR5/3	och	cff			43	51	y	n				
		60	100	C	10YR5/3	och	cff		poor	28	13	y	y				
		100	120	C	2.5Y5/3	och	cfd		poor	14	0	y	y				
									Total	**135**	**114**						
									MD	29	17						
								Droughtiness grade(DR)		2	1						
83	T	0	28	C	10YR4/2			2	-	47	47	n	n	*IV*	3b	**3b**	WE
		28	80	C	2.5Y5/3	och	cfd	5	poor	47	52	y	y				
		80	120	C	2.5Y5/3	och	cfd	10	poor	25	0	y	y				
									Total	**119**	**99**						
									MD	13	2						
								Droughtiness grade(DR)		2	2						
84	T	0	30	C	10YR4/2			2	-	50	50	n	n	*IV*	3b	**3b**	WE
		30	70	SC	2.5Y5/3	och	cfd	5	poor	40	50	y	y				
		70	80	SC	2.5Y5/3	och	cfd	20		8	0	y	n				

		80	120	SC	2.5Y5/3	och	cfd	20		32	0	y	n						
									Total	**131**	**100**								
									MD	25	3								
									Droughtiness grade(DR)	2	2								
85	T	0	25	C	10YR4/2			2	-	42	42	n	n	*IV*	3b	**3b**	WE		
		25	95	C	10YR5/3	och	cff		poor	64	59	y	y						
		95	120	C	2.5Y5/3	och	cfd		poor	18	0	y	y						
									Total	**123**	**100**								
									MD	17	3								
									Droughtiness grade(DR)	2	2								
86	T	0	30	hCL	10YR5/2				-	54	54	n	n	*IV*	3b	**3b**	WE		
		30	75	C	2.5Y5/3	och	cff		poor	44	52	y	y						
		75	120	C	10Y5/1	och	cmd		poor	32	0	y	y						
									Total	**129**	**106**								
									MD	23	9								
									Droughtiness grade(DR)	2	2								
87	T	0	30	hCL	10YR5/2				-	54	54	n	n	*IV*	3b	**3b**	WE		
		30	55	C	2.5Y5/3	och	cff	10	poor	27	30	y	y						
		55	120	C	10Y5/1	och	mfd		poor	46	20	y	y						
									Total	**126**	**103**								
									MD	20	6								
									Droughtiness grade(DR)	2	2								
88	T	0	30	hCL	10YR5/2			2	-	53	53	n	n	*IV*	3b	**3b**	WE		
		30	60	C	2.5Y5/3	och	mff	2	poor	32	38	y	y						
		60	90	SCL	10YR5/4	och	cff	20		24	12	n	n						
		90	120	SCL	10YR5.4	och	cff	20		24	0	n	n						
									Total	**134**	**103**								
									MD	28	6								
									Droughtiness grade(DR)	2	2								

89	T	0	33	hCL	10YR5/2				-	59	59	n	n	*IV*	3b	**3b**	WE
		33	68	C	2.5Y6/3	och	cfd		poor	35	46	y	y				
		68	120	C	10Y5/1	och	cfd		poor	36	3	y	y				
									Total	**130**	**108**						
									MD	24	11						
								Droughtiness grade(DR)		2	1						
90	T	0	28	hCL	10YR5/2				-	50	50	n	n	*II*	3a	**3a**	WE
		28	80	SCL	2.5Y5/3	och	cfd	10		57	57	y	n				
		80	90	SCL	2.5Y5/2			20		8	0	n	n				
		90	120	C	10Y5/1	och	cfd		poor	21	0	y	y				
									Total	**137**	**108**						
									MD	31	11						
								Droughtiness grade(DR)		1	1						
91	T	0	36	hCL	10YR5/2				-	65	65	n	n	*IV*	3b	**3b**	WE
		36	74	C	2.5Y5/3	och	cfd	5	poor	33	42	y	y				
		74	120	C	10Y5/1	och	cfd		poor	32	0	y	y				
									Total	**130**	**107**						
									MD	24	10						
								Droughtiness grade(DR)		2	2						
92	T	0	35	hCL	10YR5/2				-	63	63	n	n	*IV*	3b	**3b**	WE
		35	65	C	2.5Y5/3	och	cfd	5	poor	29	37	y	y				
		65	100	SCL	2.5Y5/3	och	cmf	5	poor	27	6	y	y				
		100	120	C	10Y5/1	och	cfd		poor	14	0	y	y				
									Total	**132**	**106**						
									MD	26	9						
								Droughtiness grade(DR)		2	2						
93	T	0	30	hCL	2.5Y4/2	och	fff	2	-	53	53	n	n	*IV*	3b	**3b**	WE
		30	120	C	10YR5/3	och	mmd	2	poor	74	51	y	y				
		30	120	C	10YR5/1	och	mmd	2	poor	127	104	y	y				

									Total	**133**	**104**								
									MD	-95	-95								
								Droughtiness grade (DR)		1	2								
94	T	0	33	hCL	2.5Y4/2			2	-	58	58	n	n	*III*	3b	**3b**	WE		
		33	65	C	10YR5/3	och	mmd	2	poor	32	41	y	y						
		65	120	C	10YR4/2	och	mmd	2	poor	38	6	y	y						
									Total	**128**	**105**								
									MD	-96	-95								
								Droughtiness grade (DR)		1	1								
95	T	0	25	hCL	2.5Y4/2			2	-	44	44	n	n	*IV*	3b	**3b**	WE		
		25	45	C	10YR5/3	och	cmd	2	poor	26	26	y	y						
		45	120	C	10YR5/1	och	mmd	2	poor	54	32	y	y						
									Total	**124**	**102**								
									MD	-96	-96								
								Droughtiness grade (DR)		1	1								
96	T	0	30	hCL	2.5Y4/2			2	-	53	53	n	n	*IV*	3b	**3b**	WE		
		30	70	C	10YR5/3	och	mmd	2	poor	39	51	y	y						
		70	120	C	10YR5/1	och	mmd	2	poor	34	0	y	y						
									Total	**127**	**104**								
									MD	-96	-96								
								Droughtiness grade (DR)		1	1								
97	T	0	30	hCL	2.5Y4/2			2	-	53	53	n	n	*IV*	3b	**3b**	WE		
		30	120	C	10YR4/2	och	mmd	2	poor	74	51	y	y						
									Total	**127**	**104**								
									MD	-96	-96								
								Droughtiness grade (DR)		1	1								
98	T	0	30	hCL	2.5Y4/2			2	-	53	53	n	n	*IV*	3b	**3b**	WE		
		30	50	C	10YR5/3	och	mmd	2	poor	26	26	y	y						
		50	120	C	10YR5/1	och	mmd	2	poor	48	26	y	y						

									Total	**127**	**104**								
									MD	-96	-96								
								Droughtiness grade (DR)		1	1								
99	T	0	30	hCL	10YR4/2	och	fff	2	-	53	53	n	n	*IV*	3b	**3b**	WE		
		30	55	C	10YR5/2	och	mmd	2	poor	29	32	y	y						
		55	120	C	10YR5/1	och	mmd	2	poor	45	19	y	y						
									Total	**127**	**104**								
									MD	-96	-96								
								Droughtiness grade (DR)		1	1								
100	T	0	30	hCL	10YR4/2			2	-	53	53	n	n	*IV*	3b	**3b**	WE		
		30	120	C	10YR5/1	och	cmd	2	poor	74	51	y	y						
									Total	**127**	**104**								
									MD	-96	-96								
								Droughtiness grade (DR)		1	1								
101	T	0	30	hCL	2.5Y4/2			2	-	53	53	n	n	*IV*	3b	**3b**	WE		
		30	50	C	10YR5/3	och	mmd	2	poor	26	26	y	y						
		50	120	C	10YR5/1	och	mmd	2	poor	48	26	y	y						
									Total	**127**	**104**								
									MD	-96	-96								
								Droughtiness grade (DR)		1	1								
102	T	0	35	hCL	2.5Y4/2			2	-	62	62	n	n	*III*	3b	**3b**	WE		
		35	120	C	10YR5/3	och	mmd	2	poor	67	45	y	y						
									Total	**129**	**106**								
									MD	-96	-96								
								Droughtiness grade (DR)		1	1								
103	T	0	30	C	2.5Y4/2	och	mmd	2	-	50	50	n	n	*IV*	3b	**3b**	WE		
		30	120	C	10YR5/2	och	cmd	2	poor	**74**	**51**	y	y						
									Total	**124**	**101**								
									MD	-96	-96								

								Droughtiness grade (DR)		1	1							
104	T	0	20	C	2.5Y4/2	och	mmd	2	-	33	33	n	n	*IV*	3b	**3b**	WE	
		20	120	C	10YR5/2	och	cmd	2	poor	**86**	**64**	y	y					
									Total	**120**	**97**							
									MD	-96	-96							
								Droughtiness grade (DR)		1	1							
105	T	0	30	hCL	2.5Y4/2	och	fff	2	-	53	53	n	n	*IV*	3b	**3b**	WE	
		30	120	C	10YR5/3	och	mmd	2	poor	74	51	y	y					
									Total	**127**	**104**							
									MD	30	7							
								Droughtiness grade (DR)		2	2							
106	T	0	25	hCL	2.5Y4/2	och	fff	2	-	44	44	n	n	*IV*	3b	**3b**	WE	
		25	70	C	10YR5/2	och	mmd	2	poor	46	57	y	y					
		70	120	C	10YR5/1	och	mmd	2	poor	34	0	y	y					
									Total	**124**	**102**							
								Droughtiness grade (DR)		2	2							
107	T	0	30	hCL	2.5Y4/2	och	mff	2	-	53	53	n	n	*IV*	3b	**3b**	WE	
		30	120	C	10YR5/3	och	mmd	2	poor	74	51	y	y					
									Total	**127**	**104**							
									MD	27	5							
								Droughtiness grade (DR)		2	2							
108	T	0	30	C	2.5Y4/2	och	mff	2	-	50	50	n	n	*IV*	3b	**3b**	WE	
		30	65	C	10YR5/3	och	cmd	2	poor	36	45	y	y					
		65	120	C	10YR5/1	och	cmd	2	poor	38	6	y	y					
									Total	**124**	**101**							
									MD	-95	-95							
								Droughtiness grade (DR)		1	1							
109	T	0	30	C	2.5Y4/2			2	-	50	50	n	n	*IV*	3b	**3b**	WE	
		30	120	C	10YR5/2	och	mmd	2	poor	74	51	y	y					

									Total	**124**	**101**							
									MD	-96	-96							
								Droughtiness grade (DR)		1	1							
110	T	0	30	hCL	2.5Y4/2			2	-	53	53	n	n	*IV*	3b	**3b**	WE	
		30	120	SC	10YR5/3	och	mmd	2	poor	80	51	y	y					
									Total	**133**	**104**							
									MD	-96	-96							
								Droughtiness grade (DR)		1	1							
111	T	0	30	hCL	2.5Y4/2			2	-	53	53	n	n	*IV*	3b	**3b**	WE	
		30	50	C	10YR5/3	och	cmd	2	poor	26	26	y	y					
		50	120	C	5Y5/1	och	cmd	2	poor	48	26	y	y					
									Total	**127**	**104**							
									MD	30	7							
								Droughtiness grade (DR)		2	2							
112	T	0	30	hCL	2.5Y4/2	och	mmd	2	-	53	53	y	n	*III*	3b	**3b**	WE	
		30	50	C	10YR5/3	och	cmd	2		26	26	y	n					
		50	120	C	5Y5/1	och	cmp	2	poor	48	26	y	y					
									Total	**127**	**104**							
									MD	30	7							
								Droughtiness grade (DR)		2	2							
113	T	0	30	mCL	2.5Y4/2	och	fff	2	-	53	53	n	n	*IV*	3b	**3b**	WE	
		30	50	C	10YR5/3	och	mmd	2	poor	26	26	y	y					
		50	120	C	5Y5/1	och	mmp	2	poor	48	26	y	y					
									Total	**127**	**104**							
									MD	30	7							
								Droughtiness grade (DR)		2	2							
114	T	0	33	mCL	2.5Y4/2	och	fff	2	-	58	58	n	n	*IV*	3b	**3b**	WE	
		33	50	C	10YR5/3	och	cmp	2	poor	22	22	y	y					
		50	120	C	5Y5/1	och	cmp	2	poor	48	26	y	y					

									Total	**128**	**105**							
									MD	31	8							
								Droughtiness grade (DR)		2	2							
115	T	0	25	hCL	2.5Y4/2	och	fff	2	-	44	44	n	n	*IV*	3b	**3b**	WE	
		25	45	C	10YR5/3	och	cmp	2	poor	26	26	y	y					
		45	120	C	5Y5/1	och	cmp	2	poor	54	32	y	y					
									Total	**124**	**102**							
									MD	27	5							
								Droughtiness grade (DR)		2	2							
116	T	0	30	hCL	2.5Y4/2	och	fff	2	-	53	53	n	n	*IV*	3b	**3b**	WE	
		30	60	C	10YR5/3	och	cmp	2	poor	32	38	y	y					
		60	120	C	5Y5/1	och	cmp	2	poor	41	13	y	y					
									Total	**127**	**104**							
									MD	30	7							
								Droughtiness grade (DR)		2	2							
117	T	0	35	C	2.5Y4/2	och	mmd	2	-	58	58	n	n	*IV*	3b	**3b**	WE	
		35	50	C	10YR5/3	och	cmd	2	poor	19	19	y	y					
		50	120	C	5Y5/1	och	mcp	2	poor	48	26	y	y					
									Total	**126**	**103**							
									MD	29	6							
								Droughtiness grade (DR)		2	2							
118	T	0	20	hCL	2.5Y4/2	och	mmd	2	-	35	35	n	n	*IV*	3b	**3b**	WE	
		20	50	C	10YR5/3	och	cmd	2	poor	38	38	y	y					
		50	120	C	5Y5/1	och	mcp	2	poor	48	26	y	y					
									Total	**122**	**99**							
									MD	25	2							
								Droughtiness grade (DR)		2	2							
119	T	0	30	hCL	2.5Y4/2	och	mmd	2	-	53	53	n	n	*IV*	3b	**3b**	WE	
		30	90	C	10YR5/3	och	cmd	2	poor	53	51	y	y					

		90	120	C	5Y5/1	och	mcp	2	poor	21	0	y	y						
									Total	**127**	**104**								
									MD	30	7								
									Droughtiness grade (DR)	2	2								
120	T	0	30	hCL	2.5Y4/2			2	-	53	53	n	n	*IV*	3b	**3b**	WE		
		30	70	C	10YR5/3	och	mmd	2	poor	53	51	y	y						
		70	120	C	10YR5/4	och	mmd	2	poor	21	0	y	y						
									Total	**127**	**104**								
									MD	30	7								
									Droughtiness grade (DR)	2	2								
121	T	0	30	mCL	2.5Y4/2			2	-	53	53	n	n	*IV*	3b	**3b**	WE		
		30	50	C	10YR5/3	och	mmd	2	poor	26	26	y	y						
		50	120	C	5Y5/1	och	mmd	2	poor	48	26	y	y						
									Total	**127**	**104**								
									MD	30	7								
									Droughtiness grade (DR)	2	2								
122	T	0	25	hCL	2.5Y4/2			2	-	44	44	n	n	*IV*	3b	**3b**	WE		
		25	45	C	10YR5/3	och	cmd	2	poor	26	26	y	y						
		45	120	C	5Y5/1	och	cmd	2	poor	54	32	y	y						
									Total	**124**	**102**								
									MD	27	5								
									Droughtiness grade (DR)	2	2								
123	T	0	28	mZCL	10YR4/2				-	53	53	n	n	*IV*	3b	**3b**	WE		
		28	70	C	2.5Y5/3	och	cff		poor	43	55	y	y						
		70	120	C	10Y5/1	och	cfd		poor	35	0	y	y						
									Total	**131**	**108**								
									MD	25	11								
									Droughtiness grade(DR)	2	1								
124	T	0	30	mZCL	10YR4/2				-	57	57	n	n	*IV*	3b	**3b**	WE		

		30	60	C	2.5Y5/2	och	cff		poor	33	39	y	y					
		60	120	C	10Y5/1	och	cfd		poor	42	13	y	y					
									Total	**132**	**109**							
									MD	26	12							
								Droughtiness grade(DR)		2	1							
125/P2	T	0	30	mCL	10YR4/2			2	-	53	53	n	n	*III*	3a	**3a**	WE	
		30	45	C	2.5Y5/3	och	cfd			24	24	y	n					
		45	60	C	2.5Y5/3	och	cmd		poor	14	20	y	y					
		60	120	C	10Y5/1	och	mf-mf		poor	42	13	y	y					
									Total	**132**	**109**							
									MD	26	12							
								Droughtiness grade(DR)		2	1							
126	T	0	30	hCL	10YR4/2			1	-	53	53	n	n	*IV*	3b	**3b**	WE	
		30	64	C	2.5Y5/3	och	cff		poor	36	44	y	y					
		64	120	C	10Y5/1	och	cfd		poor	39	8	y	y					
									Total	**128**	**105**							
									MD	22	8							
								Droughtiness grade(DR)		2	2							
127	T	0	40	C	10YR5/2			1	-	67	67	n	n	*II*	3b	**3b**	WE	
		40	60	C	10YR5/3	och	cff			24	32	y	n					
		60	65	C	2.5Y5/3	och	cff	20	poor	3	5	y	y					
		65	120	C	2.5Y5/3	och	cff	20	poor	31	5	y	y					
									Total	**126**	**110**							
									MD	20	13							
								Droughtiness grade(DR)		2	1							
128	T	0	25	hCL	10YR4/2			1	-	45	45	n	n	*IV*	3b	**3b**	WE	
		25	50	C	2.5Y5/3	och	cff		poor	33	33	y	y					
		50	120	C	10Y5/1	och	cfd		poor	49	26	y	y					
									Total	**126**	**103**							

									MD	20	6							
								Droughtiness grade(DR)		2	2							
129	T	0	30	hCL	10YR4/2			1	-	53	53	n	n	*IV*	3b	**3b**	WE	
		30	50	C	2.5Y5/3	och	mfp		poor	26	26	y	y					
		50	70	C	10Y5/1	och	cfd		poor	14	26	y	y					
		70	120	C	10Y5/1	och	cfd		poor	35	0	y	y					
									Total	**128**	**105**							
									MD	22	8							
								Droughtiness grade(DR)		2	2							
130	T	0	30	hCL	10YR4/2			1	-	53	53	n	n	*II*	3a	**3a**	WE	
		30	70	C	2.5Y5/3	och	cfd			48	64	y	n					
		70	120	C	2.5Y5/3	och	cfd		poor	35	0	y	y					
									Total	**136**	**117**							
									MD	30	20							
								Droughtiness grade(DR)		1	1							
131	T	0	30	hCL	10YR4/2			1	-	53	53	n	n	*IV*	3b	**3b**	WE	
		30	60	C	2.5Y5/3	och	cff		poor	33	39	y	y					
		60	120	C	10Y5/1	och	cfd		poor	42	13	y	y					
									Total	**128**	**105**							
									MD	22	8							
								Droughtiness grade(DR)		2	2							
132	T	0	30	hCL	10YR4/2			1	-	53	53	n	n	*IV*	3b	**3b**	WE	
		30	55	C	2.5Y5/3	och	cff		poor	30	33	y	y					
		55	120	C	10Y5/1	och	mfd		poor	46	20	y	y					
									Total	**128**	**105**							
									MD	22	8							
								Droughtiness grade(DR)		2	2							
133	T	0	30	hCL	10YR4/2			1	-	53	53	n	n	*IV*	3b	**3b**	WE	
		30	60	C	2.5Y5/3	och	cff		poor	33	39	y	y					

		60	90	C	10Y5/1	och	mfd		poor	21	13	y	y						
		90	120	C	10Y4/1	och	cfd		poor	21	0	y	y						
									Total	**128**	**105**								
									MD	22	8								
								Droughtiness grade(DR)		2	2								
134	T	0	30	hCL	10YR4/2				-	54	54	n	n	*IV*	3b	**3b**	WE		
		30	70	C	2.5Y5/3	och	cfd		poor	40	52	y	y						
		70	120	C	2.5Y5/2	och	mfp		poor	35	0	y	y						
									Total	**129**	**106**								
									MD	23	9								
								Droughtiness grade(DR)		2	2								
135	T	0	30	C	10YR4/2				-	51	51	n	n	*IV*	3b	**3b**	WE		
		30	80	C	2.5Y5/3	och	cff		poor	47	52	y	y						
		80	120	C	2.5Y5/2	och	mfd		poor	28	0	y	y						
									Total	**126**	**103**								
									MD	20	6								
								Droughtiness grade(DR)		2	2								
136	T	0	30	C	10YR4/2				-	51	51	n	n	*IV*	3b	**3b**	WE		
		30	50	C	2.5Y5/3	och	cff		poor	26	26	y	y						
		50	60	C	2.5Y5/3	och	cfd			8	16	y	n						
		60	120	C	10Y4/1	och	fmd		poor	42	13	y	y						
									Total	**127**	**106**								
									MD	21	9								
								Droughtiness grade(DR)		2	2								
137	T	0	30	C	10YR4/2				-	51	51	n	n	*IV*	3b	**3b**	WE		
		30	60	C	2.5Y5/3	och	cfd		poor	33	39	y	y						
		60	120	C	10YR5/4	och	cfd	10		44	15	n	n						
									Total	**128**	**105**								
									MD	22	8								

								Droughtiness grade(DR)		2	2							
138	T	0	30	mCL	10YR5/3			2	-	53	53	n	n	*IV*	3b	**3b**	WE	
		30	80	C	2.5Y5/3	och	cff	10	poor	43	47	y	y					
		80	120	C	10YR5/4	och	cff	20		26	0	y	y					
									Total	**122**	**100**							
									MD	16	3							
								Droughtiness grade(DR)		2	2							
139	T	0	30	mCL	10YR5/3			2	-	53	53	n	n	*II*	2	**2**	WE DR	
		30	60	C	10YR5/3	och	fff	10		36	44	n	n					
		60	80	C	2.5Y5/3	och	cfd			16	16	y	n					
		80	120	C	10YR5/1	och	cff		poor	28	0	y	y					
									Total	**133**	**112**							
									MD	27	15							
								Droughtiness grade(DR)		2	1							
140	T	0	30	mCL	10YR5/3			2	-	53	53	n	n	*IV*	3b	**3b**	WE	
		30	60	C	2.5Y5/3	och	cff	10	poor	30	35	y	y					
		60	90	C	10Y5/1	och	cff		poor	21	13	y	y					
		90	120	C	10Y5/1	och	cff		poor	21	0	y	y					
									Total	**125**	**101**							
									MD	19	4							
								Droughtiness grade(DR)		2	2							
141	T	0	30	mCL	10YR5/3			2	-	53	53	n	n	*IV*	3b	**3b**	WE	
		30	60	C	2.5Y5/3	och	cfp	5	poor	31	37	y	y					
		60	90	C	10YR5/1	och	cfp		poor	21	13	y	y					
		90	120	C	10YR5/1	och	cfp		poor	21	0	y	y					
									Total	**126**	**103**							
									MD	20	6							
								Droughtiness grade(DR)		2	2							
142	T	0	35	mCL	10YR4/2			2	-	62	62	n	n	*II*	2	**2**	WE	

		35	55	mCL	10YR4/3			10		26	29	n	n						
		55	80	C	2.5Y5/2	och	cfd		poor	18	20	y	y						
		80	120	C	10YR5/1	och	mff		poor	28	0	y	y						
									Total	**134**	**110**								
									MD	28	13								
									Droughtiness grade(DR)	2	1								
143	T	0	30	SCL	10YR4/3			2	-	50	50	n	n	*I*	1	**2**	DR		
		30	60	SL	7.5YR5/3	och	mmd	2		40	44	y	n						
		60	120	cS	7.5YR5/3	och	mmd	2	poor	24	5	y	n						
									Total	**114**	**99**								
									MD	8	2								
									Droughtiness grade(DR)	2	2								
144	T	0	34	SL	10YR4/2			1	-	57	57	n	n	*I*	1	**2**	DR		
		34	120	LmS	10YR5/4	och	cfd	1		56	32	n	n						
									Total	**113**	**89**								
									MD	7	-8								
									Droughtiness grade(DR)	2	2								
145	T	0	28	LmS	10YR4/2			1	-	36	36	n	n	*I*	1	**3a**	DR		
		28	50	LmS	10YR4/3			1		20	20	n	n						
		50	120	LmS	10YR4/3			1		42	18	n	n						
									Total	**97**	**74**								
									MD	-9	-23								
									Droughtiness grade(DR)	3a	3a								
146	T	0	30	LmS	10YR4/2			1	-	39	39	n	n	*I*	1	**3a**	DR		
		30	35	LmS	10YR4/3			1		4	4	n	n						
		35	120	LmS	10YR4/3			1		55	31	n	n						
									Total	**98**	**74**								
									MD	-8	-23								
									Droughtiness grade(DR)	3a	3a								

147	T	0	30	SL	10YR4/3	1	-	51	51	n	n	/	1	**3a**	DR	
		30	70	LmS	10YR4/4	1		30	36	n	n					
		70	120	LmS	10YR4/4	1		30	0	n	n					
							Total	**110**	**86**							
							MD	4	-11							
						Droughtiness grade(DR)		3a	3a							
148	T	0	25	SL	10YR4/3	1	-	42	42	n	n	/	1	**3a**	DR	
		25	35	LmS	10YR4/4	1		9	9	n	n					
		35	120	LmS	10YR4/4	1		55	31	n	n					
							Total	**106**	**82**							
							MD	0	-15							
						Droughtiness grade(DR)		3a	3a							
149	T	0	30	SL	10YR4/3	1	-	51	51	n	n	/	1	**3a**	DR	
		30	60	LmS	10YR4/4	5		23	26	n	n					
		60	75	LmS	10YR5/4	1		9	9	n	n					
		75	120	LmS	10YR5/4	1		27	0	n	n					
							Total	**109**	**85**							
							MD	3	-12							
						Droughtiness grade(DR)		3a	3a							
150	T	0	25	SL	10YR4/3	1	-	42	42	n	n	/	1	**2**	DR	
		25	75	SL	10YR5/4	5		62	64	n	n					
		75	120	SL	10YR5/4	1		49	0	n	n					
							Total	**153**	**106**							
							MD	47	9							
						Droughtiness grade(DR)		1	2							
151	T	0	30	SL	10YR4/3	1	-	51	51	n	n	/	1	**1**		
		30	90	SL	10YR5/4	5		71	57	n	n					
		90	120	SL	10YR5/4	1		33	0	n	n					
							Total	**154**	**108**							

									MD	48	11							
								Droughtiness grade(DR)		1	1							
152	T	0	10	SL	10YR4/3			1	-	17	17	n	n	*I*	1	**2**	DR	
	T	10	25	SL	10YR5/4			5		24	24	n	n					
		25	120	SL	10YR5/4			5		109	64	n	n					
									Total	**150**	**105**							
									MD	44	8							
								Droughtiness grade(DR)		1	2							
153	T	0	30	LS	10YR4/2			5	-	37	37	n	n	*I*	1	**3a**	DR	
		30	35	LS	10YR4/4			5		4	4	n	n					
		35	120	LS	10YR4/4			5		53	30	n	n					
									Total	**94**	**72**							
									MD	-12	-25							
								Droughtiness grade(DR)		3a	3a							
154	T	0	20	LS	10YR4/3			1	-	26	26	n	n	*I*	1	**3a**	DR	
	T	20	30	LS	10YR4/4			1		13	13	n	n					
		30	120	LS	10YR4/4			1		59	36	n	n					
									Total	**98**	**74**							
									MD	-8	-23							
								Droughtiness grade(DR)		3a	3a							
155	T	0	30	LS	10YR4/2			5	-	37	37	n	n	*I*	1	**3a**	DR	
		30	58	LS	10YR4/4			5		22	24	n	n					
		58	120	LS	10YR4/4			5		35	10	n	n					
									Total	**94**	**72**							
									MD	-12	-25							
								Droughtiness grade(DR)		3a	3a							
156	T	0	28	hZCL	10YR4/2			2	-	52	52	n	n	*III*	3b	**3b**	WE	
		28	64	C	10YR5/3	och	cfd	1		46	57	y	n					
		64	120	C	10Y5/1	och	cmd	1	poor	39	8	y	y					

									Total	**137**	**117**							
									MD	31	20							
								Droughtiness grade(DR)		1	1							
157	T	0	25	C	10YR4/3			2	-	42	42	n	n	*III*	3b	**3b**	WE	
		25	40	C	10YR5/3	och	cfd	1		24	24	y	n					
		40	64	C	10YR5/3	och	cfd	1		27	38	y	n					
		64	120	C	10Y5/1	och	cmd	1	poor	39	8	y	y					
									Total	**131**	**111**							
									MD	25	14							
								Droughtiness grade(DR)		2	1							
158	T	0	25	C	10YR4/3			2	-	42	42	n	n	*III*	3b	**3b**	WE FL	
		25	45	C	10YR5/3	och	cfd	1		32	32	y	n					
		45	64	C	10YR5/3	och	cfd	1		19	30	y	n					
		64	120	C	10Y5/1	och	cmd	1	poor	39	8	y	y					
									Total	**131**	**111**							
									MD	25	14							
								Droughtiness grade(DR)		2	1							
159	T	0	25	hCL	10YR4/3			2	-	44	44	n	n	*IV*	3b	**3b**	WE FL	
		25	75	C	10YR5/3	och	cfd	1	poor	50	58	y	y					
		75	120	C	10Y5/1	och	mfp	1	poor	31	0	y	y					
									Total	**125**	**102**							
									MD	19	5							
								Droughtiness grade(DR)		2	2							
160	T	0	25	C	10YR5/3			2	-	42	42	n	n	*II*	3b	**3b**	WE	
		25	50	C	10YR5/3	och	cfd	1		40	40	y	n					
		50	120	C	10YR5/3	och	cfd	1		55	32	y	n					
									Total	**137**	**113**							
									MD	31	16							
								Droughtiness grade(DR)		1	1							

161	T	0	20	C	10YR5/3			2	-	33	33	n	n	*II*	3b	**3b**	WE
		20	50	C	10YR5/3	och	cfd	1		48	48	y	n				
		50	120	C	10YR5/3	och	cfd	1		55	32	y	n				
									Total	**136**	**113**						
									MD	30	16						
								Droughtiness grade(DR)		1	1						
162	T	0	25	hCL	10YR4/3			1	-	45	45	n	n	*IV*	3b	**3b**	WE
		25	50	SCL	2.5Y5/3	och	cff	1	poor	32	32	y	y				
		50	120	SL	10YR5/2	och	cff	1		76	30	y	n				
									Total	**153**	**106**						
									MD	47	9						
								Droughtiness grade(DR)		1	2						
163	T	0	25	mCL	10YR4/2			1	-	45	45	n	n	*II*	2	**3b**	FL
		25	70	SCL	10YR5/4	och	cff	1		57	67	n	n				
		70	90	SCL	10YR5/2	och	cfd	1	poor	16	0	y	y				
		90	120	SL	10YR5/2	och	cff	40		20	0	y	n				
									Total	**138**	**111**						
									MD	32	14						
								Droughtiness grade(DR)		1	1						
164	T	0	25	C	10YR4/2			1	-	42	42	n	n	*IV*	3b	**3b**	WE FL
		25	60	C	10YR5/3	och	cfd	1	poor	39	45	y	y				
		60	120	C	10YR5/3	och	cfd	1	poor	42	13	y	y				
									Total	**123**	**100**						
									MD	17	3						
								Droughtiness grade(DR)		2	2						
165	T	0	10	hCL	10YR4/3			1	-	18	18	n	n	*IV*	3b	**3b**	WE
	T	10	25	hCL	10YR4/3			1		27	27	n	n				
		25	50	SCL	2.5Y5/3	och	cff	1	poor	32	32	y	y				

		50	120	SCL	2.5Y5/3	och	cff	1	poor	55	26	y	y						
									Total	**132**	**103**								
									MD	26	6								
									Droughtiness grade(DR)	2	2								
166	T	0	10	hCL	10YR4/3			1	-	18	18	n	n	*IV*	3b	**3b**	WE FL		
	T	10	25	hCL	10YR4/3			1		27	27	n	n						
		25	50	SCL	2.5Y5/3	och	cff	1	poor	32	32	y	y						
		50	120	SCL	2.5Y5/3	och	cff	1	poor	55	26	y	y						
									Total	**132**	**103**								
									MD	26	6								
									Droughtiness grade(DR)	2	2								
167	T	0	15	hCL	10YR4/3			1	-	27	18	n	n	*IV*	3b	**3b**	WE FL		
	T	15	25	hCL	10YR4/3			1		18	27	n	n						
		25	50	SCL	2.5Y5/3	och	cff	1	poor	32	32	y	y						
		50	120	SCL	2.5Y5/3	och	cff	1	poor	55	26	y	y						
									Total	**132**	**103**								
									MD	26	6								
									Droughtiness grade(DR)	2	2								
168	T	0	30	C	10YR5/3			1	-	51	51	n	n	*IV*	3b	**3b**	WE FL		
		30	120	C	2.5Y5/3	och	cfd	1	poor	74	52	y	y						
									Total	**125**	**102**								
									MD	19	5								
									Droughtiness grade(DR)	2	2								
169	T	0	30	C	10YR5/3			1	-	51	51	n	n	*IV*	3b	**3b**	WE		
		30	120	C	2.5Y5/3	och	cfd	1	poor	74	52	y	y						
									Total	**125**	**102**								
									MD	19	5								
									Droughtiness grade(DR)	2	2								

170	T	0	25	C		10YR5/3			1	-	42	42	n	n	*IV*	3b	**3b**	WE	
		25	120	C		2.5Y5/3	och	cfd	1	poor	81	58	y	y					
										Total	**123**	**100**							
										MD	17	3							
									Droughtiness grade(DR)		2	2							
171	T	0	20	hZCL		10YR4/2			2	-	37	37	n	n	*III*	3b	**3b**	WE	
		20	45	C		10YR5/3	och	cfd	1		40	40	y	n					
		45	120	C		10Y5/1	och	cmd	1	poor	55	32	y	y					
										Total	**132**	**109**							
										MD	26	12							
									Droughtiness grade(DR)		2	1							
172	T	0	28	mCL		10YR 4/4			10	-	46	46			*III*	3a	**3a**	WE	MR
		28	35	hCL		7.5YR 6/8	grey	many f	10		10	10	y						
		35	42	C		2.5GY6/1	Mn	many	5	poor	9	9	y	y					
		42	65	SCL		5YR 6/8	7.5Y6/2	many	25		21	26	y						
		65	120	SCL					40	poor	28	4	y						
										Total	**113**	**95**		disturbed				III	
										MD	7	-2		MR.micro-relief			uneven	3a	
									Droughtiness grade (DR)		2	2							
173	T	0	28	mCL	non	10YR 5/4			10	-	46	46			*II*	2	**2**	WE	DR
		28	40	mCL		10YR 6/6			10		17	17							
		40	60	mCL		10YR 6/4	Fe	few	10		24	29	y						
		60	100	C/CL	non	10YR 5/4	Fe	com	5	poor	27	12	y	y					
		100	120	MSt		10YR 5/2	Mn	com	0		10	0	y	y					
										Total	**123**	**104**							
										MD	17	7							
									Droughtiness grade (DR)		2	2							
174	T	0	28	SL	non	10YR 5/4			10		43	43			*II*	1	**2**	DR	

		28	40	SL		10YR 5/6			10			16	16							
		40	60	SL		10YR 6/6		wet	10			24	27							
		60	80	SCL			Fe	com	10		poor	15	12	y	(y)					
		80	120	LC		7.5YR 6/6	grey	many	5		poor	27	0	y	y					
											Total	**124**	**98**							
						in dip					MD	18	1							
										Droughtiness grade (DR)		2	2							
175	T	0	28	mCL	non	10YR 5/4			10		-	46	46			*III*	3a	**3a**	WE	
		28	45	mCL		10YR 5/3	FeMn	com	10			25	25	y						
		45	60	hCL			Fe	many	10			16	22	y						
		60	80	C/CL		10Y 7/1	Fe	many	0		poor	14	13	y	y					
		80	120	C	non	10GY6/1			0		poor	28	0	y	y					
											Total	**129**	**105**							
											MD	23	8							
										Droughtiness grade (DR)		2	2							
176	T	0	28	hSCL	non	10YR 4/4			10			43	43			*II*	3a	**3a**	DR	WE
		28	40	SCL		10YR 6/6	Fe	few	30			13	13							
		40	60	SCL			Fe	com	30			18	22	y						
		60	80	SC		2.5Y 7/4	FeMn	many	10		poor	15	12	y	y					
		80	100	LC		7.5YR 6/8	grey	very	25		poor	11	0	y	y					
		100	120	LC		10GY6/1			0		poor	14	0	y	y					
											Total	**113**	**89**							
											MD	7	-8							
										Droughtiness grade (DR)		2	2							
177	T	0	28	SL+		10YR 4/4			10			43	43			*II*	1	**2**	DR	
		28	50	SL+		10YR 6/3	Fe	few	10			30	30							
		50	65	SCL		10YR 5/3	Fe	few	10			14	20	y						
		65	80	SCL/SC		10YR 5/3	Fe	com	10		poor	11	6	y	y					

		80	90	SCL				30			7	0	y	y					
		90	120	SCL				40		poor	15	0							
										Total	**120**	**99**							
										MD	14	2							
									Droughtiness grade (DR)		2	2							
178	T	0	32	SL+	10YR 4/4			10			49	49			*I*	1	**3a**	DR	
		32	40	SL	10YR 6/6			15			10	10							
		40	65	SL	10YR 6/4	Fe	com	30			23	27	y						
		65	120	SCL				40		poor	28	4	y						
										Total	**110**	**91**							
										MD	4	-6							
									Droughtiness grade (DR)		3a	2							
178/P3	T	0	25	SL	10YR 4/4			11			38	38			*I*	1	**3a**	DR	
		25	50	SL+	7.5YR4/6			30			27	27							
		50	65	SCL	10YR 5/2	Fe	many f	30			11	16	y						
		65	120	SCL				40		poor	28	4							
										Total	**103**	**85**							
										MD	-3	-12							
									Droughtiness grade (DR)		3a	3a							
179	T	0	25	SCL	10YR 4/4			10			39	39			*II*	2	**3a**	DR	
		25	45	SCL	10YR 5/3	FeMn	com	15			26	26	y						
		45	65	SCL	10YR 6/6			30			16	22							
		65	120	SCL				40		poor	28	4							
					compact					Total	**108**	**90**							
					at top					MD	2	-7							
									Droughtiness grade (DR)		3a	2							
180	T	0	23	SL	10YR 4/4			10			35	35			*I*	1	**2**	DR	

		23	60	SL	7.5YR 6/8	grey	faint	15		44	48								
		60	75	SL	10YR 6/6			30		12	11								
		75	120	SCL				40	poor	23	0								
									Total	**114**	**94**								
									MD	8	-3								
									Droughtiness grade (DR)	2	2								
181	T	0	30	C	2.5Y4/2	och	mmf	2	-	50	50	y	n	*IV*	3b	**3b**	WE		
		30	70	C	10YR4/2	och	mmd	2	poor	39	51	y	y						
		70	120	SC	10YR5/3	och	mmd	2	poor	39	0	y	y						
									Total	**129**	**101**								
									MD	32	4								
									Droughtiness grade (DR)	2	2								
182	T	0	40	hCL	2.5Y4/2	och	mff	2	-	71	71	y	n	*III*	3b	**3b**	WE		
		40	120	C	10YR5/3	och	mmd	2	poor	61	38	y	y						
									Total	**131**	**109**								
									MD	34	12								
									Droughtiness grade (DR)	2	2								
183	T	0	35	hCL	2.5Y4/2	och	mff	2	-	71	71	y	n	*IV*	3b	**3b**	WE		
		35	120	C	10YR5/2	och	mmd	2	poor	61	38	y	y						
									Total	**131**	**109**								
									MD	34	12								
									Droughtiness grade (DR)	2	2								
184	T	0	35	hSCL	2.5Y4/2	och	mff	2	-	71	71	y	n	*III*	3a	**3a**	WE		
		35	60	SC	10YR5/3	och	cmp	2		61	38	y	n						
		60	120	SC	10YR5/3	och	cmp	2	poor	61	38	y	y						
									Total	**131**	**109**								
									MD	34	12								
									Droughtiness grade (DR)	2	2								
185	T	0	40	SCL	2.5Y4/2	och	fff	2	-	67	67	n	n	*III*	3a	**3a**	WE		

		40	60	SC	10YR5/3	och	cmd	2		25	29	y	n						
		60	120	SC	10YR5/3	och	cmp	2	poor	47	13	y	y						
									Total	**138**	**109**								
									MD	41	12								
								Droughtiness grade (DR)		2	2								
186	T	0	35	SCL	2.5Y4/2	och	fff	2	-	58	58	n	n	*IV*	3b	**3b**	WE		
		35	120	SC	10YR5/3	och	mmd	2	poor	74	45	y	y						
									Total	**132**	**103**								
									MD	35	6								
								Droughtiness grade (DR)		2	2								
187	T	0	30	hCL	2.5Y4/2	och	fmd	2	-	53	53	n	n	*IV*	3b	**3b**	WE		
		30	120	C	10YR5/3	och	mmd	2	poor	74	51	y	y						
									Total	**127**	**104**								
									MD	30	7								
								Droughtiness grade (DR)		2	2								

188	T	0	15	hCL	non	10YR 4/4			10			24	24			*IV*	3b	3b	WE
		15	38	hCL		2.5Y 5/2	Fe	many	10			33	33	y					
		38	120	C	non	10YR6/6	5Y 6/2	many f	0	poor		65	42	y	y				
										Total		122	99		disturbed				IV
						wet				MD		14	-2						
									Droughtiness grade (DR)			2	2						
189	T	0	20	hZCL	non	10YR 4/4			10			34	34			*IV*	3b	3b	WE
		20	40	hCL		2.5Y 5/2	Fe	com	15			28	28	y					
		40	50	CL/C		2.5GY6/1		many	10	poor		11	11	y	y				
		50	120	C	non	10YR6/6	5Y 6/2	f	0	poor		49	26	y	y				
										Total		122	99		disturbed				IV
						wet				MD		14	-2						
									Droughtiness grade (DR)			2	2						
190	T	0	15	LC	non	10YR 5/4			12			23	23			*IV*	3b	3b	WE
	T	15	35	hCL		2.5Y 5/2	Fe	com	12			32	32	y					
		35	65	CL/C		2.5GY6/1	Mn	many	10	poor		27	34	y	y				
		65	120	C	non	10YR6/6	5Y 6/2	many f	0	poor		39	7	y	y				
										Total		120	95		disturbed				IV
										MD		12	-6						
									Droughtiness grade (DR)			2	2						
191	T	0	28	mCL		10YR 4/4			10			46	46			*III*	3a	3a	WE MR
		28	35	hCL		7.5YR 6/8	grey	many f	10			10	10	y					
		35	42	C		2.5GY6/1	Mn	many	5	poor		9	9	y	y				
		42	65	SCL		5YR 6/8	7.5Y6/2	many	25			21	26	y					
		65	120	SCL					40	poor		28	4	y					
										Total		113	95		disturbed				III
										MD		5	-6		MR.micro-relief			uneven	3a
									Droughtiness grade (DR)			2	2						

192	T	0	25	mCL		10YR 4/4			10			41	41			*II*	2	2	WE DR
		25	58	fSCL		10YR 5/6			10			43	48						
		58	65	C/CL			Fe	many	5			6	11	y					
		65	120	C/CL	non	10YR 6/6	Mngrey	many	5	poor		37	6	y	y				
										Total		127	105						
										MD		19	4						
									Droughtiness grade (DR)			2	2						
Pit 3	T	0	25	SL		10YR 4/4			11			38	38			*I*	1	3a	DR 3
		25	50	SL+		7.5YR4/6			30			27	27						
		50	65	SCL		10YR 5/2	Fe	many f	30			11	16	y					
		65	120	SCL					40	poor		28	4						
										Total		103	85						
										MD		-5	-16						
									Droughtiness grade (DR)			3a	3a						

Appendix 3: Pit descriptions and photographs

Pit 3		**Description** (stone calculations are in Appendix 4)
Ap	0-25 cm	Brown (10 YR 4/4) medium sandy loam. Granular structure. Hard stones measured as 1.9% >2cm but **11%** total (>2mm) – tabular ironstone, angular flint shards and some sub-rounded sandstone fragments.
Bt	29-50 cm	Strong brown (7.5 YR 4/6) with some faint grey mottles, sticker sandy loam. Moderately stony measured as **29%** total including much fine ironstone). Medium granular structure.
2Btg	50-65 cm	Greyish-brown (10YR 5/2) and strong brown (7.5 YR 6/6) mottled, coarse sandy clay loam. Moist. Breaks to coarse granular and fine subangular blocky structures. Total stones measured as **32%**. Difficult to dig
BCu	65 cm -	Unaugerable. Assumed at least 40% stone and compact sandy clay loam texture of unknown depth.

Comment: moderately well drained WC I or II (if slowly permeable within 80cm). Stones reduce available water and ALC subgrade is set at 3a because of droughtiness.
Total stone content in topsoil is greater than apparent because of the significant amount of smaller stones. Subsoil has 10% >2cm stone and 20% 2-20mm fine gravel.
Other profiles became moderately stony below 50cm rather than 25cm as in this location, but droughtiness still limits to Subgrade 3a (see Appendix 2).

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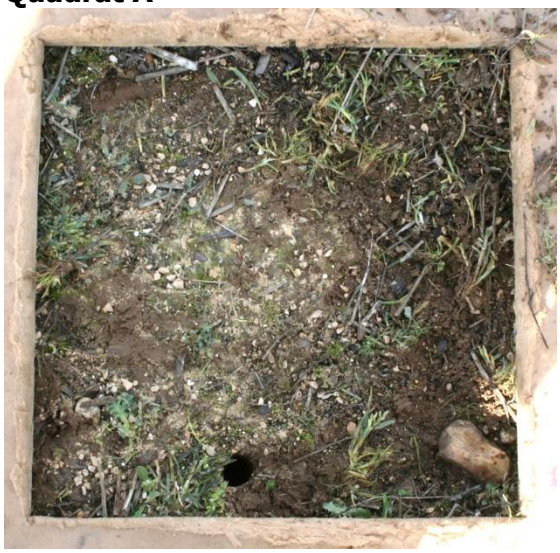
A 0-25cm (>2cm stone removed)	A: 25-50cm	A:50-60cm
		

Appendix 4: Pit 3 Stone Measurement

Location	sample depth cm	Gravimetric measurements (oven dry) > 6cm	2-6cm	2mm-2cm	< 2mm moisture %	Hand texture	assumed soil density g/cm^3	measured stone density g/cm^3	Volumetric calculations > 6cm %	2-6cm %	2mm-2cm %	Total stone %
			kg from hole	% w/w								
Pit A	**0-25**	0	1.1	16.0	24.7	mSL	1.35	2.48	0	1.9	9	**11**
			% w/w	% w/w								
Pit A	**25-50**	0	14.2	28.1	21.5	SL+	1.40	2.40-2.55	0	10	19	**29**
Pit A	**50-60**	0	13.8	31.0	24.4	cSCL	1.45	2.40-2.55	0	10	22	**32**
B	**0-25**	0	10.0	12.7		mSL	1.35	2.50-2.90	0	5	8	**13**

Volume of hole is 22.5 litres

Quadrat A



Some applied lime on surface

>2cm hard stone = 1.9% by volume
>2mm (total) stone = **11%**

A 0-25cm

Fine and medium assorted stones, ironstone, flint, sandstones

Quadrat A 25-50cm (3kg subsample)

>2cm stone = 10% by volume
>2mm (total) stone = **29%**

Quadrat B 0-25cm (2 kg subsample)

>2cm stone = 5% by volume (but includes a piece of iron)
>2mm (total) stone = **13%**

Some subrounded > 2cm stone but significantly more 2mm-2cm stone.

Method (topsoils)

>2cm sieved stone from 30 x 30 x 25cm hole (washed, dried and weighed)

Sample of < 2cm material was oven-dried, weighed, wet sieved >2mm, dried and reweighed. Stone density measured by displacement. Typical density assumed for <2mm material.

Method (subsoils)

Whole samples taken from side or bottom of soil pit (2-3 kg).

Oven-dried, weighed, >2cm stone dry-sieved and weighed, remainder wet sieved etc as above.

Density of >2cm stones (6 measurements) = 2.45 g/cm^3

Density of 2-20mm stones (8 measurements) = 2.55 g/cm^3

Assumed density of <2mm soil = 1.35 g/cm^3 topsoil (may increase if min. tilled) and 1.4 to 1.45 g g/cm^3 in subsoil (sandy loam or sandy clay loam).

Client reference:
Ashfield Land Management Limited

Project:
Rail Central, Northamptonshire

Document:
Environmental Statement

Title:
RAC6640-1: Observations

Figure No.

Revision:

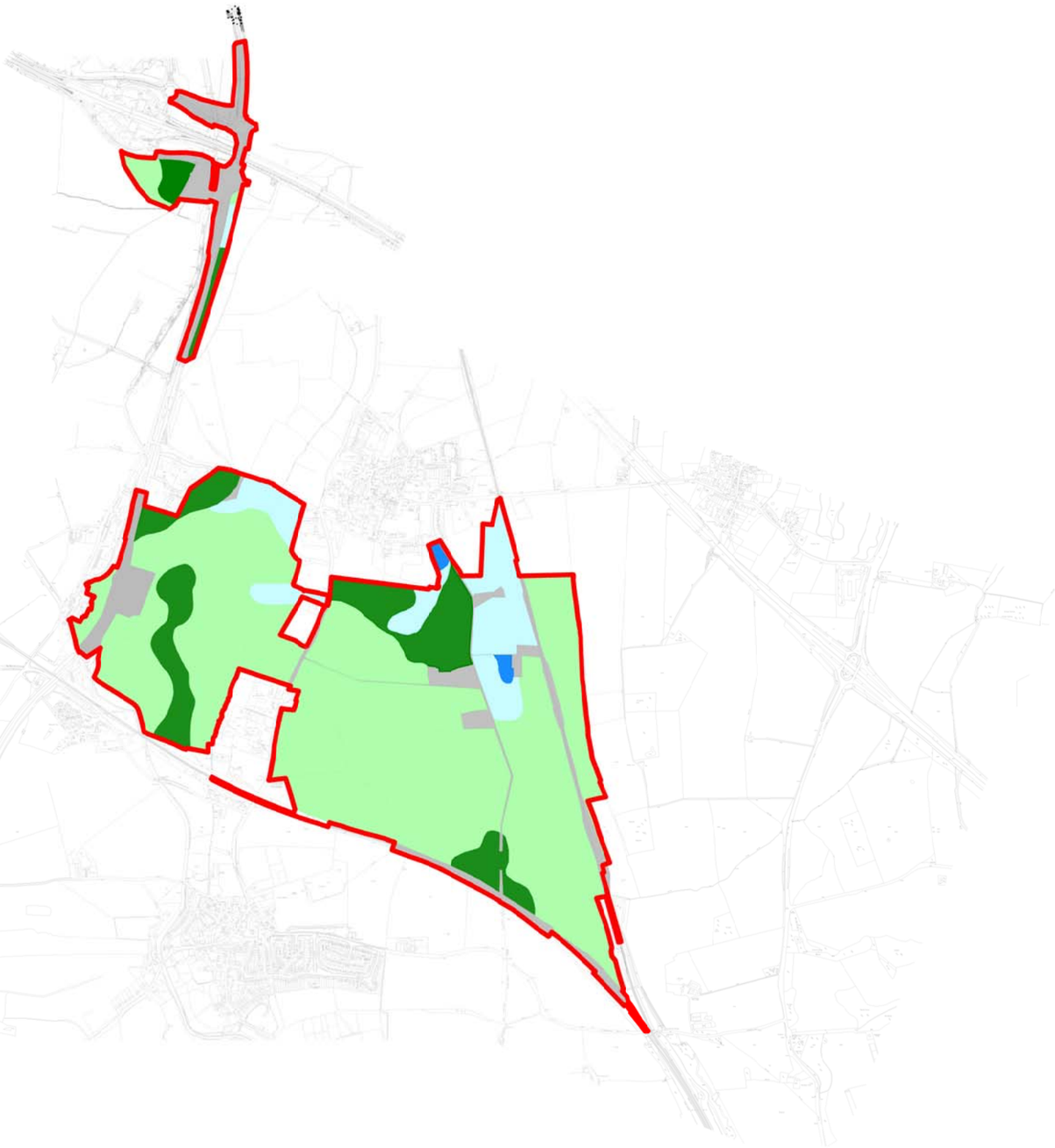
Author:
HTD

Date:
July 2017

Scale:
1:25,000 (A3)

0 metres 1,000
(1:25,000)

Promap



Grade 1
Grade 2
Grade 3a
Grade 3b
Grade 4
Grade 5
Non-agricultural
Not present

0 metres 1,000
(1:25,000)

Client reference:
Ashfield Land Management Limited

Project:
Rail Central, Northamptonshire

Document:
Environmental Statement

Title:
RAC6640-2: Agricultural Land Classification

Figure No.

Revision:

Author:
HTD

Date:
July 2017

Scale:
1:25,000 (A3)

Promap