

May 2019

Grosvenor Developments Ltd

Agricultural Land Classification and Soil Resources

at

Oxfordshire Cotswolds Garden Village, Eynsham

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1 Introduction

- 1.1 Reading Agricultural Consultants Ltd (RAC) is instructed by Grosvenor Developments Ltd to investigate the Agricultural Land Classification (ALC) and soil resources of land north of the A40 at Eynsham, Oxfordshire, by means of a detailed survey of soil and site characteristics.
- 1.2 Guidance for assessing the quality of agricultural land in England and Wales is set out in the Ministry of Agriculture, Fisheries and Food (MAFF) revised guidelines and criteria for grading the quality of agricultural land (1988)¹, and summarised in Natural England's Technical Information Note 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 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, 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 is defined in Annex 2 of the National Planning Policy Framework³ as best and most versatile agricultural land.
- 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 most of the site as undifferentiated Grade 3, with Grade 4 to the north and west, and Grade 2 to the south. However, TIN049 explains that:

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.

³ Ministry of Housing, Communities and Local Government (2018). National Planning Policy Framework.

"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 ..."

1.6 TIN049 goes on to explain that a definitive ALC grading should be obtained by undertaking a detailed survey according to the published guidelines, at an observation density of one boring per hectare. Existing detailed ALC data⁴ is available for approximately 13ha in the west of the site (shown as Area A on Figure RAC8314-1), and this survey follows the detailed methodology set out in the MAFF guidelines for the remainder of the site.

2 Site and climatic conditions

General features, land form and drainage

- 2.1 The site extends to approximately 194ha, most of which is agricultural land under grass, with some in arable use, mostly to the north. Non-agricultural land comprises a farm house and buildings in the east and north, and an area in the south-west with many mounds and hummocks that may recently have been used as a dirt bike track.
- 2.2 Topography is level to gently sloping from the highest altitude of around 85m above Ordnance
 Datum (AOD) roughly central to the site, falling mostly to the east and west. The lowest altitudes
 are around 65m AOD in the east and 70m AOD in the west.

Agro-climatic conditions

2.3 Agro-climatic data for the site have been interpolated from the Meteorological Office's standard 5km grid point data set at two locations at representative altitudes of 75m AOD, and are given in Table 1. The climate is temperate, with moderate rainfall and mild temperatures. Crop moisture deficits are moderate to moderately large. The Field Capacity Day regime (which estimates the duration of the period from the autumn or early winter to spring when the soil moisture deficit is zero) is slightly shorter than is typical for lowland England, which is considered to be favourable for agricultural work.

⁴ MAFF (1991). Agricultural Land Classification, Barnard Gate, Near Freeland, Oxfordshire. Ref 3305-056-91

Table 1: Local agro-climatic conditions

Parameter	Va	alue
Grid Reference	SP420101	SP423110
Average Annual Rainfall	678mm	675mm
Accumulated Temperatures >0°C	1,428 day°	1,427 day°
Field Capacity Days	147 days	147 days
Average Moisture Deficit, wheat	105mm	105mm
Average Moisture Deficit, potatoes	97mm	98mm

Soil parent material and soil type

- 2.4 The principal underlying geology mapped by the British Geological Survey⁵ across most of the site is mudstone of undifferentiated Oxford Clay and West Walton Formations. Oxford Clay is typically grey. The West Walton Formation clay may be calcareous and may include siltstones and subordinate fine-grained sandstones and limestone. There is a narrow band of the Kellaways Sand Member mapped along the eastern boundary of the site, comprising siltstone and sandstone, which separates the main bedrock from the Kellaways Clay Member, which comprises grey mudstone.
- 2.5 Aligned north to south, east of the centre of the site, is a superficial deposit of the Summertown-Radley Sand and Gravel Member. A pocket of sand and gravel of the Hanborough Gravel Member is mapped to the south of the centre, and the Northmoor Sand and Gravel Member is mapped in the east. Some deposits of alluvium are also mapped in the east and may include silt, sand, peat and gravel.
- 2.6 The Soil Survey of England and Wales soil association mapping⁶ (1:250,000 scale) shows three soil associations at the site. The Denchworth association is dominant across the western half of the site and is characterised by wet, clayey profiles which are typically waterlogged for long periods, of Wetness Class (WC) IV or V.
- 2.7 Correlating with the sand and gravel deposits is the Badsey 1 association. Profiles typically comprise clay loam topsoil and upper subsoil, overlying sandy gravel. Profiles are variably calcareous and well drained, of WC I.
- 2.8 In the south-east of the site, associated with the alluvium deposits, is the Kelmscot association, characterised by calcareous clay loam upper horizons over sandy loam lower horizons. Most of

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⁵ British Geological Survey (2019). *Geology of Britain viewer*, http://mapapps.bgs.ac.uk/geologyofbritain/home.html

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

the soils are permeable but are affected by groundwater and flooding, resulting in WC II to IV depending upon the severity⁷.

3 Agricultural land quality

Soil survey methods

3.1 In total, 167 soil profiles were examined across the site using an Edelman (Dutch) auger at an observation density of one per hectare across accessible land in accordance with the established recommendations for ALC surveys². Four observation pits were also excavated to examine subsoil structures. The locations of observations are indicated on Figure RAC8314-1, along with the area previously surveyed (Area A) and two areas (B and C) to which access was not available). At each observation point the following characteristics were assessed for each soil horizon up to a maximum of 120cm or any impenetrable layer:

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

3.2 Seven 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 Appendix1.

- 3.3 Soil Wetness Class (WC) was inferred from the matrix colour, presence or absence of, and depth to, greyish and ochreous gley mottling, and slowly permeable subsoil layers at least 15cm thick, in relation to the number of Field Capacity Days at the location.
- 3.4 Soil droughtiness was investigated by the calculation of moisture balance equations (given in Appendix 2). Crop-adjusted Available Profile Water (AP) is estimated from texture, stoniness and

⁷ **Jarvis et al (1984).** *Soils and Their Use in South East England*. Soil Survey of England and Wales Bulletin 15, Harpenden.

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

- 3.5 Assessment of land quality has been carried out according to the MAFF revised ALC guidelines (1988)¹. Soil profiles have been described according to Hodgson (1997)⁸ which is the recognised source for describing soil profiles and characteristics according to the revised ALC guidelines.
- 3.6 Agricultural land quality at this site is most affected by soil wetness or droughtiness, with localised areas limited by topsoil stone content. Most of the site is limited to Subgrade 3b, with large areas of Subgrade 3a and Grade 2 predominantly in the east.
- 3.7 Three main soil types have been identified.
- 3.8 Profiles of the main soil type are identified in the western part of the site and mostly comprise heavy clay loam topsoil, with heavy silty clay loam, medium clay loam and clay textures also present. Occasionally in the south of the site there is a thin surface horizon containing the grass root mat in which organic matter content is higher than in the main topsoil.
- 3.9 The average topsoil depth is 28cm and the colour is mostly greyish to dark greyish brown, or brown (10YR4/2, 4/3, 5/2, 5/3 in the Munsell soil colour charts⁹). Most is stoneless to very slightly stony, although there are localised patches where stone content is higher (up to around 15% by volume in total), although not limiting to ALC.
- 3.10 The topsoil is firm but has a moderately well developed, medium to coarse subangular blocky structure with common roots and pores. The topsoil is typically non-calcareous.
- 3.11 Upper subsoil of the main soil type comprises clay or occasionally heavy clay loam which is most commonly brown or light olive brown (10YR5/3 or 2.5YR5/3). The stone content continues to be low. Ochreous mottles indicate periods of intermittent waterlogging, although roots may be present. The upper subsoil structure is weakly developed with fine angular blocky peds in the south, and coarse angular in the north, and which is in some places is slightly compacted. Permeability is poor.

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

⁹ Munsell Color (2009). Munsell Soil Color Book. Grand Rapids, MI, USA

- 3.12 Lower subsoil commonly comprises greyish or greenish grey (including 2.5Y6/1, 10Y6/1 or 5GY5/1) clay which is prominently mottled and very firm, with a coarse angular blocky structure (shown in photographs in Appendix 3). The profiles are poorly drained, of WC IV, or occasionally of WC III, resulting in a wetness and workability limitation to Subgrade 3b.
- 3.13 Comparable observations were reported in the existing survey data available in the west of the site, which classified the field as Subgrade 3b.
- 3.14 A small area to the north of the site within this soil type has been classified as Grade 4 as it is characterised by wetland juncus reeds and was severely waterlogged to the surface at the time of survey.
- 3.15 The second main soil type is identified in the south and east of the site. Topsoil is of slightly stony, brown (10YR4/3) medium clay loam which is variably calcareous. The average thickness is 28cm. The consistency was friable to very friable at the time of survey, with a fine subangular blocky structure.
- 3.16 This overlies a typical upper subsoil of brown (10YR5/3) heavy clay loam which is friable to firm.

 Ochreous mottles and ferrimanganiferous concretions, which also indicate wetness in the soil,

 are common and the horizons are considered to be gleyed.
- 3.17 Lower subsoil is commonly clay or heavy clay loam, although there are instances of sandy clay loam and medium clay loam. The colour continues to be mostly brown (10YR5/3) and is gleyed. Stone content is low. The consistency is slightly firm but the moderately well developed structure ensures the profiles remain permeable. Most of the profiles of this soil type are of WC II, with minor variations resulting in instances of WC I or III. Profiles of WC II with medium clay loam topsoil are limited slightly by wetness and workability to Grade 2. Profiles of WC I have little to no limitation to their agricultural use and are of Grade 1, whilst the single profile of WC III is limited to Subgrade 3a. However these occurrences are isolated and do not form coherent units, and therefore have been amalgamated into the surrounding Grade 2.
- 3.18 The third soil type identified correlates with the principal mapped superficial sand and gravel deposits, south of the centre of the site. The topsoil comprises dark greyish brown or brown (10YR4/2 or 4/3) heavy clay loam, with instances of medium clay loam and clay, which is most commonly calcareous. The average thickness is 31cm. The topsoil stone content is variable, ranging from around 10 to 25% in total. This commonly includes larger stones (larger than 2cm) which have the potential to hinder agricultural operations.

- 3.19 The topsoil structure is typically moderately well developed with medium angular or subangular blocky peds although some bigger clods are also observed.
- 3.20 Upper subsoil is often brown (10YR4/3 or 5/3) clay, with localised heavy clay loam and sandy clay loam. The upper subsoil is commonly mottled. Stone content increases and ranges from around 15% to 40%. The structure is moderately to weakly developed although is fine angular blocky, or medium granular where sandy clay loam.
- 3.21 The stone content increases with depth, such that in most profiles the lower subsoil was not able to be observed as the soil became impenetrable to auger. The top of the lower subsoil horizon was observed in two pits excavated in this soil type, from which the stone content has been estimated at around 60% by volume comprising stones of variable size. The assessment of lower subsoil conditions in those profiles not able to be observed has been assumed. Where there was slight sandiness detected at the lower reaches of the auger, the profile has been assumed to include an extremely stony sandy loam at depth, in accordance with the mapped soil type.
- 3.22 The large volume of stones in these profiles significantly reduces the capacity for water storage in the profile, resulting in droughtiness limitations to Grade 2 or Subgrade 3a. In several profiles, topsoil stone content is equally limiting.
- 3.23 The areas of each ALC grade of land on the site are given in Table 2 and are shown in Figure RAC8314-2. Photographs taken at the site are given in Appendix 3.

Table 2: Agricultural land classification

Grade	Description	Area (ha)	% of agri land
2	Very good quality	34.5	18
3a	Good quality	23.0	12
3b	Moderate quality	131.8	69
4	Poor quality	0.7	1
Total Agricultural		190	100
Non-Agricultural		4.5	-

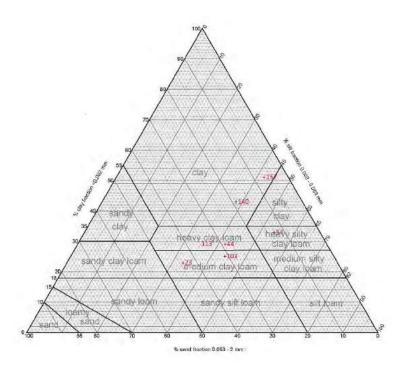
Appendix 1: Laboratory Data

Determinand	Site 23	Site 44	Site 54	Site 103	Site 113	Site 140	Site 157	Units
Sand 2.00-0.063 mm	44	29	13	31	32	19	7	% w/w
Silt 0.063-0.002 mm	33	42	54	44	39	38	42	% w/w
Clay <0.002 mm	23	29	33	25	29	43	51	% w/w
Organic Matter	2.7	3.8	7.1	5.0	3.1	5.0	9.2	% w/w
Texture	Medium Clay	Heavy Clay	Heavy Silty	Medium Clay	Heavy Clay	Clay	Clay	
	Loam	Loam	Clay Loam	Loam	Loam			

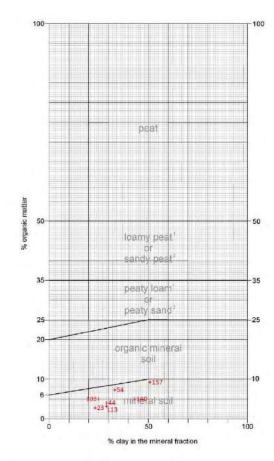
Determinand	Site 23	Site 44	Site 54	Site 103	Site 113	Site 140	Site 157	Units
Soil pH	6.7	7.4	6.9	7.9	8.1	8.4	7.5	
Phosphorus (P)	5.6	6.0	8.0	3.8	33.0	6.0	15.2	Mg/l (av)
Potassium (K)	106	134	98.7	80.2	180	127	209	Mg/l (av)
Magnesium (Mg)	56.5	57.8	78.8	59.6	47.8	192	152	Mg/l (av)

Determinand	Site 23	Site 44	Site 54	Site 103	Site 113	Site 140	Site 157	Units
Phosphorus (P)	0	0	0	0	3	0	1	ADAS Index
Potassium (K)	1	2-	1	1	2-	2-	2+	ADAS Index
Magnesium (Mg)	2	2	2	2	1	4	3	ADAS Index

Soil Texture by Particle Size Analysis



Organic Matter Class



*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 type	s	
%	TAv	Eav
hard	1	0.5
chalk	10	7

Climate Da	ta	
MDwheat	105	
MDpotato	97	
FCD	147	

Wetness Class Guidelines	11	III	IV	V
SPL within 80cm, gleying within 40cm	>67cm	40-67cm	<40cm	
SPL within 80cm, gleying at 40-70cm	>51cm	<51cm		
No SPL but gleying within 40cm	coarse sub	soil	I other case	s II

hard	flint &	pebble

Maximum depth of auger penetration is <u>underlined</u>

Site		De	pth	Texture	CaCO ₃	Colour	Mottle	abund-	stone%	stone%	Struct-	APwheat	AP potato	Gley	SPL	WC	Wetness	Final	Limiting
No.		C	m				colour	ance	hard	chalk	ure	mm	mm				grade WE	Grade	Factor(s)
1	Т	0	26	hZCL		10YR5/3	Fe	com	1			49	49	у		IV	3b	3b	WE
		26	35	ZC		2.5Y5/3	Fe	com	15		poor	9	9	у	у				
		35	70	ZC		2.5Y5/3	Fe	com	2		poor	31	41	у	у				
		70	120	ZC		2.5Y6/1	Fe	com.	0		poor	35	0	у	у				
											Total	125	99						
											MD	20	2						
									Droughti	ness grade	(DR)	2	2						
2	Т	0	30	hZCL		10YR5/3			10		-	52	52			IV	3b	3b	WE
		30	50	С		2.5Y5/3	Fe	com	10		poor	24	24	у	у				
		50	120	С		2.5Y6/1	Fe	com	1		poor	49	26	у	у				
											Total	124	101						
											MD	19	4						
									Droughti	ness grade	(DR)	2	2						
3	Т	0	25	hCL		10YR5/3			10		-	52	52			IV	3b	3b	WE
		25	80	С		2.5Y5/3	Fe	com	10		poor	24	24	у	у				
		80	120	С		2.5Y6/1	Fe	com	1		poor	49	26	у	у				
											Total	124	101						
											MD	19	4						
									Droughti	ness grade	(DR)	2	2						
4	Т	0	35	mCL		10YR5/2			10		-	57	57			III	3a	3a	WE

		35	42	mCL	10YR5/2			15		10	10						
		42	70	С	2.5Y5/3	Fe	com	0	poor	24	36	У	у				
		70	120	С	2.5Y6/1	Fe	com	0	poor	35	0	у	у				
									Total	126	103						
									MD	21	6						
								Droughtine	ss grade (DR)	2	2						
5	Т	0	35	hCL	2.5Y4/3			15	=	54	54			IV	3b	3b	WE
		35	80	С	2.5Y5/3	Fe	com	0	poor	41	46	у	у				
		80	120	С	2.5Y6/1	Fe	com	0	poor	28	0	у	у				
									Total	123	100						
									MD	18	3						
								Droughtine	ss grade (DR)	2	2						
6	Т	0	35	hCL	2.5Y4/3			10	-	57	57			IV	3b	3b	WI
		35	65	С	2.5Y5/3	Fe	com	0	poor	30	39	у	у				
		65	120	С	2.5Y6/1	Fe	com	0	poor	39	7	у	у				
									Total	126	103						
									MD	21	6						
								Droughtine	ss grade (DR)	2	2						
7	Т	0	40	hCL	10YR4/3			15	-	62	62			III	3b	3b	W
		40	70	С	10YR5/3	FeMn	many	15	poor	23	34	у	у				
		70	90	С	10YR5/3	FeMn	many	25	poor	11	0	у	у				
		90	120	С	10YR5/3	FeMn	many	10	poor	19	0	. у	у				
									Total	115	95						
									MD	10	-2						
								Droughtine	ss grade (DR)	2	2						
3	Т	0	40	hCL	10YR5/3	FeMn	com	18	-	60	60	у		III	3b	3b	WE
		40	90	С	2.5Y5/3	Fe	many	1	poor	41	39	у	у				
		90	120	С	10Y7/	Fe	com	0	poor	21	0	у	у				
									Total	121	98						
									MD	16	1						
								Droughtine	ss grade (DR)	2	2						
)	Т	0	30	hCL	10YR5/3			25	=	41	41			III	3b	3b	W
		30	85	С	2.5Y5/4	Fe	com	1	poor	50	52		у				
		85	120	С	10Y7/	Fe	com	0	poor	25	0	у	у				

									Total	116	93						
									MD	11	-4						
								Droughtiness	grade (DR)	2	2						
10	Т	0	30	mCL	10YR4/3			30	-	39	39			IV	3b	3b	WE
		30	65	С	2.5Y5/3	Fe	com	1	poor	36	45	у	у				
		65	80	SC	2.5Y6/3	Fe	com	1	poor	12	6	У	у				
		80	120	SC	10Y7/	Fe	com	1	poor	32	0	. у	у				
									Total	118	90						
									MD	13	-7						
								Droughtiness (grade (DR)	2	2						
11	Т	0	35	hCL	10YR4/2	Fe	few	1	=	39	39			III	3b	3b	WE
		35	50	С	2.5Y5/4	Fe	com	1		36	45	у					
		<u>50</u>	80	С	2.5Y5/4	Fe	com	1		12	6	у					
		80	120	С	10Y7/	Fe	com	1	poor	32	0	. у	у	-			
									Total	118	90			permea	ble. Area	ess from surfa generally wet	t - iuncus
									MD	13	-7			and por	nd. Assum	e GW and W	CIII
								Droughtiness (grade (DR)	2	2						
12	Т	0	26	hCL	10YR4/2			1	=	46	46			III	3b	3b	WE
		26	70	С	2.5Y5/4	Fe	com	1		54	70						
		70	120	С	10YR4/4	Fe	com	30	poor	25	0		у				
									Total	125	116			Moist a	t surface,	GW at 70	
									MD	20	19						
								Droughtiness (grade (DR)	2	1						
13	Т	0	30	mCL	10YR4/2			1	-	53	53			IV	3b	3b	WE
		30	36	hCL	2.5Y5/3	Fe	com	25		7	7	у					
		36	90	С	2.5Y5/2	Fe	com	0	poor	46	44	у	у				
		90	120	LfS	10Y7/	Fe	com	0		39	0	. у					
									Total	146	105			GW at	50cm		
									MD	41	8						
								Droughtiness (grade (DR)	1	2						
	Т	0	30	mCL	10YR4/3			20	=	44	44			11	2	2	WE
14				mCL	10YR4/3	Fe	com	2		46	55						
14		30	65	IIICL	10184/3	16	00111	_									
14		30 65	65 120	C	10YR4/3 10YR4/4	FeMn	com	2		43	8					n Table 11	

									MD	28	10						
								Droughting	ss grade (DR)	2	2						
15	Т	0	30	hCL	10YR4/2			25		41	41			IV	3b	3b	WE
15	'	30	35	hCL	10YR4/2			35	_	5	5			7 V	30	30	VV L
		35	65	C	2.5Y5/3	FeMn	com	2	poor	29	38	у	V				
		65	120	С	10Y7/	Fe	com	0	poor	39	7	y	y y				
		00	120	O	10177	10	COIII	O	Total	115	91	У	y				
									MD	10	-6						
								Droughtine	ss grade (DR)	2	2						
16	Т	0	30	hCL	10YR4/3			5	-	51	51			IV	3b	3b	WE
	·	30	50	C	2.5Y5/4	FeMn	com	1	poor	26	26		у	,,	OD	O.D	**-
		50	120	С	2.5Y5/3	FeMn	many	5	poor	47	25	у	y				
			0		2.0.070			ŭ	Total	124	102	. ,	,				
									MD	19	5						
								Droughtine	ss grade (DR)	2	2						
17	Т	0	35	hCL	10YR4/3			5	-	60	60			IV	3b	3b	WE
	-	35	120	С	10YR6/3	FeMn	com	1	poor	68	45	у	у				
									Total	128	105	,	,				
									MD	23	8						
								Droughtines	ss grade (DR)	2	2						
18	Т	0	38	hCL	10YR4/3			5	-	65	65			IV	3b	3b	WE
		38	45	С	2.5Y5/4	Fe	com	10	poor	8	8		у				
		45	60	С	2.5Y6/1	Fe	many	0	poor	14	20	у	у				
		60	120	С	10Y7/	Fe	com	0	poor	42	13	у у	у				
									Total	129	106						
									MD	24	9						
								Droughtines	ss grade (DR)	2	2						
19	Т	0	32	hCL	10YR4/3			5	=	55	55			IV	3b	3b	WE
		32	65	С	2.5Y5/3	Fe	com	0	poor	34	43	у	у				
		65	120	С	2.5Y6/1	Fe	many	0	poor	39	7	. у	у				
									Total	127	104						
									MD	22	7						
								Droughtines	ss grade (DR)	2	2						
20	Т	0	30	hCL	10YR4/3			20	=	44	44			IV	3b	3b	WE

		30	100	С	10YR5/3	Fe	many	15	poor	53	45	У	у				
		100	120	С	10YR5/3	Fe	many	15	poor	12	0	. у	у				
									Total	108	89						
									MD	3	-8						
								Droughtiness	grade (DR)	3a	2						
21	Т	0	35	hCL	10YR4/3			10	=	57	57			IV	3b	3b	WE
		35	70	С	2.5Y5/3	Fe	com	15	poor	29	39	у	у				
		<u>70</u>	120	С	2.5Y5/3	Fe	com	15	poor	30	0	. у	У				
									Total	116	96						
									MD	11	-1						
								Droughtiness	grade (DR)	2	2						
22	Т	0	35	hCL	10YR4/3			10	=	57	57			IV	3b	3b	WE
		35	120	С	2.5Y5/3	Fe	com	0	poor	69	46	. у	у				
									Total	126	103						
									MD	21	6						
								Droughtiness	grade (DR)	2	2						
3/P1	Т	0	30	mCL	10YR4/2			5	-	51	51			IV	3b	3b	WE
		30	90	С	2.5Y5/3	Fe	com	5	poor	52	50	у	у				
		90	120	С	2.5Y5/3	Fe	com	15	poor	18	0	. у	у				
									Total	121	101			GW at	45cm		
									MD	16	4						
								Droughtiness	grade (DR)	2	2						
24	Т	0	30	hCL	10YR4/2			5	-	51	51			IV	3b	3b	WE
		30	45	С	2.5Y5/3	Fe	com	35	poor	13	13	у	у				
		<u>45</u>	80	С	2.5Y5/3	Fe	com	35	poor	19	22	у	у				
		80	120	С	10Y7/	Fe	com	5	poor	27	0	. у	у				
									Total	110	87						
									MD	5	-10						
								Droughtiness	grade (DR)	2	3a						
25	Т	0	30	hCL	10YR4/3			5	-	51	51			IV	3b	3b	WE
		30	90	С	2.5Y5/3	Fe	com	5	poor	52	50	у	у				
		90	120	С	10Y7/	Fe	com	15	poor	18	0	. у	у				
									Total	121	101						

								Droughtiness	grade (DR)	2	2						
26	Т	0	35	hCL	10YR4/3 2.5Y5/3-			5	-	60	60			IV	3b	3b	WE
		35	120	С	4	Fe	com	5	poor	65	43	y/n	у				
									Total	125	103						
									MD	20	6						
								Droughtiness	grade (DR)	2	2						
27	Т	0	35	hCL	10YR4/3			12	=	56	56			IV	3b	3b	WE
		35	75	С	10Y4/1	Fe	com	2	poor	36	45	у	У				
		<u>75</u>	120	С	10Y4/1	Fe	com	5	poor	30	0	у	у				
									Total	122	101			Standir	ng surface	water in vicini	ty
									MD	17	4						
								Droughtiness	grade (DR)	2	2						
28	Т	0	40	hCL	10YR4/3			5	-	69	69			III	3b	3b	WE
		40	70	С	2.5Y5/3	FeMn	com	15	poor	23	34	у	у				
		70	120	С	10YR5/1	FeMn	com	2	poor	34	0	у	у				
									Total	126	102						
									MD	21	5						
								Droughtiness	grade (DR)	2	2						
29	Т	0	45	hCL	10YR4/3			5	-	77	77			1	2	2	WE
		45	75	SCL	10YR5/1	FeMn	com	35		22	25	у					
		<u>75</u>	120	SCL	10YR5/1	FeMn	com	40		28	0	у					
									Total	127	102			Possibl	y disturbed	d	
									MD	22	5						
								Droughtiness	grade (DR)	2	2						
30	Т	0	35	hCL	10YR4/3			5	=	60	60			11	3a	3a	WE
		35	50	SCL	10YR5/1	FeMn	com	35		15	15	у					
		50	120	С	10YR5/1	FeMn	com	35		38	22	у					
									Total	113	97			Possibl	y disturbed	t	
									MD	8	0						
								Droughtiness	grade (DR)	2	2						
31	Т	0	35	hCL	10YR4/3			5	-	60	60			I	2	2	WE
		35	50	hCL	10YR4/3	FeMn	com	5		23	23						
		50	65	SCL	10YR5/1	FeMn	com	35		10	15	у					

															·			
										Total	127	103			Possibl	y disturbe	d	
										MD	22	6						
									Droughtiness	grade (DR)	2	2						
32	Т	0	25	mCL		10YR4/3			5	-	43	43			IV	3b	3b	WE
		25	75	С		2.5Y5/3	Fe	com	1	poor	50	58	у	У				
		75	90	С		2.5Y5/3	FeMn	com	15	poor	9	0	у	у				
		90	120	С		2.5Y5/3	Fe	com	30	poor	15	0	у	У	F			
										Total	117	101			GW at	40cm		
										MD	12	4						
									Droughtiness	grade (DR)	2	2						
33	Т	0	30	mCL		10YR4/3			5	-	51	51			IV	3b	3b	WE
		30	90	С		10YR5/3	Fe	com	1	poor	54	52	у	у				
		90	120	С		2.5Y5/6	FeMn	com	1	poor	21	0	у	у				
										Total	126	103						
										MD	21	6						
									Droughtiness	grade (DR)	2	2						
34	Т	0	40	mCL		10YR4/3			5	-	69	69			1	1	1	
		40	90	mCL		10YR5/4	Fe	com	1		55	48						
		90	120	С		10YR5/3	FeMn	com	10	poor	19	0	у	У				
										Total	143	116						
										MD	38	19						
									Droughtiness	grade (DR)	1	1						
35	Т	0	20	mCL		10YR4/3			5	=	34	34			11	2	3a	DR
		20	50	С	У	10YR6/3	Fe	com	40		30	30	у					
		<u>50</u>	120	С	У	10YR6/3	Fe	com	45		32	19	у					
										Total	97	83						
										MD	-8	-14						
									Droughtiness	grade (DR)	3a	3a						
36	Т	0	15	mCL		10YR4/3			5	=	26	26			11	2	2	WE D
		15	75	С	У	10YR5/3	Fe	com	15		65	76	у					
		75	120	С	У	10YR6/3	Fe	com	15		31	0	у					
										Total	122	101						
										MD	17	4						
									Droughtiness	grade (DR)	2	2						

37	Т	0	20	mCL		10YR4/3			5	-	34	34			11	2	2	WE DR
		20	90	С	у	10YR5/3	Fe	com	15		69	69	у					
		90	120	С	у	10YR6/3	Fe	com	40		15	0	. у					
										Total	118	103						
										MD	13	6						
									Droughtines	s grade (DR)	2	2						
38	Т	0	25	mCL		10YR4/3			5	=	43	43			1	1	1	
		25	50	hCL		10YR4/3	Fe	com	1		40	40						
		50	120	С		10YR4/4	Fe	com	0		56	32						
										Total	138	115						
										MD	33	18						
									Droughtines	s grade (DR)	1	1						
39	Т	0	20	mCL		10YR4/3			5	-	34	34			II	2	3a	DR
		20	50	С	у	10YR6/3	Fe	com	45		28	28	у					
		<u>50</u>	120	С	у	10YR6/3	Fe	com	45		32	19	. у					
										Total	94	81						
										MD	-11	-16						
									Droughtines	s grade (DR)	3a	3a						
40	Т	0	30	mCL		10YR4/3			5	-	51	51			II	2	3a	DR
		30	50	С	У	10YR6/3	Fe	com	35		22	22	У					
		50	120	С	У	10YR6/3	Fe	com	45		32	19	. у					
										Total	105	91						
										MD	0	-6						
									Droughtines	s grade (DR)	3a	2						
41	Т	0	25	mCL		10YR4/3			30	-	32	32			1	1	3a	DR
		25	45	С	у	10YR6/3			40		20	20						
		<u>45</u>	120	С	у	10YR6/3	Fe	com	45		37	23	. у					
										Total	89	75						
										MD	-16	-22						
									Droughtines	s grade (DR)	3a	3a						
42	Т	0	25	mCL		10YR4/2			5	-	43	43			IV	3b	3b	WE
		25	85	С		10YR5/2	Fe	com	5	poor	54	56	у	у				
		<u>85</u>	120	С		10YR5/3	Fe	com	20	poor	20	0	. у	у				
										Total	117	99						

									MD	12	2						
								Droughtine	ess grade (DR)	2	2						
43	Т	0	25	mCL	10YR3/2			5	-	43	43			11	2	3b	FL
		25	70	hCL	10YR4/2	Fe	com	10		54	65	у					
		70	80	С	2.5Y6/1	Fe	com	10	poor	6	0	у	у				
		80	120	С	2.5Y6/1	Fe	com	10	poor	25	0	у	у				
									Total	129	108			FZ 3			
									MD	24	11						
								Droughtine	ess grade (DR)	2	1						
44	Т	0	25	hCL	10YR4/2			10	-	41	41			III	3b	3b	WE
		25	45	hCL	10YR4/3	FeMn	com	1		32	32						
		45	120	С	10YR5/3	Fe	com	5	poor	53	31	у	у				
									Total	125	103						
									MD	20	6						
								Droughtine	ess grade (DR)	2	2						
45	Т	0	30	mCL	10YR4/3			20	-	44	44			III	3a	3a	WE DR
		30	45	С	10YR6/3	FeMn	com	25		18	18						
		45	120	С	10YR6/3	Fe	com	25	poor	43	25	у	у				
									Total	105	87						
									MD	0	-10						
								Droughtine	ess grade (DR)	3a	2						
46	Т	0	30	mCL	10YR4/3			20	=	44	44			III	3a	3a	WE DR
		30	45	С	10YR6/3	FeMn	com	25		18	18						
		45	120	С	10YR6/3	Fe	com	25	poor	43	25	у	У				
									Total	105	87						
									MD	0	-10						
								Droughtine	ess grade (DR)	3a	2						
47	Т	0	20	mCL	10YR4/3			20	=	29	29			III	3a	3a	WE DR
		20	60	С	10YR5/3	FeMn	com	25		43	49	у					
		60	120	С	10YR6/3	Fe	com	30	poor	30	9	у	У				
									Total	102	88						
									MD	-3	-9						
								Droughtine	ess grade (DR)	3a	2						
48	Т	0	20	hCL	10YR4/2	Fe	few	0	=	36	36			IV	3b	3b	WE

		20	65	С	2.5Y5/4	Fe	com	10	poor	45	53	(y)	у				
		65	90	С	10Y6/1	Fe	com.	10	poor	16	6	у	у				
		90	120	С	10Y6/1	Fe	com	10	poor	19	0	у	у				
									Total	116	95						
									MD	11	-2						
								Droughtine	ss grade (DR)	2	2						
49	Т	0	20	hCL	10YR4/2			0		36	36			IV	3b	3b	WE
		20	35	С	2.5Y5/3	Fe	com.	0	poor	20	20	у	у				
		35	120	С	10Y6/1	Fe	com.	0	poor	69	46	у	у				
									Total	124	101						
									MD	19	4						
								Droughtine	ss grade(DR)	2	2						
50	Т	0	15	hZCL	10YR4/3			10	-	26	26			IV	3b	3b	WE
		15	35	С	2.5Y5/3	Fe	com	15	poor	22	22	у	у				
		35	100	С	2.5Y6/4	Fe	com	15	poor	47	39	(y)	у				
		100	120	С	2.5Y5/3	Fe	com	35	poor	9	0	у	у				
									Total	105	87						
									MD	0	-10						
								Droughtine	ss grade(DR)	3a	2						
51	Т	0	30	hCL	10YR4/2			0	=	54	54			IV	3b	3b	WE
		30	90	hCL	10YR5/3	Fe	com	10	m/poor	56	51	у	у				
		90	120	С	10Y6/1	Fe	com	0	poor	21	0	у	у				
									Total	131	105						
									MD	26	8						
								Droughtine	ss grade(DR)	2	2						
52	Т	0	35	hCL	10YR4/2	Fe	com	0	-	63	63			II	3a	3a	WE
		35	90	С	2.5Y5/3	Fe	com	0		56	56	у					
		90	120	С	10Y6/1	Fe	com	0	poor	21	0	у	у				
									Total	140	119	•	•				
									MD	35	22						
								Droughtine	ss grade(DR)	1	1						
53	Т	0	25	С	10YR4/3	Fe	com	0	-	43	43			IV	3b	3b	WE
		25	45	С	10YR5/3	Fe	com	0	poor	26	26	у	у				
		45	120	С	10Y6/1	Fe	com	5	poor	53	31	у	у				
				-		-			F			,	,				

									Total	121	100						
									MD	16	3						
								Droughtiness	grade(DR)	2	2						
54	Т	0	18	hZCL	10YR4/3	Fe	com	0	-	32	32			IV	3b	3b	WE
		18	35	С	10YR5/3	Fe	com	0		27	27	У					
		35	120	С	2.5Y5/3	Fe	com	5	poor	65	43	у	у				
									Total	125	103						
									MD	20	6						
								Droughtines	grade(DR)	2	2						
55	Т	0	20	hCL	10YR5/3	Fe	com	0	=	36	36	у		III	3b	3b	WE
		20	50	С	10YR5/3	Fe	com	10		44	44	у					
		50	80	С	2.5Y5/3	Fe	com	10	poor	19	24	у	у				
		80	120	С	10Y6/1	Fe	com	0	poor	28	0	у	у				
									Total	127	103						
									MD	22	6						
								Droughtiness	grade(DR)	2	2						
56	Т	0	25	mCL	10YR4/3	Fe	com	0	-	45	45			IV	3b	3b	WE
		25	80	С	2.5Y5/3	Fe	com	0	poor	54	59	у	у				
		80	120	С	10Y6/1	Fe	com	0	poor	28	0	у	у				
									Total	126	104						
									MD	21	7						
								Droughtiness	grade(DR)	2	2						
57	Т	0	15	hCL	10YR5/3	Fe	com	0	-	27	27			IV	3b	3b	WE
		15	60	С	2.5Y5/3	Fe	com	0	poor	53	59	у	у				
		60	120	С	10Y6/1	Fe	com	0	poor	42	13	у	у				
									Total	122	99						
									MD	17	2						
								Droughtiness	grade(DR)	2	2						
58	Т	0	28	mCL	10YR4/2			5	-	48	48			11	2	2	WE DR
		28	65	hCL	10YR4/4	FeMn	com	25		38	45						
		65	120	С	2.5Y6/1	Fe	com	0	poor	39	7	у	у				
									Total	125	100						
									MD	20	3						
								Droughtines	grade(DR)	2	2						

59 T 0 20 mZCL 10YR4/2 0 - 38 38 III 20 50 C 2.5Y5/3 Fe com 0 48 48 y 50 120 C 10Y6/1 Fe com 0 poor 49 26 y y	3a	3a	WE
50 120 C 10Y6/1 Fe com 0 <u>poor 49 26</u> y y			
Total 135 112			
MD 30 15			
Droughtiness grade(DR) 1 1			
60 T 0 25 mCL 10YR4/2 2 - 44 44 <i>IV</i>	3b	3b	WE
25 45 C 2.5Y5/3 Fe com 0 poor 26 26 y y			
45 120 C 10Y6/1 Fe com 0 <u>poor 56 33</u> y y			
Total 126 103			
MD 21 6			
Droughtiness grade(DR) 2 2			
61 T 0 35 hCL 10YR4/3 2 - 62 62 <i>II</i>	3a	3a	WE
35 65 C 2.5Y5/3 Fe few 10 33 44			
65 80 C 2.5Y5/3 Fe com 0 poor 11 7 y y			
80 120 C 10Y6/1 Fe com 0 <u>poor 28 0</u> y y			
Total 133 112			
MD 28 15			
Droughtiness grade(DR) 2 1			
62 T 0 20 mZCL 10YR4/2 2 - 37 37 II	2	2 W	WE DR
20 22 C 10YR4/3 30 2 2			
<u>22</u> 65 C 10YR4/3 35 30 30			
65 120 C 2.5Y5/3 Fe com 0 <u>poor 49 26</u> y y			
Total 119 96			
MD 14 -1			
Droughtiness grade(DR) 2 2			
63 T 0 40 hCL 10YR4/3 10 - 65 65 III	3b	3b	WE
40 70 C 10YR5/3 FeMn com 0 poor 27 39 y y			
70 120 C 10Y6/1 Fe com 0 <u>poor 35 0</u> y y			
Total 127 104			
MD 22 7			
Droughtiness grade(DR) 2 2			
64 T 0 35 mCL 10YR4/3 15 - 54 54 <i>IV</i>	3b	3b	WE

		80	120	С	10Y6/1	Fe	com	0	poor	28	0	у	у				
									Total	123	100						
									MD	18	3						
								Droughtines	s grade(DR)	2	2						
65	Т	0	40	mZCL	10YR4/2			5	=	72	72			IV	3b	3b	WE
		40	80	С	2.5Y5/3	FeMn	many	2	poor	33	38	у	у				
		80	120	С	10Y6/1	Fe	com	0	poor	28	0	у	у				
									Total	134	111						
									MD	29	14						
								Droughtines	s grade(DR)	2	1						
66	Т	0	40	mCL	10YR4/3			10	-	65	65			II	2	2	WE DR
		40	70	С	10YR5/3	Fe	com	15		28	41	у					
		70	120	С	2.5Y5/3	Fe	com	0	poor	35	0	у	у				
									Total	128	106						
									MD	23	9						
								Droughtines	s grade(DR)	2	2						
67	Т	0	25	mCL	10YR5/3			1	-	45	45			III	3a	3a	WE
		25	45	hCL	10YR5/3	FeMn	com	10		29	29	у					
		45	60	С	10YR5/3	FeMn	com	15	poor	12	17	у	у				
		60	120	С	10YR5/3	FeMn	many	5	poor	40	12	у	у				
									Total	125	103						
									MD	20	6						
								Droughtines	s grade(DR)	2	2						
68	Т	0	30	hCL	10YR4/2			10	-	49	49			IV	3b	3b	WE
		30	120	С	10Y6/1	FeMn	com	1	poor	74	52	у	у				
									Total	123	100						
									MD	18	3						
								Droughtines	s grade(DR)	2	2						
69	Т	0	25	hCL	10YR5/2			10	-	41	41			IV	3b	3b	WE
		25	35	С	2.5Y5/3	FeMn	com	1	poor	13	13	у	у				
		35	120	С	10Y6/1	FeMn	com	1	poor	68	45	у	у				
									Total	121	99						
									MD	16	2						
								Droughtines	s grade(DR)	2	2						

70	Т	0	15	mCL	10YR5/3			15	=	23	23			IV	3b	3b	WE
		15	45	С	2.5Y5/3	Fe	com	0	poor	39	39	у	у				
		45	120	С	10Y6/1	Fe	com	0	poor	56	33	. у	у				
									Total	118	95						
									MD	13	-2						
								Droughtin	ess grade(DR)	2	2						
71	Т	0	20	mCL	10YR5/3			15	=	31	31			IV	3b	3b	WE
		20	65	С	2.5Y5/3	Fe	com	0	poor	50	59	У	у				
		65	120	С	10Y6/1	Fe	com	0	poor	39	7	. у	у				
									Total	119	96						
									MD	14	-1						
								Droughtin	ess grade(DR)	2	2						
72	Т	0	30	mCL	10YR5/3			15	=	46	46			IV	3b	3b	WE
		30	70	С	2.5Y5/3	FeMn	com	15	poor	34	45	У	у				
		70	100	С	2.5Y5/4	Fe	com	0	poor	21	0	У					
		100	120	С	10Y6/1	Fe	com	0	poor	14	0	. у	у				
									Total	116	91						
									MD	11	-6						
								Droughtin	ess grade(DR)	2	2						
73	Т	0	30	hCL	10YR5/3			15	=	46	46			IV	3b	3b	WE
		30	40	С	2.5Y5/3	Fe	com	1	poor	13	13	У	у				
		40	120	С	10Y6/1	Fe	com	0	poor	62	39	. у	у				
									Total	121	98						
									MD	16	1						
								Droughtin	ess grade(DR)	2	2						
74	Т	0	25	mCL	10YR4/2			15	=	39	39			III	3a	3a	WE
		25	35	С	10YR5/3	FeMn	com	35		11	11	у					
		<u>35</u>	65	С	10YR5/3	FeMn	com	35		24	32	у					
		65	120	С	10Y6/1	Fe	com	5	poor	37	6	. у	у				
									Total	110	88						
									MD	5	-9						
								Droughtin	ess grade(DR)	2	2						
75	Т	0	25	mCL	10YR4/3	Fe	com	10	=	41	41			IV	3b	3b	WE
		25	30	С	2.5Y5/3	Fe	com	15	poor	6	6	у	у				

		30	45	С	2.5Y5/3	Fe	com	35	poor	13	13	у	у				
		<u>45</u>	65	С	2.5Y5/3	Fe	com	35	poor	11	18	у	у				
		65	120	С	10Y6/1	Fe	com	5	poor	37	6	. у	у				
									Total	108	83						
									MD	3	-14						
								Droughtine	ss grade(DR)	3a	3a						
76	Т	0	30	hCL	10YR4/2	Fe	com	2	-	53	53	у		IV	3b	3b	WE
		30	70	С	2.5Y5/3	Fe	com	15	poor	34	45	у	у				
		70	120	С	10Y6/1	Fe	com	0	poor	35	0	. у	у				
									Total	122	98						
									MD	17	1						
								Droughtine	ss grade(DR)	2	2						
77	Т	0	35	hCL	10YR5/3	Fe	com	2	-	62	62	у		IV	3b	3b	WE
		35	70	С	10YR5/3	Fe	com	1	poor	33	45	у	у				
		70	90	С	10YR5/6	Fe	com	25	poor	11	0		у				
		90	120	С	10Y6/1	Fe	com	0	poor	21	0	. у	у				
									Total	127	107						
									MD	22	10						
								Droughtine	ss grade(DR)	2	2						
78	Т	0	30	mCL	10YR4/3			30	=	39	39			III	3a	3b	ST
		30	60	С	2.5Y5/3	Fe	com	15		34	41	у					
		60	120	С	2.5Y6/1	Fe	com	15	poor	36	11	. у	у				
									Total	109	91			St >2cr 15%	n over		
									MD	4	-6						
								Droughtine	ss grade(DR)	3a	2			L			
79	Т	0	25	hCL	10YR4/3	Fe	com	15	- -	39	39			III	3b	3b	WE
	•	25	30	hCL	10YR4/3	Fe	com	15		7	7			•••			
		<u>30</u>	65	hCL	10YR5/3	Fe	com	30		34	40	у					
		65	120	C	10Y6/1	Fe	com	2	poor	38	6	y	у				
			-	-		-			Total	117	92	. ,	,				
									MD	12	-5						
								Droughtine	ss grade(DR)	2	2						
80	Т	0	40	mCL	10YR4/3			1		71	71			III	3a	3a	WE
		40	50	С	10YR5/3	FeMn	com	1		16	16	у			- Ou		**-
		70	50	0	1011(0/0	I CIVIII	COIII	'		10	10	У					

		50	120	С	2.5Y5/3	Fe	com	10	poor	44	24	. у	у				
									Total	132	111						
									MD	27	14						
								Droughtine	ess grade(DR)	2	1						
81	Т	0	40	hCL	10YR4/2			2	-	71	71			111	3b	3b	WE
		40	60	С	10YR5/3	Fe	com	15	poor	17	22	у	у				
		60	120	С	10Y6/1	Fe	many	15	poor	36	11	. у	у				
									Total	124	104						
									MD	19	7						
								Droughtin	ess grade(DR)	2	2						
82	Т	0	15	hCL	10YR4/2			2	=	26	26			IV	3b	3b	WE
		15	50	С	2.5Y5/3	Fe	com	1	poor	45	45	У	у				
		50	120	С	10Y6/1	Fe	many	0	poor	49	26	у	у				
									Total	121	98						
									MD	16	1						
								Droughtine	ess grade(DR)	2	2						
83	Т	0	30	hCL	10YR4/2			2	-	53	53			IV	3b	3b	WE
		30	55	С	2.5Y5/3	Fe	com	1	poor	29	32	У	у				
		55	120	С	10Y6/1	Fe	many	0	poor	46	20	. у	у				
									Total	128	105						
									MD	23	8						
								Droughtine	ess grade(DR)	2	2						
84	Т	0	30	hCL	10YR5/3			2	-	53	53			IV	3b	3b	WE
		30	45	С	2.5Y5/2	Fe	com	1	poor	19	19	У	у				
		45	120	С	10Y6/1	Fe	many	0	poor	56	33	. у	у				
									Total	128	105						
									MD	23	8						
								Droughtin	ess grade(DR)	2	2						
85	Т	0	25	hCL	10YR5/3			2	-	44	44			IV	3b	3b	WE
		25	60	С	10YR5/3	Fe	com	1	poor	39	45	У	у				
		60	120	С	10Y6/1	Fe	many	0	poor	42	13	. у	у				
									Total	125	102						
									MD	20	5						
								Droughtine	ess grade(DR)	2	2						

86	Т	0	35	hCL	10YR4/3			2	-	62	62			III	3b	3b	WE
		35	45	hCL	10YR4/3			2		16	16						
		45	65	С	10YR5/3	Fe	com	1	poor	17	26	у	у				
		65	120	С	2.5Y5/3	Fe	many	0	poor	39	7	у	у				
									Total	133	110			GW at	65cm		
									MD	28	13						
								Droughtine	ess grade(DR)	2	1						
87	Т	0	10	hCL	10YR4/3			2	-	18	18			IV	3b	3b	WE
		10	30	С	2.5Y5/3	Fe	com	2	poor	26	26	у	у				
		30	120	С	10Y6/1	Fe	com	1	poor	74	52	у	у				
									Total	117	95						
									MD	12	-2						
								Droughtine	ess grade(DR)	2	2						
88	Т	0	25	hCL	10YR4/2			12	-	40	40			III	3b	3b	WE
		25	45	hCL	10YR5/3	FeMn	com	40		20	20	у					
		<u>45</u>	65	hCL	10YR5/3	FeMn	com	40	poor	10	15	у	у				
		65	120	С	2.5Y5/3	Fe	many	0	poor	39	7	у	у	F		-	
									Total	109	82			GW at	45cm		
									MD	4	-15						
								Droughtine	ess grade(DR)	3a	3a						
89	Т	0	25	hCL	10YR4/3			10	-	41	41			III	3b	3b	WE
		25	30	С	10YR5/3	FeMn	com	40		5	5	у					
		<u>30</u>	65	С	10YR5/3	FeMn	com	40	poor	23	29	у	у				
		65	120	С	2.5Y5/3	Fe	many	0	poor	39	7	у	у				
									Total	107	81						
									MD	2	-16						
								Droughtine	ess grade(DR)	3a	3a						
90	Т	0	28	hCL	10YR5/3			5	-	48	48			III	3b	3b	WE
		28	60	С	2.5Y5/3	Fe	com	20		35	42	у					
		60	70	С	2.5Y5/3	Fe	com	15	poor	6	11	у	у				
		<u>70</u>	120	С	2.5Y5/3	Fe	many	0	poor	35	0	у	у				
									Total	124	101						
									MD	19	4						
								Droughtin	ess grade(DR)	2	2						

91	Т	0	30	mCL		10YR4/2			2	-	53	53			IV	3b	3b	WE
		30	50	С		2.5Y5/3	Fe	many	15	poor	22	22	у	у				
		50	120	С		10Y6/1	Fe	com	0	poor	49	26	у	у				
										Total	124	101						
										MD	19	4						
									Droughtiness	grade(DR)	2	2						
92	Т	0	30	hCL		10YR5/3			2	=	53	53			IV	3b	3b	WE
		30	80	С		5GY5/1	Fe	com	0	poor	47	52	у	у				
		80	120	С		5GY5/1	Fe	com	2	poor	27	0	у	у				
										Total	127	105						
										MD	22	8						
									Droughtiness	grade(DR)	2	2						
93	Т	0	25	hZCL		10YR4/2	Fe	few	0	=	48	48			IV	3b	3b	WE
		25	35	С		10YR4/3	Fe	com	0		16	16						
		35	85	С		10YR5/3	Fe	com	0	poor	44	46	У	у				
		85	120	С	Υ	2.5Y5/3	Fe	com	5	poor	23	0	у	у				
										Total	131	109						
										MD	26	12						
									Droughtiness	grade(DR)	2	1						
94	Т	0	20	hZCL		10YR4/2			0	-	38	38			IV	3b	3b	WE
		20	35	С		10YR5/1	Fe	com	0		24	24	У					
		35	40	С		10YR5/3	Fe	com	10	poor	6	6	У	у				
		40	60	С		2.5Y5/3	Fe	com	5	poor	19	25	У	у				
		60	120	С		10Y6/1	Fe	com	0	poor	42	13	у	у				
										Total	129	106						
										MD	24	9						
									Droughtiness	grade(DR)	2	2			,,,			
95	Т	0	28	hCL		10YR4/2	Fe	few	0	=	50	50			III- IV	3b	3b	WE
		28	40	С		10YR5/3	Fe	com	0		19	19	у					
						0.51/5/0	_	com	0	poor	38	39	у	у				
		40	85	С		2.5Y5/3	Fe	COIII		•				,				
		40 85	85 120	C C		2.5 Y 5/3 10 Y 6/1	Fe	com	0	poor	25	0	у	у				
										poor Total	25 132	0 109	у					
												••••	у					

96	Т	0	15	hCL		10YR4/2	Fe	few	0	-	27	27			III	3b	3b	WE
		15	50	С		10YR5/3	Fe	com	0		56	56	у					
		50	80	С		2.5Y5/3	Fe	com	0	poor	21	26	у	у				
		80	120	С		10Y6/1	Fe	com	0	poor	28	0	у	у				
										Total	132	109						
										MD	27	12						
									Droughtine	ess grade(DR)	2	11						
97	Т	0	30	hZCL		10YR5/2	Fe	few	0	=	57	57			III	3b	3b	WE
		30	50	С		10YR5/3	Fe	com	0		32	32	У					
		50	95	С		10YR5/3	Fe	com	0	poor	32	26	у	у				
		95	120	С		10Y6/1	Fe	com	0	poor	18	0	у	у				
										Total	138	115						
										MD	33	18						
									Droughtine	ess grade(DR)	11	1						
98	Т	Aban	doned b	ike track. M	lounds/bun	ds of clay. Del	oris inc. bri	ck and cor	ncrete blocks. [Ditches					IV	3b	5	MR
99	Т	0	15	hZCL		10YR4/3			5	_	27	27			III- IV	3b	3b	WE
		15	30	С		10YR5/3	Fe	few	0		24	24	у					
		30	40	С		10YR5/3	Fe	com	0		16	16	у					
		40	90	С		10YR5/3	FeMn	com	0	poor	41	39	у	у				
		90	120	С	Υ	10YR5/3	Fe	com	10		22	0	у у					
										Total	130	106						
										MD	25	9						
									Droughtine	ess grade(DR)	2	2						
100	Т	0	24	С		10YR4/3	Fe	few	0	-	41	41			III- IV	3b	3b	WE
		24	28	С		10YR5/3	FeMn	few	5		6	6	у					
		28	60	С		10YR5/3	Fe	com	0	m/poor	39	46	у	(y)				
		60	120	С		2.5Y5/3	FeMn	com	0	poor	42	13	у	у				
										Total	128	106						
										MD	23	9						
									Droughtine	ess grade(DR)	2	2						
101	Т	0	20	mZCL		10YR4/2			5	=	36	36			III	3a	3a	WE
		20	30	hCL		10YR4/3			1		16	16	у					
		30	50	С		10YR5/3	FeMn	com	0		32	32	у					
		50	120	С		10YR5/3	FeMn	com	0	poor	49	26	у	у				

									Total	133	110						
									MD	28	13						
								Droughtiness	grade(DR)	2	1						
102	Т	0	10	ohCL	10YR4/2	Fe	com		=	28	28	У		IV	3b	3b	WE
		10	22	С	10YR5/2	Fe	com	1		19	19	У					
		22	45	С	2.5Y5/3	Fe	com	0	poor	30	30	У	у				
		45	80	С	2.5Y5/3	Fe	many	0	poor	28	33	У	у				
		80	120	С	10Y6/1	Fe	com	0	poor	28	0	. у	у				
									Total	132	109						
									MD	27	12						
								Droughtiness	grade(DR)	2	1						
103	Т	0	26	mCL	10YR5/2	Fe	com	0	-	44	44	У		IV	3b	3b	WE
		26	50	С	2.5Y5/3	Fe	com	0	poor	31	31	У	у				
		50	120	С	10Y6/1	Fe	com	0	poor	49	26	. у	у				
									Total	124	101						
									MD	19	4						
								Droughtiness	grade(DR)	2	2						
104	Т	0	28	С	10YR5/2	Fe	com	0	-	48	48	у		IV	3b	3b	WE
		28	60	С	2.5Y5/3	FeMn	com	2	poor	35	41	У	у				
		60	90	С	2.5Y5/3	FeMn	com	5	poor	20	12	У	у				
		90	120	С	10Y6/1	Fe	com	0	poor	21	0	. у	у				
									Total	124	101						
									MD	19	4						
								Droughtiness	grade(DR)	2	2						
105	Т	0	10	оС	10YR5/2			0	-	23	23			IV	3b	3b	WE
		10	30	С	10YR5/2			2		31	31						
		30	75	С	2.5Y5/3	Fe	com	5	poor	41	50	У	у				
		75	120	С	10Y6/1	Fe	com	0	poor	32	0	. у	у				
									Total	127	104						
									MD	22	7						
								Droughtiness	grade(DR)	2	2						
106	Т	0	5	оС	10YR5/2			2	_	11	11			IV	3b	3b	WE
		5	20	С	10YR5/2			2		24	24						
		20	33	С	10YR5/3	Fe	com	2		20	20	У					

		50	120	С	10Y6/1	Fe	com	0	poor	49	26	у	у				
									Total	126	103						
									MD	21	6						
								Droughtin	ess grade(DR)	2	2						
107	Т	0	20	hCL	10YR5/3	Fe	few	0	_	36	36			III- IV	3b	3b	WE
	•	20	40	С	10YR5/3	FeMn	com	2		31	31	у			02		
		40	65	С	2.5Y5/3	FeMn	com	2	poor	23	32	y	у				
		65	120	С	10Y6/1	Fe	com	0	poor	39	7	у	у				
									Total	129	106	. ,	,				
									MD	24	9						
								Droughtin	ess grade(DR)	2	2						
108	Т	0	5	oCL	10YR3/2			0	-	14	14			III	3b	3b	WE
		5	26	hCL	10YR4/3	Fe	com	2		33	33						
		26	42	hCL	10YR4/2	Fe	com	2		25	25	у					
		42	80	С	2.5Y5/3	Fe	com	0	poor	31	36	у	у				
		80	120	С	5GY5/1	Fe	com	0	poor	28	0	у	у				
									Total	131	108		•				
									MD	26	11						
								Droughtin	ess grade(DR)	2	1						
109	Т	0	28	С	10YR5/2			0	-	48	48			IV	3b	3b	WE
		28	55	С	2.5Y5/3	Fe	com	5	poor	31	33	у	у				
		55	120	С	10Y6/1	Fe	com	2	poor	45	19	у	у				
									Total	123	100						
									MD	18	3						
								Droughtin	ess grade(DR)	2	2						
110	Т	0	30	hCL	10YR5/3	Fe	com	0	=	54	54	у		IV	3b	3b	WE
		30	40	С	2.5Y5/3	Fe	com	5	poor	12	12	у	у				
		40	120	С	10Y6/1	Fe	com	2	poor	61	38	у	у				
									Total	127	105						
									MD	22	8						
								Droughtin	ess grade(DR)	2	2						
111	Т	0	30	С	10YR4/2	Fe	com	0	-	51	51	у		IV	3b	3b	WE
		30	80	С	2.5Y5/3	Fe	com	0	poor	47	52	у	у				
		80	120	С	10Y6/1	Fe	com	0	poor	28	0	у	у				

30 40 C																		
Company Comp										Total	126	103						
2 T 0 30 C 10YR5/2 Fe com 0 - 51 51 y N/V 36 36 36 WI 30 40 C 25Y5/2 Fe com 10 poor 12 12 y y y										MD	21	6						
30									Droughtiness	grade(DR)	2	2						
40 120 C	112	Т	0	30	С	10YR5/2	Fe	com	0	-	51	51	у		IV	3b	3b	WE
Total 125 102 125 102 125 102 125 102 125 102 125 12			30	40	С	2.5Y5/2	Fe	com	10	poor	12	12	у	у				
MD			40	120	С	10Y6/1	Fe	com	0	poor	62	39	у	у				
										Total	125	102						
3 T 0 16 hCL 10YR5/2										MD	20	5						
2									Droughtiness	grade(DR)	2	2						
40 120 C	113	Т	0	16	hCL	10YR5/2			0	-	27	27			IV	3b	3b	WE
Total 118 95 MD 13 -2 Droughtiness grade(DR) 2 2 4 T 0 35 mCL 10YR4/3 Fe few 0 -63 63 // hCL 10YR5/3 Fe few 0 poor 53 30 y y Total 135 112 MD 30 15 Droughtiness grade(DR) 1 1 Total 135 112 MD 30 15 Droughtiness grade(DR) 1 1 Total 135 112 MD 30 15 Total 136 43 // hCL 10YR5/3 FeMn many 0 poor 53 30 y y Total 135 112 MD 30 15 Total 139 115 MD 34 18 Droughtiness grade(DR) 1 1 Total 139 115 MD 34 18 Droughtiness grade(DR) 1 1 Total 139 115 MD 34 18 Droughtiness grade(DR) 1 1 Total 139 115 MD 34 18 Droughtiness grade(DR) 1 1 Total 139 115 MD 34 18 Droughtiness grade(DR) 1 1 Total 139 115 MD 34 18 Droughtiness grade(DR) 1 1 Total 139 115 MD 34 18 Droughtiness grade(DR) 1 1 Total 139 115 MD 34 18 Droughtiness grade(DR) 1 1 Total 139 115 MD 34 18 Droughtiness grade(DR) 1 1 Total 139 115 MD 34 18 Droughtiness grade(DR) 1 1 Total 139 115 MD 34 18 Droughtiness grade(DR) 1 1 Total 139 115 MD 34 18 Droughtiness grade(DR) 1 1 Total 139 115 MD 34 18 Droughtiness grade(DR) 1 1 Total 139 115 MD 34 18 Droughtiness grade(DR) 1 1 Total 139 115 MD 34 18 Droughtiness grade(DR) 1 1 Total 139 115 MD 34 18 Droughtiness grade(DR) 1 1 Total 139 115 MD 34 18 Droughtiness grade(DR) 1 1 Total 139 115 MD 34 18 Droughtiness grade(DR) 1 1 Total 130 115 MD 34 18 Droughtiness grade(DR) 1 1 Total 130 115 MD 34 18 Droughtiness grade(DR) 1 1 Total 130 115 Drought	P2		16	40	С	10YR5/2	Fe	com	5	poor	30	30	у	у				
MD 13 -2 -2 -2 -2 -2 -2 -2 -			40	120	С	10Y6/1	Fe	com	2	poor	61	38	у	у				
Total 10 10 10 10 10 10 10 1										Total	118	95						
4 T 0 35 mCL 10YR4/3 0 0 - 63 63 III 3a 3a VII 3a 3a 3a VII 3a 3a 3a VII 3										MD	13	-2						
35									Droughtiness	grade(DR)	2	2						
A7 120 C	114	Т	0	35	mCL	10YR4/3			0	-	63	63			III	3a	3a	WE
Total 135 112 MD 30 15 Droughtiness grade(DR) 1			35	47	hCL	10YR5/3	Fe	few	0		19	19						
MD 30 15 Droughtiness grade(DR) 1			47	120	С	10YR5/3	FeMn	many	0	poor	53	30	у	У				
Total Tot										Total	135	112						
5 T 0 25 mCL 10YR4/3 5 - 43 43 II 2 2 2 WI 25 50 C 10YR5/3 FeMn com 0 40 40 y 50 120 C 10YR5/3 FeMn many 0 56 32 y Total 139 115 MD 34 18 Droughtiness grade(DR) 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1										MD	30	15						
25 50 C 10YR5/3 FeMn com 0 40 40 y 50 120 C 10YR5/3 FeMn many 0 56 32 y Total 139 115 MD 34 18 **The state of the state									Droughtiness	grade(DR)	1	1						
50 120 C 10YR5/3 FeMn many 0 56 32 y Total 139 115 MD 34 18 Total 139 115 MD 32 7	115	Т	0	25	mCL	10YR4/3			5	-	43	43			11	2	2	WE
Total 139 115 MD 34 18 Total 14 14 Total 127 104 MD 22 7			25	50	С	10YR5/3	FeMn	com	0		40	40	у					
MD 34 18 Droughtiness grade(DR) 1			50	120	С	10YR5/3	FeMn	many	0		56	32	у					
Company Comp										Total	139	115						
6 T 0 25 hCL 10YR4/2 1 - 45 45 /V 3b 3b WE 25 37 C 10YR5/2 FeMn few 15 17 17 17 37 90 C 2.5Y5/3 Fe com 1 poor 44 43 y y 9 90 120 C 10Y6/1 Fe com 0 poor 21 0 y y Total 127 104 MD 22 7										MD	34	18						
25 37 C 10YR5/2 FeMn few 15 17 17 37 90 C 2.5Y5/3 Fe com 1 poor 44 43 y y 90 120 C 10Y6/1 Fe com 0 poor 21 0 y y Total 127 104 MD 22 7									Droughtiness	grade(DR)	1	1						
37 90 C 2.5Y5/3 Fe com 1 poor 44 43 y y 90 120 C 10Y6/1 Fe com 0 poor 21 0 y y Total 127 104 MD 22 7	116	Т	0	25	hCL	10YR4/2			1	-	45	45			IV	3b	3b	WE
90 120 C 10Y6/1 Fe com 0 <u>poor 21 0</u> y y Total 127 104 MD 22 7			25	37	С	10YR5/2	FeMn	few	15		17	17						
Total 127 104 MD 22 7			37	90	С	2.5Y5/3	Fe	com	1	poor	44	43	у	у				
MD 22 7			90	120	С	10Y6/1	Fe	com	0	poor	21	0	у	у				
										Total	127	104						
Droughtiness grade(DR) 2 2										MD	22	7						
									Droughtiness	grade(DR)	2	2						

3a 3a WE
3b 3b WE
3b 3b WE
3b 3b WE
at
3b 3b WE
_

122	Т	0	30	hCL	10YR4/2			0	=	54	54			IV	3b	3b	WE
		30	55	hCL	2.5Y5/3	Fe	com	0	poor	28	30	у	у				
		55	120	С	10Y6/1	Fe	com	0	poor	46	20	у	у				
									Total	127	104						
									MD	22	7						
								Droughtine	ess grade(DR)	2	2						
123	Т	0	40	mCL	10YR4/2			5	-	69	69			11	2	2	WE
		40	55	hCL	10YR4/3	Fe	few	25		16	18						
		55	120	С	10YR5/3	FeMn	many	0	poor	46	20	у	у				
									Total	130	106						
									MD	25	9						
								Droughtine	ess grade(DR)	2	2						
124	Т	0	35	mCL	10YR4/2	Fe	few	5	-	60	60			11	2	2	WE
		35	52	hCL	10YR4/3			20		21	22						
		52	95	С	2.5Y5/3	Fe	com	2	poor	30	23	У	у				
		95	121	С	2.5Y5/3	Fe	com	0	poor	18	0	у	у				
									Total	129	105						
									MD	24	8						
								Droughtine	ess grade(DR)	2	2						
125	Т	0	30	mCL	10YR4/3			10	-	49	49			III	3a	3a	WE
		30	52	hCL	10YR5/3	FeMn	com	35		23	24	у					
		<u>52</u>	55	С	10YR5/3	FeMn	com	35		1	3	у					
		55	120	С	2.5Y5/3	Fe	com	15	poor	39	17	у	у				
									Total	112	92						
									MD	7	-5						
								Droughtine	ess grade(DR)	2	2						
126	Т	0	5	ohCL	10YR4/3			0	=	14	14			IV	3b	3b	WE
		5	15	hCL	10YR4/3			0		16	16						
		15	25	hCL	10YR5/3	Fe	com	0		16	16	у					
		25	120	С	2.5Y5/3	Fe	com	2	poor	80	57	у	у				
									Total	126	103						
									MD	21	6						
								Droughtine	ess grade(DR)	2	2						
127	Т	0	40	С	10YR4/3	Fe	few	2	-	67	67			III	3b	3b	WE

		40	60	С	10YR5/3	Fe	com	2	poor	20	26	у	у				
		60	80	С	2.5Y5/3	Fe	com	10	poor	13	12	у	у				
		80	120	С	10Y6/1	Fe	com	2	poor	27	0	. у	у				
									Total	127	104						
									MD	22	7						
								Droughtiness	grade(DR)	2	2						
28	Т	0	30	hZCL	10YR4/2			2	=	56	56			IV	3b	3b	WE
		30	60	С	2.5Y5/3	Fe	com	0	poor	33	39	у	у				
		60	120	С	10Y6/1	Fe	com	0	poor	42	13	у	у				
									Total	131	108						
									MD	26	11						
								Droughtiness	grade(DR)	2	1						
29	Т	0	28	hCL	10YR4/3	Fe	few	15	-	43	43			11	3a	3a	WED
		28	40	С	10YR5/3	FeMn	com	35	m/poor	12	12	у					
		<u>40</u>	60	С	10YR5/3	FeMn	com	60	m/poor	10	13	у					
		60	120	С				60		21	7	. у					
									Total	86	75						
									MD	-19	-22						
								Droughtiness	grade(DR)	3a	3a						
30	Т	0	28	hCL	10YR4/2			2	-	49	49			IV	3b	3b	WE
		28	40	С	10YR5/3	FeMn	com	2	poor	15	15	у	у				
		40	120	С	2.5Y5/3	FeMn	com	5	poor	59	37	у	у				
									Total	124	102						
									MD	19	5						
								Droughtiness	grade(DR)	2	2						
31	Т	0	32	hCL	10YR4/3			12	-	51	51			1	2	3b	DR
		32	45	С	10YR4/3			30		15	15						
		45	120	С	10YR4/3			80		16	10		F				
									Total	82	76		LSS -	very sma	III stone		
									MD	-23	-21						•••••
								Droughtiness	grade(DR)	3b	3a						
32	Т	0	38	hCL	10YR4/3			15	-	59	59			II	3a	3a	WE
		38	65	С	10YR5/3	Fe	com	10		28	39	у					
		30	00	•	101110/0		00	10			00	y					

		<u>80</u>	120	С		10YR5/3	Fe	com	25		25	0	у				
										Total	121	104					
										MD	16	7					
									Droughtiness g	rade(DR)	2	2					
133	Т	0	30	hCL	у	10YR4/2			25	=	41	41		1	2	3a	DR ST
		<u>30</u>	45	hCL	У	10YR5/3			25		18	18					
		45	80	SL	у	10YR5/4			60		17	17					
		80	120	SL	у	10YR5/4			60		19	0		-			
										Total	96	76		As Badsey assoc St. 12%	?		
										MD	-9	-21		>2cm			
									Droughtiness g	rade(DR)	3a	3a					
134	Т	0	30	hCL	У	10YR4/2			25	-	41	41		1	2	3a	DR ST
		30	45	hCL	У	10YR5/3			25		18	18					
		45	80	SL	У	10YR5/4			60		17	17					
		80	120	SL	У	10YR5/4			60		19	0		F			
										Total	96	76		As Badsey assoc St. 12%	?		
										MD	-9	-21		>2cm			
									Droughtiness of	rade(DR)	3a	3a					
135	Т	0	28	hCL	У	10YR4/2			15	-	43	43		II	2	3a	DR
		28	65	С	У	10YR5/3	Fe	com	20		38	48	у				
		28 <u>65</u>	65 120	C SL	y y	10YR5/3 10YR5/4	Fe	com	20 60		38 26	48 3	у 				
							Fe	com		Total			у 	As Badsey assoc	;?		
							Fe	com		Total MD	26	3	у 	As Badsey assoc	;?		
							Fe	com		MD	26 107	<u>3</u>	у	As Badsey assoc	?		
136	T						Fe	com	60	MD	26 107 2	3 95 -2	y 	As Badsey assoc	2	3b	ST
136	T	<u>65</u>	120	SL	У	10YR5/4	Fe	com	60 Droughtiness o	MD grade(DR)	26 107 2 3a	3 95 -2 2	y			3b	ST
136	T	<u>65</u> 0	120	SL	у	10YR5/4 10YR4/2	Fe	com	60 Droughtiness g	MD grade(DR)	26 107 2 3a 41	3 95 -2 2 41	y			3b	ST
136	T	0 30	120 30 45	SL hCL hCL	у У у	10YR5/4 10YR4/2 10YR5/3	Fe	com	Droughtiness g 25 25	MD grade(DR)	26 107 2 3a 41 18	3 95 -2 2 41 18	y		2	3b	ST
136	T	0 30	120 30 45	SL hCL hCL	у У у	10YR5/4 10YR4/2 10YR5/3	Fe	com	Droughtiness g 25 25	MD rade(DR) -	26 107 2 3a 41 18 36	3 95 -2 2 41 18 17	y	I	2	3b	ST
	T	0 30	120 30 45	SL hCL hCL	у У у	10YR5/4 10YR4/2 10YR5/3	Fe	com	Droughtiness g 25 25	MD Irade(DR) - Total MD	26 107 2 3a 41 18 36	3 95 -2 2 41 18 17 76	y	I	2	3b	ST
136	T	0 30	120 30 45	SL hCL hCL	у У у	10YR5/4 10YR4/2 10YR5/3	Fe	com	25 25 60	MD Irade(DR) - Total MD	26 107 2 3a 41 18 36 96 -9	3 95 -2 2 41 18 17 76 -21	y	I	2	3b	ST ST DR ST
		0 30 45	30 45 120	hCL hCL SL	y y y y	10YR5/4 10YR4/2 10YR5/3 10YR5/4	Fe	com	Droughtiness g 25 25 60 Droughtiness g	MD rade(DR) - Total MD rade(DR)	26 107 2 3a 41 18 36 96 -9 3a	3 95 -2 2 41 18 17 76 -21 3a	y	/ As Badsey associ	2		
		0 30 45	30 45 120	SL hCL hCL SL	y y y y	10YR5/4 10YR4/2 10YR5/3 10YR5/4	Fe	com	Droughtiness of 25 25 60 Droughtiness of 25	MD rade(DR) - Total MD rade(DR)	26 107 2 3a 41 18 36 96 -9 3a 41	3 95 -2 2 41 18 17 76 -21 3a 41	y	/ As Badsey associ	2		

										MD	-9	-21					
									Droughtiness		3a	3a		<u> </u>			
138	Т	0	28	hCL	у	10YR5/3			8	- grade(DIT)	47	47			2	2	WE DR
.00		28	60	С	y	10YR5/3	Fe	com	15		37	44	у	,,	_	_	WEBK
		60	80	С	у	10YR5/1	Fe	com	15		14	14	y				
		80	120	С	у	10YR5/1	Fe	com	20		26	0	y				
					,					Total	123	104	,	As Badsey ass GW at	oc?		
										MD	18	7		80cm			
									Droughtiness	grade(DR)	2	2					
139	Т	0	30	hCL	у	10YR4/3			8	=	50	50		1	2	2	WE DR
		30	50	С	у	10YR5/3	Fe	com	10		29	29	у				
		<u>50</u>	120	С	У	10YR5/3	Fe	com	25		43	25	. у				
										Total	122	103		As Badsey ass	oc?		
										MD	17	6					
									Droughtiness	grade(DR)	2	2					
140	Т	0	40	С	у	10YR4/2			8	=	63	63		1	3a	3a	WE DR
		40	52	SCL	У	10YR5/4			60		7	8					
		<u>52</u>	120	SCL	У	10YR5/4			60		29	12					
										Total	100	83		Most stone v. s	mall with	pebbles	
										MD	-5	-14					
									Droughtiness	grade(DR)	3a	3a					
141	Т	0	28	mCL	У	10YR4/2	Fe	few	5	-	48	48		1	1	3a	DR
		28	42	С	У	10YR4/3	Fe	com	20		18	18					
		<u>42</u>	120	С	У	10YR5/3	Fe	com	60		30	20	. у				
										Total	96	86					
										MD	-9	-11					
									Droughtiness	grade(DR)	3a	3a					
142	Т	0	32	hCL		10YR4/3			12	-	51	51		1	2	2	WE DR
		32	45	С		7.5YR4/3	Fe	com	20		17	17					
		45	87	С		7.5YR4/3	Fe	com	30		27	29					
		87	120	С		7.5YR4/3	Fe	com	35		18	0					
										Total	113	97					
										MD	8	0					
									Droughtiness	grade(DR)	2	2					

143	Т	0	28	hCL	у	10YR4/2			12	=	45	45		1	2	2	WE DR
		28	68	С	У	10YR4/3	FeMn	com	12		44	57					
		68	75	С	У	7.5YR5/4	Fe	com	35		4	2					
		<u>75</u>	120	С	У	7.5YR5/4	Fe	com	35		24	0					
										Total	117	104					
										MD	12	7					
									Droughtiness	grade(DR)	2	2					
144	Т	0	28	hCL	У	10YR4/2			25	-	39	39		1	2	3a	DR
		28	32	С	У	10YR4/3			40		4	4					
		32	50	С	У	10YR5/3			40		18	18					
		50	120	SL	У	10YR5/3			40		48	19					
										Total	108	79					
										MD	3	-18					
									Droughtiness	grade(DR)	3a	3a					
145	Т	0	34	mCL	У	10YR4/3			10	-	55	55		11	2	2	WE DR
		34	40	С	У	10YR5/3	FeMn	com	5		9	9	у				
		40	42	С	У	10YR5/3			25		2	2	у				
		<u>42</u>	50	С	У	10YR5/3			35		9	9	у				
		50	120	SL		10YR5/3			40		48	19	у				
										Total	123	94					
										MD	18	-3					
									Droughtiness	grade(DR)	2	2					
146	Т	0	30	mCL		10YR4/3			8	-	50	50		1	1	1	
		30	120	hCL		10YR4/4	Fe	com	2		100	63					
										Total	150	113					
										MD	45	16					
									Droughtiness	grade(DR)	1	1					
147	Т	0	38	mCL	У	10YR4/3	FeMn	few	8	-	63	63		11	2	2	WE
		38	95	С	У	10YR5/3	Fe	com	0		55	51	у				
		95	120	SCL	у	10YR5/3	Fe	com	1		25	0	у				
										Total	143	114					
										MD	38	17					
									Droughtiness	grade(DR)	1	1					
148	Т	0	20	mCL	у	10YR4/3	FeMn	few	8	-	33	33		11	2	2	WE

		20	80	С	У	10YR5/3	Fe	com	5		69	76	У				
		80	120	mCL	У	10YR5/3	FeMn	com	1		40	0	. у				
										Total	142	110					
										MD	37	13					
									Droughtines	s grade(DR)	1	1					
149	Т	0	29	mZCL		10YR4/2			0	-	55	55		1	1	1	
		29	45	mCL		10YR4/3	Fe	com	0		26	26					
		45	65	mCL		10YR5/3	Fe	com	0		23	32	у				
		65	120	С		10YR5/3	FeMn	com	0		44	8	. у				
										Total	148	121					
										MD	43	24					
									Droughtines	s grade(DR)	1	1					
150	Т	0	30	mCL		10YR4/3			0	-	54	54		1	1	1	
		30	80	mCL		10YR4/3	Fe	com	0		62	64					
		80	120	hCL		10YR5/3	Fe	com	0		40	0	у				
										Total	156	118					
										MD	51	21					
									Droughtines	s grade(DR)	1	1					
151	Т	0	20	hCL		10YR4/3			0	=	36	36		11	3a	3a	WE
		20	55	С		10YR5/3	FeMn	com	0		52	56	у				
		55	120	С		10YR5/3	FeMn	com	0		52	24	у у				
										Total	140	116					
										MD	35	19					
									Droughtines	s grade(DR)	1	1					
152	Т	0	26	mCL		10YR4/3	FeMn	com	0	=	47	47		11	2	2	WE
		26	50	hCL		10YR5/3	FeMn	com	2		38	38	у				
		50	120	SCL		10YR5/3	FeMn	com	15		60	26	. у				
										Total	145	110					
										MD	40	13					
									Droughtines	s grade(DR)	1	1					
153	Т	0	18	mCL		10YR4/3	FeMn	com	0	=	32	32		11	2	2	WE DR
		18	40	hCL		10YR5/3	FeMn	com	20		29	29	у				
		<u>40</u>	120	SCL		10YR5/3	FeMn	com	35		57	30	. у				
										Total	118	91					

									MD	13	-6					
								Droughtiness	grade(DR)	2	2					
154	Т	0	28	mCL	10YR4/2			0	-	50	50		11	2	2	WE DR
		28	47	hCL	10YR5/3	Fe	com	0		30	30	у				
		47	65	С	10YR5/3	FeMn	com	0		17	29	у				
		65	80	С	10YR5/3	FeMn	com	20		10	7	у				
		80	120	С	10YR5/3	FeMn	com	20		26	0	. у				
									Total	133	116					
									MD	28	19					
								Droughtiness	grade(DR)	2	1					
155	Т	0	30	mCL	10YR4/3			0	=	50	50		11	2	2	WE DR
		30	120	hCL	10YR5/3	Fe	com	0		30	30	. у				
									Total	133	116					
									MD	28	19					
								Droughtiness	grade(DR)	2	11					
156	Т	0	25	оС	10YR4/3	FeMn	few	1	=	57	57		11	2	2	WE
		25	40	hCL	10YR5/3	FeMn	com	1		24	24	у				
		40	120	С	10YR5/3	FeMn	com	1		71	48	. у	F			
									Total	152	128		Border mCL	organic - t	textures/work	kability as
									MD	47	31					
								Droughtiness	grade(DR)	1	1		•			
157	Т	0	30	оС	10YR4/3			1	=	68	68		11	2	2	WE DR
		30	48	hCL	10YR5/3	FeMn	com	5		27	27	у				
		48	55	С	10YR5/3	FeMn	com	5		7	11	у				
		<u>55</u>	120	С	10YR5/3	FeMn	com	15		45	21	у	Border mCL	organic - t	textures/work	cability as
		<u>00</u>	120	Ü	101110/0	1 011111	00111	10	Total	147	127	,	02			
									MD	42	30		<u>L</u>			
								Droughtiness		1	1					
158	Т	0	25	mCL	10YR4/3			1	grade(Dit)	53	53			2	2	WE DR
		25	50	hCL	10YR5/3	FeMn	com	5		27	27	у	"	_	_	WE DIX
		50	120	C	10YR5/3	FeMn	com	5		7	11	y				
		-		•				Ü	Total	132	112	,				
									iotai	.52						
									MD	27	15					

159	Т	0	30	mCL	10YR4/3			1	=	53	53		11	2	2	WE
		30	90	mZCL	10YR5/3	Fe	com	0		74	68	у				
		90	120	hCL	10YR5/3	Fe	com	0		30	0	у				
									Total	157	121					
									MD	52	24					
								Droughtines	s grade(DR)	1	1					
160	Т	0	34	mCL	10YR4/3			1	=	61	61		11	2	2	WE
		34	120	hCL	10YR5/3	Fe	com	0		96	58	у				
									Total	156	118					
									MD	51	21					
								Droughtines	s grade(DR)	1	1					
161	Т	0	28	mCL	10YR4/3			1	=	50	50		11	2	2	WE
		28	70	hCL	10YR5/3	FeMn	com	0		55	67	у				
		70	120	С	10YR5/3	FeMn	com	0		40	0	у				
									Total	145	117					
									MD	40	20					
								Droughtines	s grade(DR)	1	1					
162	Т	0	38	mCL	10YR4/3			1	-	68	68		11	2	2	WE
		38	78	hCL	10YR5/3	FeMn	com	0		47	51	у				
		78	120	С	10YR5/3	FeMn	com	0		34	0	у				
									Total	149	119					
									MD	44	22					
								Droughtines	s grade(DR)	1	1					
163	Т	0	23	mCL	10YR4/3			2	-	41	41		11	2	2	WE
		23	75	hCL	10YR5/3	FeMn	com	0		68	75	у				
		75	120	С	10YR5/3	FeMn	com	0		36	0	у				
									Total	145	116					
									MD	40	19					
								Droughtines	s grade(DR)	1	1					
164	Т	0	30	mCL	10YR4/3			2	-	41	41		II	2	2	WE
		30	50	hCL	10YR5/3	FeMn	com	0		68	75	у				
		50	120	С	10YR5/3	FeMn	com	0		36	0	у				
									Total	145	116					
									MD	40	19					

								Droughtiness grad	de(DR)	1	1						
165	Т	0	23	mCL	10YR4/3			2	-	41	41			II	2	2	WE
		23	65	hCL	10YR5/3	FeMn	com	0		58	67	у					
		65	120	С	10YR5/3	FeMn	com	0		44	8	у					
									Total	143	116						
									MD	38	19						
								Droughtiness grad	de(DR)	1	1						
166	Т	0	35	mCL	10YR4/3			2	-	62	62			II	2	2	WE
		35	45	hCL	10YR5/3	FeMn	com	0		16	16	у					
		45	120	С	10YR5/3	FeMn	com	0		64	40	у					
									Total	142	118						
									MD	37	21						
								Droughtiness grad	de(DR)	1	1						
167	Т	0	27	mZCL	10YR4/3			2	-	50	50			III	3a	3a	WE
		27	42	С	10YR5/3	FeMn	com	0		24	24	у					
		42	55	С	2.5Y5/3	Fe	com	0		17	21	у					
		55	90	С	2.5Y5/3	Fe	com	0	poor	25	20	у	у				
		90	120	С	2.5Y5/3	Fe	com	5	poor	20	0	у	у				
									Total	136	115						
									MD	31	18						
								Droughtiness grad	de(DR)	1	1						

Appendix 3: Site Photographs

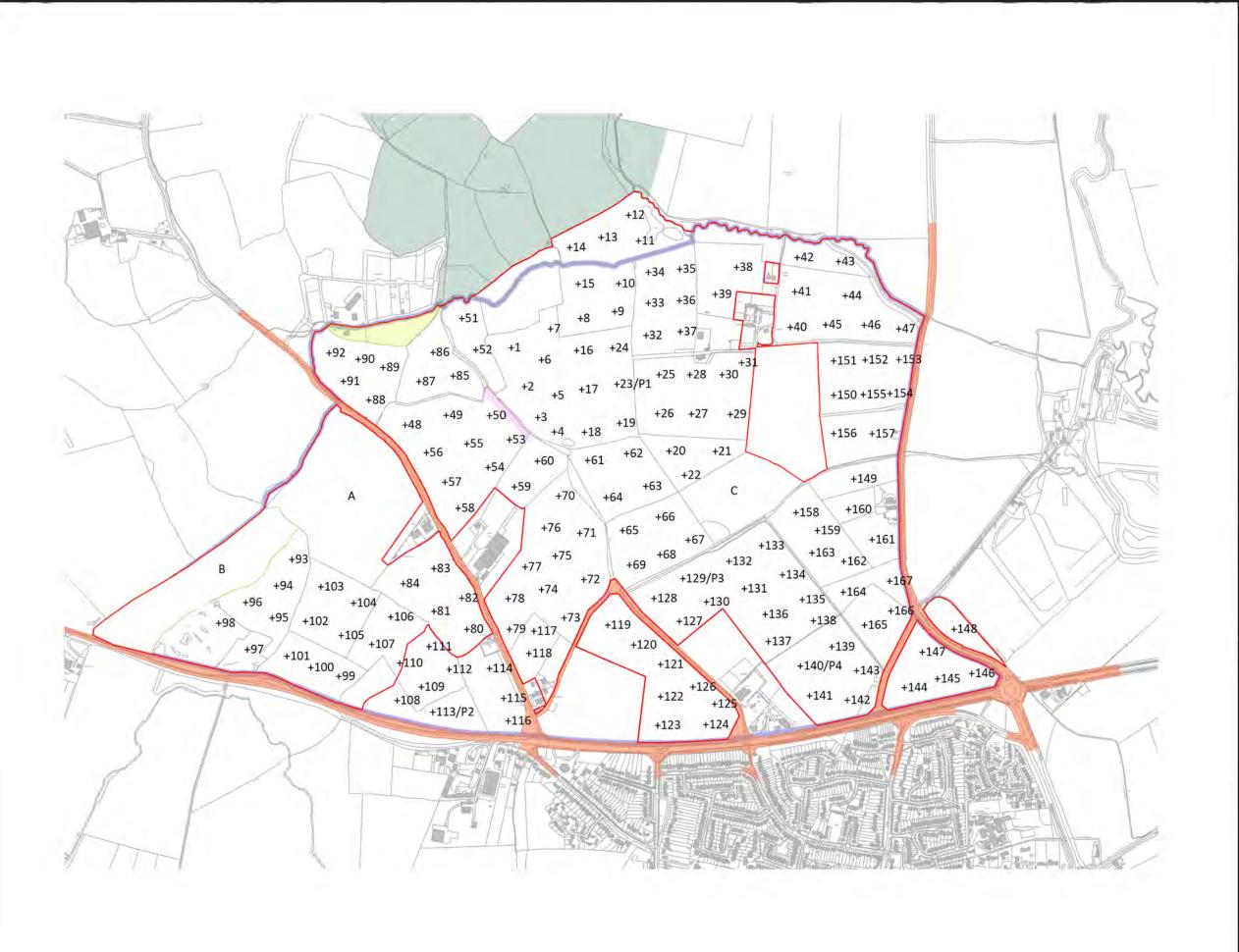








Pit 4 Pit 4 topsoil Pit 4 stony subsoil





+P Pit Observation

A Previously Surveyed

B & C Access Not Available

Survey Area

Site: Oxfordshire Cotswolds Garden Village, Eynsham

Client: Grosvenor Developments Ltd

Figure RAC8314-1: Observations

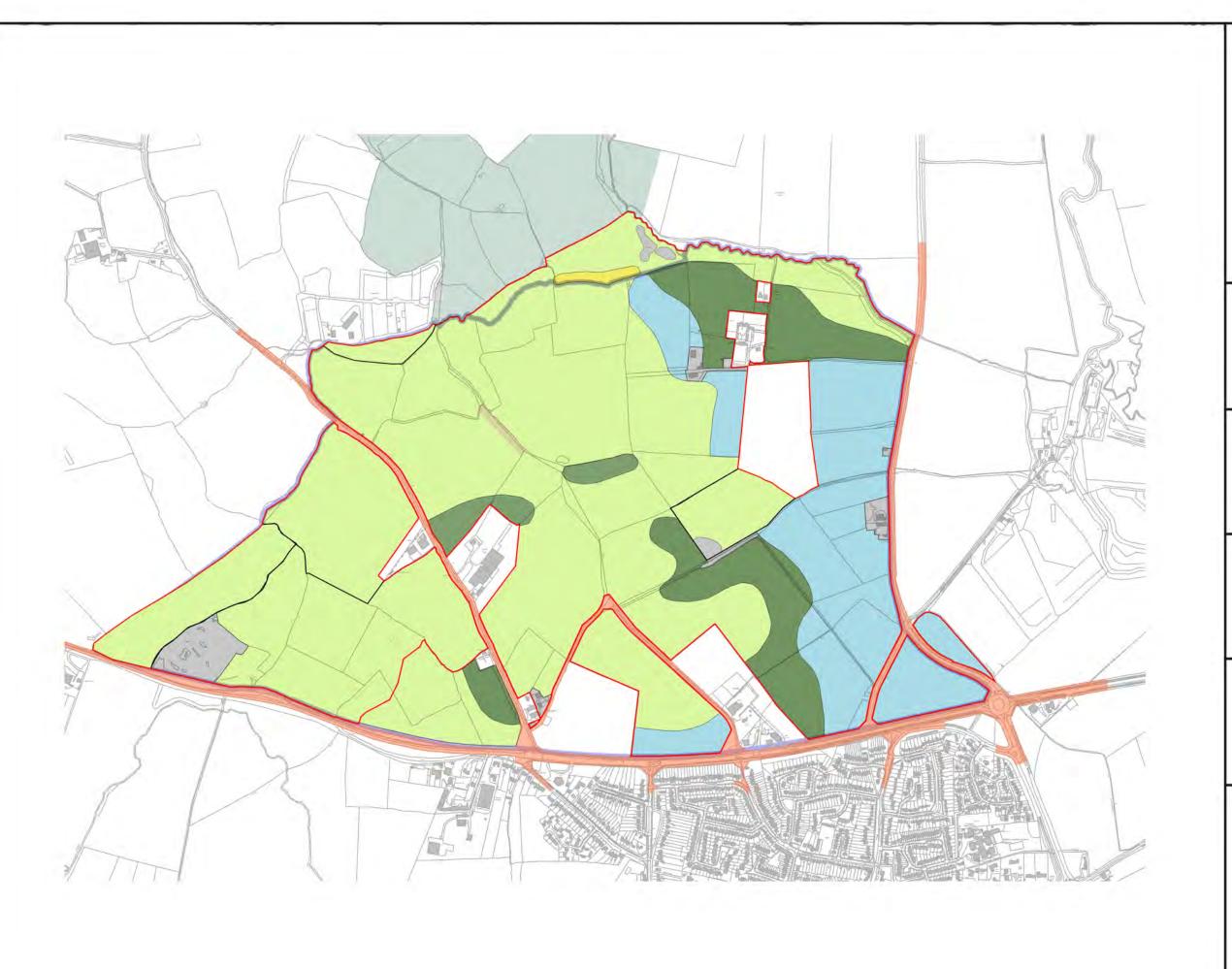
Scale 1:10,000@A3 April/2019

Reading Agricultural Consultants Ltd
Gate House
Beechwood Court
Long Toll
Woodcote
RG8 0RR
01491 684233

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Agricultural Land Classification

Grade 1
Grade 2
Subgrade 3a
Subgrade 3b
Grade 4
Grade 5
Non Agricultural
Not Present
Survey Area
Not Surveyed

Site: Oxfordshire Cotswolds Garden Village, Eynsham

Client: Grosvenor Developments Ltd

Figure RAC8314-2: Agricultural Land Classification

Scale 1:10,000@A3 April/2019

Reading Agricultural Consultants Ltd Gate House Beechwood Court Long Toll Woodcote RG8 ORR 01491 684233

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