A1

Slough Borough Local Plan
Site 20: Ditton Park Farm
Slough, Berkshire

Agricultural Land Classification
ALC Map and Report

April 1997

Resource Planning Team
Eastern Region
FRCA Reading

RPT Job Number: 0204/058/97
MAFF Reference: EL 02/01239

AGRICULTURAL LAND CLASSIFICATION REPORT

SLOUGH BOROUGH LOCAL PLAN
SITE 20:
DITTON PARK FARM, SLOUGH.

INTRODUCTION

1. This report presents the findings of a detailed Agricultural Land Classification (ALC) survey of 14.0 hectares of land to the south-east of Slough in Berkshire. The survey was carried out during April 1997.

2. The survey was carried out by the Farming and Rural Conservation Agency (FRCA) for the Ministry of Agriculture, Fisheries and Food (MAFF), in connection with the Slough Borough Local Plan. This survey supersedes any previous ALC information for this land.

3. The work was conducted by members of the Resource Planning Team in the Eastern Region of the FRCA. The land has been graded in accordance with the published MAFF ALC guidelines and criteria (MAFF, 1988). A description of the ALC grades and subgrades is given in Appendix I.

4. At the time of survey the land on the site was in permanent grassland. The areas of the site shown as 'Other Land' consist of residential dwellings and a disturbed area with portacabins.

SUMMARY

5. The findings of the survey are shown on the enclosed ALC map. The map has been drawn at a scale of 1:10,000. It is accurate at this scale, but any enlargement would be misleading.

6. The area and proportions of the ALC grades and subgrades on the surveyed land are summarised in Table 1.

Table 1: Area of grades and other land

Grade/Other land	Area (hectares)	% surveyed area	% site area
1	2.3	17.7	16.5
2	7.8	60.0	55.7
3a	2.9	22.3	20.7
Other Land	1.0	N/A	7.1
Total Surveyed Area	13.0	100	N/A
Total site area	14.0	N/A	100

7. The fieldwork was conducted at an average density of 1 boring every hectare. A total of 14 borings and 1 soil pit were described.

8. The area to the western side of the site has been mapped as Grade 1 (excellent quality agricultural land). These fine and coarse loamy soils are deep, very slightly stony and free draining. Such soils combine with the prevailing climate to give land which has very minor or no limitations to agricultural use.

9. The majority of the site has been classified as Grade 2 (very good quality agricultural land). The profiles are similar to those described above but are variable and suffer from a slight wetness and/or droughtiness limitation depending on the combination and characteristics of the soil horizons in each profile. Occasional borings within this mapping unit are of worse quality.

10. On the south eastern edge of the site, the soils are impenetrable to the auger at varying depths. Although the soils are similar to the remainder of the site, the wetness and/or droughtiness restrictions are more limiting which restricts the land to Subgrade 3a (good quality).

FACTORS INFLUENCING ALC GRADE

Climate

11. Climate affects the grading of the land through the assessment of an overall climatic limitation and also through interactions with soil characteristics.

12. The key climatic variables used for grading this site are given in Table 2 and were obtained from the published 5km grid datasets using the standard interpolation procedures (Met. Office, 1989).

Table 2: Climatic and altitude data

Factors	Units	Values	Values	Values
Grid reference	N/A	TQ 006 778	TQ 007 780	TQ 006 783
Altitude	m,AOD	20	21	25
Accumulated Temperature	day°C	1491	1490	1486
Average Annual Rainfall	mm	670	672	675
Field Capacity Days	days	139	139	140
Moisture Deficit, Wheat	mm	118	118	117
Moisture Deficit, Potatoes	mm	113	113	112
Overall Climatic Grade	N/A	Grade 1	Grade 1	Grade 1

13. 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.

14. The main parameters used in the assessment of an overall climatic limitation are average annual rainfall (AAR), as a measure of overall wetness, and accumulated temperature (AT0, January to June), as a measure of the relative warmth of a locality.

15. The combination of rainfall and temperature at this site mean that there is no overall climatic limitation. Other local climatic factors such as exposure and frost risk are not believed to have a significant adverse effect on the site. The site is climatically Grade 1.

Site

16. The agricultural land at this site lies at an altitude of 19-25m AOD. The majority of the land at the site is flat or very gently sloping with slight undulations. Nowhere does gradient or microrelief affect agricultural land quality.

Geology and soils

17. The published geological information (BGS, 1981) shows the majority of the site to be underlain with Flood-plain Gravel with a small area to the extreme north of the site being mapped as Taplow Gravel.

18. The most recently published soil information (SSEW, 1983) shows the survey area to be mapped as 'unsurveyed, mainly urban and industrial areas'. However, the most likely Soil Associations to be found at the site are Hamble 2 and/or Sutton 2. The former is described as 'Deep stoneless well drained silty soils and similar soils affected by groundwater locally. The latter is described as 'Well drained fine and coarse loamy soils usually over gravel with a calcareous matrix'. Soils broadly consistent with the above descriptions were found upon field examination.

AGRICULTURAL LAND CLASSIFICATION

19. The details of the classification of the site are shown on the attached ALC map and the area statistics of each grade are given in Table 1.

20. The location of the auger borings and pits is shown on the attached sample location map and the details of the soils data are presented in Appendix II.

Grade 1

21. A limited area in the central part of the site running along the most western boundary has been classified as Grade 1 (excellent quality agricultural land). Typical profiles consist of fine sandy silt loam topsoil overlying similar or slightly heavier upper subsoils which are occasionally gleyed. Lower subsoils are variable in nature but generally consist of heavy clay loam or clay with some sandy pockets also being observed. The profiles are generally stoneless or very slightly stony throughout (0-5% total flints, 0-2% flints > 2cm diameter). The depth to gleying varies from 0-48cm whilst the soils become poorly structured and slowly permeable at depths between 68-78cm where the clayey horizons are observed. Drainage is therefore slightly impeded causing a Wetness Class of II to be assigned to these soils. The light textured topsoils alleviate this minor soil wetness problem such that Wetness Grade 1 is considered appropriate. Soil pit 1 is representative of these soil types. Moisture balance calculations indicate that the available water capacity of the soils is sufficient to provide crops with adequate moisture to prevent drought stress in most years. This land therefore has very minor or no limitations to its agricultural use.

Grade 2

22. The majority of the area is mapped as very good quality agricultural land (Grade 2). The land is affected mainly by droughtiness with soil wetness being equally or more restricting in places. The majority of profiles within this unit comprise very slightly to moderately stony (4-25% total flints by volume, 0-2% > 2cm diameter) fine sandy silt loam or medium clay loam topsoils overlying similar or slightly heavier subsoils which are sometimes gleyed (suggesting seasonal waterlogging). The soils are very variable depending on the amount of sand in the profile. However, the majority of profiles have poorly structured slowly permeable clay, heavy clay loam or sandy clay loam horizons which occur at depths between 68 and 82cm, some of which contain up to 10% total flints. Very occasional profiles were impenetrable to the auger at approximately 90cm depth over gravel. A wetness class of I or II has been assigned to these soils depending on depth to slowly permeable horizons. On the whole, the combination of soil texture and hard stone restricts the water available to crops such that there is a very slight risk of drought stress to the plants in most years. This, sometimes in combination with soil wetness (caused by slowly permeable subsoil horizons occurring at moderate depths which affects crop growth and development and opportunities for landwork and/or grazing) restricts the land to Grade 2.

Subgrade 3a

23. To the Southeast of the site, a smaller area of good agricultural land (Subgrade 3a) has been mapped. The principal limitations include soil wetness and soil droughtiness as in the Grade 2 unit.

24. The areas affected by soil droughtiness are those where moderate stone contents within the profile restrict water availability to plants. Typically, these profiles consist of fine sandy silt loam topsoils which are very slightly to moderately stony (2-20% total flints, 0-2% >2cm diameter). These pass to similar or slightly heavier upper subsoils which have a maximum stone content of 20% total flints and are sometimes gleyed. The lower subsoils are again very variable ranging from loamy coarse sand textures to heavy clay loam. These lower horizons are gleyed but become more gravelly with depth and impenetrable to the auger between 50-60cm. A Wetness Class of I or II has been assigned to these soils. As in the Grade 2 unit, water availability to crops is restricted such that there is a slight risk of drought stress to plants in most years. The risk is however, slightly greater than for land assigned to Grade 2.

25. Those profiles affected by soil wetness suffer from impeded drainage where the presence of slowly permeable clayey horizons occur at relatively shallow depths (35cm). This impeded drainage gives rise to gleyed upper subsoil horizons (within 30cm) as a result of seasonal waterlogging. The utilisation of the land is restricted by reducing the number of days when cultivations and/or grazing may occur without causing structural damage to the soil. This affect is partially offset by the light topsoil textures so that even though Wetness class IV is assigned to these soils, Wetness Grade 3a is considered appropriate.

Sharron Cauldwell
Resource Planning Team,
FRCA Reading.

SOURCES OF REFERENCE

British Geological Survey (1981) Sheet No. 269, Windsor 1:50,000 scale (Solid and Drift Edition). BGS: London.

Ministry of Agriculture, Fisheries and Food (1988) *Agricultural Land Classification of England and Wales: Revised guidelines and criteria for grading the quality of agricultural land.* MAFF: London.

Met. Office (1989) *Climatological Data for Agricultural Land Classification.* Met. Office: Bracknell.

Soil Survey of England and Wales (1983) *Sheet 6, Soils of South East England.* 1:250,000 scale. SSEW: Harpenden.

Soil Survey of England and Wales (1984) *Soils and their Use in South East England.* Bulletin 15. SSEW: Harpenden.

DESCRIPTIONS 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 (e.g. 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.

APPENDIX II

SOIL DATA

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	**OTH**	Other
DCW:	Deciduous woodland	**BOG:**	Bog or marsh	**SAS:**	Set-Aside
HTH:	Heathland	**HRT:**	Horticultural crops	**PLO:**	Ploughed

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	**ST:**	Topsoil Stoniness
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
EX:	Exposure				

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	FSST:	soft, fine grained sandstone
ZR:	soft, argillaceous, or silty rocks	CH:	chalk
MSST:	soft, medium grained sandstone	GS:	gravel with porous (soft) stones
SI:	soft weathered igneous/metamorphic rock	GH:	gravel with non-porous (hard) stones

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		
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 appropriate 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 : SLOUGH BLP SITE 20 Pit Number : 1P

Grid Reference: TQ00507800 Average Annual Rainfall : 670 mm
Accumulated Temperature : 1491 degree days
Field Capacity Level : 139 days
Land Use : Permanent Grass
Slope and Aspect : degrees

HORIZON	TEXTURE	COLOUR	STONES >2	TOT.STONE	LITH	MOTTLES	STRUCTURE	CONSIST	SUBSTRUCTURE	CALC
0- 28	FSZL	10YR33 00	0	3	HR	F				
28- 48	MCL	10YR43 00	0	2	HR		MDCAB	FR	M	
48- 78	HCL	25 Y63 00	0	2	HR	M	MDCAB	FR	M	
78- 96	C	10YR62 00	0	2	HR	M	WDVCPL	FM	P	
96-120	MCL	25 Y62 00	0	0		M	WDVCPL	FM	P	

Wetness Grade : 1 Wetness Class : II
Gleying :048 cm
SPL :078 cm

Drought Grade : 1 APW : 153mm MBW : 35 mm
APP : 128mm MBP : 15 mm

FINAL ALC GRADE : 1
MAIN LIMITATION :

SAMPLE NO.	GRID REF	USE	ASPECT	GRDNT	GLEY	SPL	--WETNESS-- CLASS	GRADE	-WHEAT- AP	MB	-POTS- AP	MB	DRT	M.REL FLOOD	EROSN EXP	FROST DIST	CHEM LIMIT	ALC	COMMENTS
1P	TQ00507800	PGR			048	078	2	1	153	35	128	15	1					1	
2	TQ00607820	PGR	S	02	020	068	2	2	147	29	121	8	2				WD	2	
3	TQ00707820	PGR			042		1	1	88	-30	91	-22	3B				DR	3A	I55 Ass roots
4	TQ00607810	PGR			0	068	2	1	154	36	132	19	1					1	
5	TQ00707810	PGR	S	01	048	070	2	1	158	40	130	17	1					1	
6	TQ00807810	PGR			048		1	1	125	7	121	8	2				DR	2	I90 Ass roots
7	TQ00507800	PGR			048	079	2	1	157	39	132	19	1					1	see pit 1
8	TQ00607800	PGR			025	035	4	3A	123	5	112	-1	2				WE	3A	Imp 95
9	TQ00707800	PGR			043	070	2	1	142	24	119	6	2				DR	2	
10	TQ00807800	PGR			040		1	1	87	-31	88	-25	3B				DR	3A	I60 Ass roots
11	TQ00607790	PGR			039	082	2	1	140	22	112	-1	2				DR	2	
12	TQ00707790	PGR			030	035	4	3A	109	-9	115	2	3A				WE	3A	IMP 78
13	TQ00607780	PGR			048	070	2	2	150	32	112	-1	2				WD	2	
14	TQ00707780	PGR			030		2	1	83	-35	83	-30	3B				DR	3A	I50 Ass roots
15	TQ00557770	PGR			050	075	2	2	132	14	110	-3	2				WD	2	

SAMPLE	DEPTH	TEXTURE	COLOUR	MOTTLES COL	MOTTLES ABUN	MOTTLES CONT	PED COL.	PED GLEY	STONES >2	STONES >6	STONES LITH	STONES TOT	STRUCT/ CONSIST	SUBS STR	SUBS POR	SUBS IMP	SUBS SPL	SUBS CALC	
1P	0-28	fszl	10YR33 00	000C00	00	F			0	0	HR	3							
	28-48	mcl	10YR43 00						0	0	HR	2	MDCAB	FR	M				
	48-78	hcl	25 Y63 00	10YR56	00	M		Y	0	0	HR	2	MDCAB	FR	M				Too porous
	78-96	c	10YR62 00	75YR56	00	M	00MN00	00 Y	0	0	HR	2	WDVCPL	FM	P	Y		Y	With fine sand
	96-120	mcl	25 Y62 00	10YR68	00	M		Y	0	0		0	WDVCPL	FM	P	Y		Y	With fine sand
2	0-20	mzcl	10YR42 00						2	0	HR	25							
	20-35	fszl	10YR53 51	10YR46	00	M		Y	0	0	HR	20		M					
	35-52	fszl	10YR63 52	75YR46	00	M		Y	0	0	HR	10		M					
	52-68	fszl	25 Y62 00	75YR34	00	M		Y	0	0	HR	5		M					
	68-90	hcl	25 Y63 00	10YR58	00	M		Y	0	0	HR	2		P		Y			Border clay
	90-120	scl	25 Y61 62	75YR46	00	M		Y	0	0	HR	2		P		Y			Dense, firm
3	0-20	fszl	10YR43 00						2	0	HR	20							
	20-42	fszl	10YR54 44						0	0	HR	20		M					
	42-55	mcl	10YR42 00	75YR58	00	C		Y	0	0	HR	15		M					Imp gravelly
4	0-35	fszl	10YR53 00	10YR56	00	C		Y	0	0		0							
	35-58	mcl	10YR52 00	75YR46	00	C		Y	0	0		0		M					
	58-68	hcl	10YR53 00	10YR58	00	M		Y	0	0	HR	2		M					
	68-90	c	10YR62 00	10YR56	00	M	00MN00	00 Y	0	0		0		P		Y			
	90-120	c	10YR63 00	75YR58	00	M	00MN00	00 Y	0	0	HR	5		P		Y			
5	0-32	fszl	10YR42 00						2	0	HR	12							
	32-48	fszl	10YR53 00						0	0	HR	2		M					
	48-70	mcl	10YR52 00	10YR58	00	C		Y	0	0	HR	2		M					
	70-90	hcl	10YR62 00	75YR58	00	C		Y	0	0	HR	2		P		Y			Firm
	90-120	c	10YR62 00	75YR58	00	M		Y	0	0	HR	2		P		Y			
6	0-30	fszl	10YR43 00						1	0	HR	20							
	30-48	fszl	10YR43 00	10YR58	00	F			0	0	HR	10		M					
	48-78	mcl	10YR53 00	10YR58	00	C		Y	0	0	HR	5		M					
	78-90	hcl	10YR53 00	10YR56	00	M	00MN00	00 Y	0	0	HR	5		P		Y			Imp gravelly
7	0-35	fszl	10YR42 00						0	0	HR	1							
	35-48	mcl	25Y 42 43						0	0	HR	2		M					
	48-79	hcl	25Y 51 52	10YR58	00	C	00MN00	00 Y	0	0	HR	2		M					Loose, friable
	79-120	c	10YR51 61	10YR58	00	M	00MN00	00 Y	0	0		0		P		Y			
8	0-25	fszl	10YR42 00						0	0	HR	2							
	25-35	hcl	25Y 52 62	10YR56	00	C		Y	0	0		0		M					
	35-70	hcl	25Y 61 62	75YR58	46	M	00MN00	00 Y	0	0		0		P		Y			Border clay
	70-87	scl	25Y 61 62	75YR46	58	M		Y	0	0		0		P		Y			Dense, firm
	87-95	msl	25Y 51 61	10YR58	00	M		Y	0	0	HR	15		M					Imp gravelly
9	0-20	fszl	10YR42 00						0	0	HR	4							
	20-43	mcl	10YR53 54						0	0	HR	5		M					
	43-70	hcl	10YR53 61	10YR56	58	C	00MN00	00 Y	0	0	HR	4		M					Loose, friable
	70-120	c	25Y 61 62	10YR56	58	C	00MN00	00 Y	0	0	HR	1		P		Y			

SAMPLE	DEPTH	TEXTURE	COLOUR	MOTTLES COL	MOTTLES ABUN	MOTTLES CONT	PED COL.	PED GLEY	STONES >2	STONES >6	STONES LITH	STONES TOT	STRUCT/ CONSIST	SUBS STR	SUBS POR	SUBS IMP	SUBS SPL	SUBS CALC	
10	0-30	fszl	10YR32 42						2	0	HR	6							
	30-40	mcl	10YR42 00						0	0	HR	8		M					
	40-60	lcs	25Y 63 00	75YR46 58	M			Y	0	0	HR	15		M					Imp gravelly
11	0-27	fszl	10YR42 00						0	0	HR	4							
	27-39	mcl	25Y 43 44						0	0	HR	3		M					
	39-82	hcl	25Y 63 00	10YR55 00	C		00MN00 00	Y	0	0	HR	2		M					Loose
	82-120	scl	25Y 63 00	10YR58 00	M		00MN00 00	Y	0	0	HR	3		P		Y			Dense, firm
12	0-30	fszl	10YR42 00						0	0	HR	4							
	30-78	c	25Y 51 61	10YR58 00	M		00MN00 00	Y	0	0		0		P		Y			Imp gravelly
13	0-30	mcl	10YR43 00						0	0	HR	10							
	30-48	mcl	10YR53 00						0	0	HR	2		M					
	48-70	mcl	10YR63 00	75YR58 00	C			Y	0	0		0		M					
	70-120	hcl	25Y 64 00	75YR58 00	M		00MN00 00	Y	0	0		0		P		Y			Firm, dense
14	0-30	fszl	10YR33 00						2	0	HR	15							
	30-38	mcl	25 Y53 00	10YR56 00	C			Y	0	0	HR	2		M					
	38-50	hcl	10YR53 00	75YR58 00	M		00MN00 00	Y	0	0	HR	5		M		Y			Imp gravelly
15	0-32	mcl	10YR42 00						0	0	HR	10							
	32-50	mcl	10YR54 00						0	0	HR	10		M					
	50-75	mcl	10YR63 00	10YR68 62	C			Y	0	0	HR	2		M					
	75-95	hcl	10YR62 00	75YR58 00	C		00MN00 00	Y	0	0	HR	2		P		Y			Firm, dense
	95-120	c	25Y 62 00	75YR58 00	C		00MN00 00	Y	0	0	HR	10		P		Y			