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Maidstone Borough Local Plan
Site 66 Land at Sandway, Kent
Agricultural Land Classification,
ALC Map and Report
May 1995

AGRICULTURAL LAND CLASSIFICATION, REPORT

MAIDSTONE BOROUGH LOCAL PLAN
SITE 66 LAND AT SANDWAY

1 Summary

1 1 ADAS was commissioned by MAFF s Land Use Planning Unit to provide information on land quality for a number of sites in the Maidstone Borough of Kent The work forms part of MAFF s statutory input to the preparation of the Maidstone Borough Local Plan

1 2 The site comprises 12 8 hectares of land to the south of Sandway near Lenham in Kent An Agricultural Land Classification (ALC) survey was carried out during April 1995 The survey was undertaken at a detailed level of approximately one boring per hectare of agricultural land surveyed A total of 13 borings and three soil inspection pits were described according to MAFF s revised guidelines and criteria for grading the quality of agricultural land (MAFF 1988) These guidelines provide a framework for classifying land according to the extent to which its physical or chemical characteristics impose a long term limitation on its use for agriculture

1 3 The work was carried out by members of the Resource Planning Team in the Guildford Statutory Group of ADAS

1 4 At the time of the survey the majority of the site had recently been ploughed and drilled with a cereal crop The remaining areas to the centre and north of the site were under permanent grass Non agricultural land includes a widened roadside verge an overgrown track an area of scrub covering a steep slope between the arable and grassland areas and two areas used for farm waste storage including animal and building waste The Urban areas shown are domestic dwellings and associated gardens The Agricultural Buildings shown include barns cattle housing and stables

1 5 The distribution of grades and subgrades is shown on the attached ALC map and the areas and extent are given in the table below The map has been drawn at a scale of 1 10 000 It is accurate at this scale but any enlargement would be misleading

Table 1 Distribution of Grades and Subgrades

Grade	Area (ha)	% of Site
2	11 2	87 5
Non Agricultural	0 6	4 7
Urban	0 7	5 5
Agricultural Buildings	0 3	2 3
Total area of site	12 8ha	100 0

1 6 Appendix I gives a general description of the grades subgrades and land use categories identified in the survey The main classes are described in terms of the type of limitation that can occur the typical cropping range and the expected level and consistency of yield

1 7 The agricultural land at this site has been classified as Grade 2 (very good quality) The land has been graded on the basis of slight soil wetness and soil droughtiness limitations The majority of the site was influenced by soil wetness due to slightly impeded drainage caused by a slowly permeable horizon occurring within 80cm depth The remaining area concentrated on the land of highest altitude is influenced by soil droughtiness due to the occurrence of freely draining sandy soils

2 Climate

2 1 The climatic criteria are considered first when classifying land as climate can be overriding in the sense that severe limitations will restrict land to low grades irrespective of favourable site or soil conditions

2 2 The main parameters used in the assessment of an overall climatic limitation are average annual rainfall as a measure of overall wetness and accumulated temperature as a measure of the relative warmth of a locality

2 3 A detailed assessment of the prevailing climate was made by interpolation from a 5km gridpoint dataset (Met Office 1989) The details are given in the table below and these show that there is no overall climatic limitation affecting the site

2 4 The site is believed to be rather frost prone (Met Office 1971) This is due to the location of the site in an area of cold air drainage and from which further air movement is poor The site is not thought to be exposed However climatic and soil factors interact to influence soil wetness and droughtiness limitations to a greater extent

Table 2 Climatic Interpolation

Grid Reference	TQ885508	TQ885510
Altitude (m AOD)	110	115
Accumulated Temperature (day degrees C Jan -June)	1381	1375
Average Annual Rainfall (mm)	737	740
Field Capacity Days	153	154
Moisture deficit wheat (mm)	108	107
Moisture deficit potatoes (mm)	100	99
Overall Climatic Grade	1	1

3 Relief

3 1 The site lies between approximately 110 and 115m AOD Overall the site slopes from a peak in the north gently to the west south and east Nowhere on the site does the gradient of these slopes influence land quality

4 Geology and Soils

4 1 The published geological information (BGS 1976) shows the majority of the site to be underlain by Cretaceous Folkestone Beds A small area to the south of the site is shown as Cretaceous Sandgate Beds

4 2 The most recent published soils information (SSEW 1983) shows the site to be underlain by soils of the Fyfield 2 and Malling Associations The legend accompanying the map describes Fyfield 2 soils as well drained coarse loamy and sandy soils over sands and sandstones Some very acid sandy soils with bleached subsurface horizons on heaths and in woodlands Risk of water erosion (SSEW 1983) Malling soils are described as well drained non calcareous fine loamy soils over limestone at depth Some well drained coarse loamy and similar fine loamy over clayey soils Some fine loamy soils with slowly permeable subsoils and slight seasonal waterlogging Occasional shallower calcareous soils over limestone Landslips and associated irregular terrain locally (SSEW 1983) The soils encountered at this site were of this broad type except that none were found to be over limestone There was also little likelihood of water erosion as the slopes were gradual

5 Agricultural Land Classification

5 1 Paragraph 1 5 provides the details of the area measurements for each grade and the distribution of each grade is shown on the attached ALC map

5 2 The location of the soil observation points are shown on the attached sample point map

Grade 2

5 3 Land of very good quality has been mapped for the whole of the agricultural area of this site Limitations include both soil wetness and soil droughtiness Soil wetness is significant on the land of lowest altitude towards the west south and east of the site In these areas the soils commonly comprise a very slightly stony (up to 3% v/v total flints) medium clay loam topsoil These pass to a commonly gleyed similarly stony permeable medium clay loam or occasionally a sandy clay loam upper subsoil This commonly overlies a similarly textured gleyed permeable horizon passing to a moderately structured slowly permeable heavy clay loam lower subsoil to depth Occasionally the slowly permeable horizon gives way to a permeable medium sandy loam horizon from around 100cm The pit observation Pit 1 (see Appendix III) is typical of this soil type The slowly permeable horizon leads to a slight drainage impedance In the local climate this leads to Wetness Class II being applied and subsequent Grade 2 when the workability status of the medium textured topsoils is taken into account Soil wetness affects plant growth and yield and leads to a reduction in the number of days when cultivations and/or grazing may occur without causing structural damage to the soil Occasional observations were of a slightly worse quality but were of insufficient distribution to map as a separate unit

5 4 The area of the site limited by soil droughtiness is located on the sloping land and that of higher altitude towards the north of the site The two soil pits (Pits 2 and 3) show the variation that exists in this area Pit 3 is actually classified as Grade 1 and the majority of the observations relate to this pit (the frost prone nature of this site however precludes the inclusion of Grade 1 land at this site) However Pit 2 is classified as Subgrade 3a and represents the sandier soil profiles with loamy sand and sand subsoils occurring higher up the profile than in the Pit 3 soils which have medium loam upper horizons Given the degree of variation within the site all this land has been conservatively placed in a Grade 2 mapping unit other grades could not be differentiated at this scale of survey In the prevailing local climate the free draining coarse nature of the majority of these soils leads to a minor reduction in profile available water Therefore there is a slight risk of soil droughtiness affecting plant growth and yield

ADAS Ref 2007/098/95
MAFF Ref EL20/862

Resource Planning Team
Guildford Statutory Group
ADAS Reading

SOURCES OF REFERENCE

British Geological Survey (1976) Sheet 288 Maidstone Solid & Drift Edition 1 50 000

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

Meteorological Office (1971) Unpublished Climate data relating to Sheet 173 1 63 360

Meteorological Office (1989) Climatic datasets for Agricultural Land Classification

Soil Survey of England and Wales (1980) Bulletin No 9 Soils of Kent

Soil Survey of England and Wales (1983) Sheet No 6 Soils of South East England 1 250 000 and Accompanying Legend

Soil Survey of England and Wales (1984) Bulletin No 15 Soils and their use in South-East England

APPENDIX I

DESCRIPTION OF THE GRADES AND SUBGRADES

Grade 1 Excellent Quality Agricultural Land

Land with no or very minor limitations to agricultural use A very wide range of agricultural and horticultural crops can be grown and commonly includes top fruit soft fruit salad crops and winter harvested vegetables Yields are high and less variable than on land of lower quality

Grade 2 Very Good Quality Agricultural Land

Land with minor limitations which affect crop yield cultivations or harvesting A wide range of agricultural or horticultural crops can usually be grown but on some land of this grade there may be reduced flexibility due to difficulties with the production of the more demanding crops such as winter harvested vegetables and arable root crops The level of yield is generally high but may be lower or more variable than Grade 1 land

Grade 3 Good to Moderate Quality Land

Land with moderate limitations which affect the choice of crops the timing and type of cultivation harvesting or the level of yield When more demanding crops are grown yields are generally lower or more variable than on land in Grades 1 and 2

Subgrade 3a Good Quality Agricultural Land

Land capable of consistently producing moderate to high yields of a narrow range of arable crops especially cereals or moderate yields of a wide range of crops including cereals grass oilseed rape potatoes sugar beet and the less demanding horticultural crops

Subgrade 3b Moderate Quality Agricultural Land

Land capable of producing moderate yields of a narrow range of crops principally cereals and grass or lower yields of a wider range of crops or high yields of grass which can be grazed or harvested over most of the year

Grade 4 Poor Quality Agricultural Land

Land with severe limitations which significantly restrict the range of crops and/or the level of yields It is mainly suited to grass with occasional arable crops (eg cereals and forage crops) the yields of which are variable In moist climates yields of grass may be moderate to high but there may be difficulties in utilisation The grade also includes very droughty arable land

Grade 5 Very Poor Quality Agricultural Land

Land with severe limitations which restrict use to permanent pasture or rough grazing except for occasional pioneer forage crops

Urban

Built-up or 'hard' uses with relatively little potential for a return to agriculture including housing industry commerce education, transport religous buildings cemetries Also hard-surfaced sports facilities permanent caravan sites and vacant land all types of derelict land including mineral workings which are only likely to be reclaimed using derelict land grants

Non-agricultural

'Soft' uses where most of the land could be returned relatively easily to agriculture including private parkland public open spaces sports fields allotments and soft-surfaced areas on airports Also active mineral workings and refuse tips where restoration conditions to soft after-uses may applv

Woodland

Includes commercial and non-commercial woodland A distinction may be made as necessary between farm and non farm woodland

Agricultural Buildings

Includes the normal range of agricultural buildings as well as other relatively permanent structures such as glasshouses Temporary structures (eg polythene tunnels erected for lambing) may be ignored

Open Water

Includes lakes ponds and rivers as map scale permits

Land Not Surveyed

Agricultural land which has not been surveyed

Where the land use includes more than one of the above eg buildings in large grounds and where map scale permits the cover types may be shown separately Otherwise the most extensive cover type will be shown

APPENDIX II

FIELD ASSESSMENT OF SOIL WETNESS CLASS

SOIL WETNESS CLASSIFICATION

Soil wetness is classified according to the depth and duration of waterlogging in the soil profile Six soil wetness classes are identified and are defined in the table below

Definition of Soil Wetness Classes

Wetness Class	Duration of Waterlogging[1]
I	The soil profile is not wet within 70 cm depth for more than 30 days in most years [2]
II	The soil profile is wet within 70 cm depth for 31-90 days in most years **or** if there is no slowly permeable layer within 80 cm depth it is wet within 70 cm for more than 90 days but only wet within 40 cm depth for 30 days in most years
III	The soil profile is wet within 70 cm depth for 91-180 days in most years **or** if there is no slowly permeable layer present within 80 cm depth it is wet within 70 cm for more than 180 days but only wet within 40 cm depth for between 31-90 days in most years
IV	The soil profile is wet within 70 cm depth for more than 180 days but not wet within 40 cm depth for more than 210 days in most years **or** if there is no slowly permeable layer present within 80 cm depth it is wet within 40 cm depth for 91-210 days in most years
V	The soil profile is wet within 40 cm depth for 211-335 days in most years
VI	The soil profile is wet within 40 cm depth for more than 335 days in most years

Soils can be allocated to a wetness class on the basis of quantitative data recorded over a period of many years or by the interpretation of soil profile characteristics site and climatic factors Adequate quantitative data will rarely be available for ALC surveys and therefore the interpretative method of field assessment is used to identify soil wetness class in the field The method adopted here is common to ADAS and the SSLRC

[1]The number of days specified is not necessarily a continuous period

[2] In most years is defined as more than 10 out of 20 years

APPENDIX III

SOIL PIT AND SOIL BORING DESCRIPTIONS

Contents

SOIL PROFILE DESCRIPTIONS EXPLANATORY NOTE

Soil pit and auger boring information collected during ALC fieldwork is held on a computer database This uses notations and abbreviations as set out below

Boring Header Information

1 **GRID REF** national 100 km grid square and 8 figure grid reference

2 **USE** Land use at the time of survey The following abbreviations are used

ARA	Arable	**WHT**	Wheat	**BAR**	Barley
CER	Cereals	**OAT**	Oats	**MZE**	Maize
OSR	Oilseed rape	**BEN**	Field Beans	**BRA**	Brassicae
POT	Potatoes	**SBT**	Sugar Beet	**FCD**	Fodder Crops
LIN	Linseed	**FRT**	Soft and Top Fruit	**FLW**	Fallow
PGR	Permanent Pasture	**LEY**	Ley Grass	**RGR**	Rough Grazing
SCR	Scrub	**CFW**	Coniferous Woodland	**DCW**	Deciduous Wood
HTH	Heathland	**BOG**	Bog or Marsh	**FLW**	Fallow
PLO	Ploughed	**SAS**	Set aside	**OTH**	Other
HRT	Horticultural Crops				

3 **GRDNT** Gradient as estimated or measured by a hand held optical clinometer

4 **GLEY/SPL** Depth in centimetres (cm) to gleying and/or slowly permeable layers

5 **AP (WHEAT/POTS)** Crop adjusted available water capacity

6 **MB (WHEAT/POTS)** Moisture Balance (Crop adjusted AP - crop adjusted MD)

7 **DRT** Best grade according to soil droughtiness

8 If any of the following factors are considered significant 'Y' will be entered in the relevant column

MREL	Microrelief limitation	**FLOOD**	Flood risk	**EROSN**	Soil erosion risk
EXP	Exposure limitation	**FROST**	Frost prone	**DIST**	Disturbed land
CHEM	Chemical limitation				

9 **LIMIT** The main limitation to land quality The following abbreviations are used

OC	Overall Climate	**AE**	Aspect	**EX**	Exposure
FR	Frost Risk	**GR**	Gradient	**MR**	Microrelief
FL	Flood Risk	**TX**	Topsoil Texture	**DP**	Soil Depth
CH	Chemical	**WE**	Wetness	**WK**	Workability
DR	Drought	**ER**	Erosion Risk	**WD**	Soil Wetness/Droughtiness
ST	Topsoil Stoniness				

Soil Pits and Auger Borings

1 **TEXTURE** soil texture classes are denoted by the following abbreviations

S	Sand	**LS**	Loamy Sand	**SL**	Sandy Loam
SZL	Sandy Silt Loam	**CL**	Clay Loam	**ZCL**	Silty Clay Loam
ZL	Silt Loam	**SCL**	Sandy Clay Loam	**C**	Clay
SC	Sandy Clay	**ZC**	Silty Clay	**OL**	Organic Loam
P	Peat	**SP**	Sandy Peat	**LP**	Loamy Peat
PL	Peaty Loam	**PS**	Peaty Sand	**MZ**	Marine Light Silts

For the sand loamy sand sandy loam and sandy silt loam classes the predominant size of sand fraction will be indicated by the use of the following prefixes

F Fine (more than 66% of the sand less than 0 2mm)
M Medium (less than 66% fine sand and less than 33% coarse sand)
C Coarse (more than 33% of the sand larger than 0 6mm)

The clay loam and silty clay loam classes will be sub-divided according to the clay content **M** Medium (<27% clay) **H** Heavy (27-35% clay)

2 **MOTTLE COL** Mottle colour using Munsell notation

3 **MOTTLE ABUN** Mottle abundance expressed as a percentage of the matrix or surface described

F few <2% **C** common 2 20% **M** many 20-40% **VM** very many 40% +

4 **MOTTLE CONT** Mottle contrast

F faint - indistinct mottles evident only on close inspection
D distinct - mottles are readily seen
P prominent - mottling is conspicuous and one of the outstanding features of the horizon

5 **PED COL** Ped face colour using Munsell notation

6 **GLEY** If the soil horizon is gleyed a Y will appear in this column If slightly gleyed an S will appear

7 **STONE LITH** Stone Lithology - One of the following is used

HR	all hard rocks and stones	**SLST**	soft oolitic or dolimitic limestone
CH	chalk	**FSST**	soft fine grained sandstone
ZR	soft argillaceous or silty rocks	**GH**	gravel with non porous (hard) stones
MSST	soft medium grained sandstone	**GS**	gravel with porous (soft) stones
SI	soft weathered igneous/metamorphic rock		

Stone contents (>2cm >6cm and total) are given in percentages (by volume)

8 **STRUCT** the degree of development size and shape of soil peds are described using the following notation

degree of development	**WK** weakly developed	**MD** moderately developed
	ST strongly developed	
ped size	**F** fine	**M** medium
	C coarse	**VC** very coarse
ped shape	**S** single grain	**M** massive
	GR granular	**AB** angular blocky
	SAB sub angular blocky	**PR** prismatic
	PL platy	

9 **CONSIST** Soil consistence is described using the following notation

L loose **VF** very friable **FR** friable **FM** firm **VM** very firm
EM extremely firm **EH** extremely hard

10 **SUBS STR** Subsoil structural condition recorded for the purpose of calculating profile droughtiness **G** good **M** moderate **P** poor

11 **POR** Soil porosity If a soil horizon has less than 0 5% biopores >0 5 mm a 'Y will appear in this column

12 **IMP** If the profile is impenetrable to rooting a Y will appear in this column at the appropiate horizon

13 **SPL** Slowly permeable layer If the soil horizon is slowly permeable a 'Y will appear in this column

14 **CALC** If the soil horizon is calcareous a Y will appear in this column

15 Other notations

APW available water capacity (in mm) adjusted for wheat
APP available water capacity (in mm) adjusted for potatoes
MBW moisture balance wheat
MBP moisture balance potatoes

SOIL PIT DESCRIPTION

Site Name MAIDSTONE LP SITE 66 Pit Number 1P

Grid Reference TQ88605080 Average Annual Rainfall 737 mm
Accumulated Temperature 1381 degree days
Field Capacity Level 153 days
Land Use Ploughed
Slope and Aspect degrees E

HORIZON	TEXTURE	COLOUR	STONES >2	TOT STONE	LITH	MOTTLES	STRUCTURE	CONSIST	SUBSTRUCTURE	CALC
0 31	MCL	10YR42 00	0	3	HR					
31 53	MCL	10YR44 00	0	2	HR	F	MDCSAB	FR	M	
53 74	SCL	10YR53 00	0	3	HR	M	MDCSAB	FR	M	
74-120	HCL	25Y 63 00	0	3	HR	M	WKCSAB	FR	M	

Wetness Grade 2 Wetness Class II
Gleying 53 cm
SPL 74 cm

Drought Grade 1 APW 152mm MBW 44 mm
APP 114mm MBP 14 mm

FINAL ALC GRADE 2
MAIN LIMITATION Wetness

SOIL PIT DESCRIPTION

Site Name MAIDSTONE LP SITE 66 Pit Number 2P

Grid Reference TQ88505090 Average Annual Rainfall 737 mm
Accumulated Temperature 1381 degree days
Field Capacity Level 153 days
Land Use Ploughed
Slope and Aspect 02 degrees S

HORIZON	TEXTURE	COLOUR	STONES 2	TOT STONE	LITH	MOTTLES	STRUCTURE	CONSIST	SUBSTRUCTURE	CALC
0- 28	MSL	10YR42 00	0	3	HR					
28- 55	LMS	10YR44 00	0	0			MDCSAB	FR	G	
55- 70	LMS	75YR33 00	0	0			MDCAB	FR	G	
70- 90	MS	10YR44 00	0	0		C	WKMSAB	VF	M	
90 120	MS	10YR66 00	0	0			S	L	M	

Wetness Grade 1 Wetness Class I
Gleying cm
SPL cm

Drought Grade 3A APW 102mm MBW 6 mm
APP 87 mm MBP 13 mm

FINAL ALC GRADE 3A
MAIN LIMITATION Droughtiness

SOIL PIT DESCRIPTION

Site Name MAIDSTONE LP SITE 66 Pit Number 3P

Grid Reference TQ88275100 Average Annual Rainfall 737 mm
Accumulated Temperature 1381 degree days
Field Capacity Level 153 days
Land Use Ploughed
Slope and Aspect degrees

HORIZON	TEXTURE	COLOUR	STONES	2	TOT STONE	LITH	MOTTLES	STRUCTURE	CONSIST	SUBSTRUCTURE	CALC
0 30	MCL	10YR41 00	0		3	HR					
30 51	SCL	10YR42 43	0		3	HR	F	MDCSAB	FR	M	
51 83	MSL	10YR44 46	0		5	HR		WKCSAB	FR	G	
83 90	LMS	10YR44 46	0		5	HR		MDCSAB	FR	G	
90- 96	MS	75YR58 00	0		10	HR	M	MDCSAB	FM	M	
96-120	FS	25Y 83 00	0		0		C	WKMAB	VF	M	

Wetness Grade 1 Wetness Class I
Gleying 96 cm
SPL cm

Drought Grade 1 APW 158mm MBW 50 mm
APP 114mm MBP 14 mm

FINAL ALC GRADE 1
MAIN LIMITATION

SAMPLE NO	GRID REF	USE	ASPECT	GRDNT	GLEY	SPL	WETNESS CLASS	WHEAT- GRADE	AP	MB	POTS- AP	MB	M REL DRT	FLOOD	EROSN EXP	FROST DIST	CHEM LIMIT	ALC	COMMENTS
1	TQ88375109	PGR	S		55		1	1	121	13	117	17	2					1	IMP 80 SEE 3P
1P	TQ88605080	PLO	E		53	74	2	2	152	44	114	14	1				WE	2	PIT 90 AUG 120
2	TQ88205097	RGR	S		25		2	2	139	31	113	13	1				WE	2	SEE 1P
2P	TQ88505090	PLO	S	02			1	1	102	-6	87	-13	3A				DR	3A	PIT 120
3	TQ88275100	PLO	S		55		1	1	137	29	113	13	2				DR	2	IMP 100 SEE 3P
3P	TQ88275100	PLO			96		1	1	158	50	114	14	1					1	PIT 120
4	TQ88405100	PLO	W	02	40	40	3	3A	160	52	116	16	1				WE	3A	SEE 1P
5	TQ88505100	PGR	W		25		2	1	87	-21	92	-8	3B				DR	2	IMP 70 SEE 3P
6	TQ88605100	PGR	E	02			1	1	83	25	86	-14	3B				DR	2	IMP 55 SEE 3P
7	TQ88705100	PLO			30		2	2	145	37	109	9	2				WD	2	SEE 1P
8	TQ88305090	PLO	S		32		2	2	131	23	114	14	2				WE	2	IMP 100 SEE 3P
9	TQ88405090	PLO	S	02	55	55	2	2	150	42	114	14	1				WE	2	SEE 1P
10	TQ88505090	PLO	S	02	55		1	1	111	3	87	-13	3A				DR	3A	SEE 2P
11	TQ88605090	PLO	W	02	30	80	2	2	150	42	110	10	1				WE	2	SEE 1P
12	TQ88505080	PLO	S	02	55		1	1	168	60	113	13	1					1	
13	TQ88605080	PLO	W	02	30	80	2	2	152	44	112	12	1				WE	2	SEE 1P

SAMPLE	DEPTH	TEXTURE	COLOUR	MOTTLES COL	ABUN	CONT	PED COL	GLEY	STONES >2	>6	LITH	TOT	STRUCT/ CONSIST	SUBS STR	POR	IMP	SPL	CALC	
1	0-25	scl	10YR42 00						0	0	HR	3							
	25-55	msl	10YR54 00						0	0		0		G					
	55 80	msl	10YR63 00	10YR66 00	C			Y	0	0	HR	5		G					IMP 80-IRONPAN
1P	0 31	mcl	10YR42 00						0	0	HR	3							
	31 53	mcl	10YR44 00	10YR56 00	F				0	0	HR	2	MDCSAB FR	M					
	53 74	scl	10YR53 00	10YR58 00	M			Y	0	0	HR	3	MDCSAB FR	M					
	74 120	hcl	25Y 63 00	10YR58 00	M			Y	0	0	HR	3	WKCSAB FR	M	Y		Y		
2	0 25	mcl	10YR42 00						0	0	HR	3							
	25 40	mcl	10YR53 00	10YR56 00	C			Y	0	0		0		M					
	40 70	scl	10YR53 00	10YR56 00	C			Y	0	0		0		M					
	70-120	lms	25Y 63 00	10YR66 00	M			Y	0	0		0		G					
2P	0 28	msl	10YR42 00						0	0	HR	3							
	28 55	lms	10YR44 00						0	0		0	MDCSAB FR	G					
	55-70	lms	75YR33 00						0	0		0	MDCAB FR	G					
	70-90	ms	10YR44 00	00FE00 00	C		00MN00 00		0	0		0	WKMSAB VF	M					
	90-120	ms	10YR66 00						0	0		0	S L	M					
3	0-30	scl	10YR42 00						0	0	HR	3							
	30-55	scl	10YR44 00	10YR56 00	F				0	0		0		M					
	55-90	msl	10YR44 00	10YR58 00	C			S	0	0		0		G					
	90-100	lms	25Y 63 00	10YR66 00	C			Y	0	0		0		G					IMP 100-IRONPAN
3P	0-30	mcl	10YR41 00						0	0	HR	3							
	30 51	scl	10YR42 43	10YR56 00	F				0	0	HR	3	MDCSAB FR	M					
	51 83	msl	10YR44 46						0	0	HR	5	WKCSAB FR	G					
	83 90	lms	10YR44 46						0	0	HR	5	MDCSAB FR	G					
	90 96	ms	75YR58 00	00FE00 00	M				0	0	HR	10	MDCSAB FM	M					IRONPAN-V COMPACT
	96 120	fs	25Y 83 00	10YR56 76	C			Y	0	0		0	WKMA8 VF	M					
4	0 28	mcl	10YR42 00						0	0	HR	3							
	28 40	mcl	10YR44 54						0	0		0		M					
	40 65	hcl	10YR53 00	10YR56 00	C			Y	0	0		0		M			Y		
	65 100	hcl	10YR63 00	10YR58 00	M			Y	0	0		0		M			Y		
	100 120	msl	10YR63 00	10YR58 00	M			Y	0	0		0		G					
5	0 25	msl	10YR42 00						0	0	HR	3							
	25 35	msl	10YR44 00	10YR56 00	C		00MN00 00	Y	0	0		0		G					
	35 70	lms	10YR54 00					Y	0	0		0		G					IMP 70-IRONPAN
6	0-25	msl	10YR42 00						0	0	HR	3							
	25-50	scl	10YR43 00	10YR66 00	F				0	0		0		M					
	50-55	scl	10YR43 00	10YR66 00	F				0	0	HR	10		M					IMP 55-IRONPAN
7	0 30	scl	10YR42 00						0	0	HR	3							
	30 50	scl	10YR53 43	10YR56 00	C			Y	0	0	HR	5		M					
	50 120	mcl	25Y 63 00	10YR58 00	C		00MN00 00	Y	0	0	HR	5		M					

SAMPLE	DEPTH	TEXTURE	COLOUR	- MOTTLES- COL	ABUN	CONT	PED COL	GLEY	-STONES-- >2	6	LITH	TOT	STRUCT/ CONSIST	SUBS STR	POR	IMP	SPL	CALC
8	0-32	mcl	10YR42 00						0	0	HR	3						
	32-70	mcl	10YR53 52	10YR56 00	C			Y	0	0	HR	5		M				
	70 100	mcl	10YR52 00	10YR58 00	M			Y	0	0	HR	5		M				IMP 100-IRONPAN
9	0 32	mcl	10YR42 00						0	0	HR	3						
	32 55	mcl	10YR54 00						0	0	HR	5		M				
	55 70	hcl	10YR53 00	10YR58 00	M			Y	0	0	HR	5		M		Y		
	70 120	hcl	10YR63 00	10YR58 00	M			Y	0	0	HR	5		M		Y		
10	0 30	msl	10YR42 00						0	0	HR	3						
	30 55	lms	10YR43 00						0	0		0		G				
	55 100	lms	10YR42 54	10YR66 00	C			Y	0	0	HR	5		G				
	100-120	ms	10YR63 00	10YR66 00	C			Y	0	0		0		M				
11	0 30	mcl	10YR42 00						0	0	HR	3						
	30 60	scl	10YR53 52	10YR58 00	C			Y	0	0	HR	5		M				
	60 80	scl	10YR63 00	10YR58 00	M			Y	0	0	HR	5		M				
	80 120	hcl	25Y 63 00	10YR58 00	M			Y	0	0		0		M		Y		
12	0 30	scl	10YR42 00						0	0	HR	3						
	30 55	msl	10YR44 54						0	0		0		G				
	55-120	fs	25Y 63 00	10YR58 00	M			Y	0	0		0		G				
13	0 30	mcl	10YR42 00						0	0	HR	3						
	30-55	mcl	10YR54 00	10YR56 00	C			Y	0	0	HR	5		M				
	55-80	scl	25Y 53 00	10YR58 00	M			Y	0	0	HR	5		M				
	80-120	hcl	25Y 63 00	10YR58 00	M			Y	0	0		0		M		Y		