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Winchester District Local Plan
Land at Durley.
Agricultural Land Classification
ALC Map and Report
April 1995

AGRICULTURAL LAND CLASSIFICATION REPORT

WINCHESTER DISTRICT LOCAL PLAN.
LAND AT DURLEY.

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 Winchester District of Hampshire. The work forms part of MAFF's statutory input to the preparation of the Winchester District Local Plan.

1.2 The site comprises approximately 9 hectares of land at the village of Durley, north-east of Southampton. An Agricultural Land Classification (ALC) survey was carried out in April 1995. The survey was undertaken at a detailed level of approximately one boring per hectare of agricultural land surveyed. A total of 10 borings and two soil inspection pits were described in accordance with 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 survey 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 agricultural land on the site comprised permanent grassland and maize stubble. A tarmac road crossing the site has been marked as urban.

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	% of Agricultural Land
2	3.7	42.0	43.0
3a	4.9	55.6	57.0
Urban	0.2	2.4	100% (8.6 ha.)
Total area of site	8.8	100%	

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 on the site has been classified as Grade 2 and Subgrade 3a, good quality agricultural land. The main limitation associated with the majority of the site is droughtiness due to the sandy and gravelly nature of the subsoils. relatively high groundwater levels, caused by seepage, which together with the more clayey textured soils at the southern end of the site result in a wetness and workability restriction in this area during the wetter periods of the year, limiting the land quality to Subgrade 3a.

2. Climate

2.1 The climatic criteria are considered first when classifying land as climate can be overriding in the sense that severe climatic 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 (day °C Jan-June), 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 However, climatic factors do interact with soil factors to influence soil wetness and droughtiness limitations. The climate at this location is relatively warm and moist in a regional context, therefore the likelihood of a soil wetness limitation may be increased.

2.5 No local climatic factors such as exposure or frost risk are believed to affect the site.

Table 2 : Climatic Interpolation

Grid Reference	SU 516 161
Altitude (m)	23
Accumulated Temperature (Day °C, Jan-June)	1527
Average Annual Rainfall (mm)	826
Field Capacity (days)	172
Moisture Deficit, Wheat (mm)	108
Moisture Deficit, Potatoes (mm)	102
Overall Climatic Grade	1

3. Relief

3.1 The site is very gently sloping, lying at an altitude of approximately 20-30m AOD. Nowhere on the site do altitude or relief pose any limitation to agricultural use.

4. Geology and Soils

4.1 The published geological map (BGS, 1978) shows the majority of the site to be underlain by Bagshot Sands interbedded with pebbles across much of the site. A small area of Bracklesham Beds is mapped towards the south of the site.

4.2 The published Soil Survey map (SSEW, 1983) shows the soils on the site to comprise those of the Bursledon association. These are described as 'deep fine loamy soils with slowly permeable subsoils and slight seasonal waterlogging associated with deep coarse loamy soils variably affected by groundwater' (SSEW 1983).

4.3 Detailed field examination found the soils over the northern part of the site to comprise coarse loamy over variably stony sandy horizons with occasional interbedding of finer textured material. At the southern end of the site fine loamy subsoil horizons were found overlying sand at depth. The central part of the site comprised and intergrade between the two with deeper coarse loamy over sandy soils predominating. Relatively high groundwater levels were observed over much of the site.

5. Agricultural Land Classification

5.1 The location of the soil observation points are shown on the attached sample point map.

Grade 2

5.2 The central part of the site has been classified as Grade 2 and correlates with the deeper coarse loamy soils. These soils typically have a medium sandy silt loam topsoil over a mottled, similarly textured or slightly finer textured upper subsoil overlying sand at depth. Moisture balance calculations indicate that these soils will have a slight droughtiness limitation during the drier periods of the year. Evidence of mottling in the subsoils indicates that the soils are likely to suffer periodic waterlogging during the winter months when groundwater levels are high but, with the coarse loamy topsoil textures, workability restrictions are not limiting under the prevailing climatic conditions. The land is therefore classified as Grade 2 due to the minor droughtiness limitation.

Subgrade 3a

5.3 Two areas of subgrade 3a have been identified, with the northern area limited to this subgrade due to droughtiness, whilst the smaller area at the southern end of the site has a wetness and workability restriction. Over the northern part of the site the soils typically have a medium sandy loam topsoil over a stony medium sandy loam upper subsoil, becoming sandy with depth, Pit 2 is representative of these soils. Stone contents in the subsoil are generally in the region of 25-35% comprising medium size rounded quartzite pebbles. Moisture balance calculations indicate that these soils will be moderately droughty during the drier periods of the year limiting the land to Subgrade 3a.

5.4 The land at the southern end of the site has a wetness and workability restriction. These soils have a medium clay loam topsoil over mottled sandy clay loam or clay loam subsoil horizons with occasional sand lenses. Below 1 m depth mottled sands are encountered. A soil profile pit (Pit 1) showed the presence of a poorly structured, slowly permeable lower subsoil horizon at 45cm restricting the soils to Wetness Class III which, given the prevailing climatic conditions limits the land to Subgrade 3a. Poorly drained wet soils may inhibit plant and root development, and may be more susceptible to structural damage through trafficking by agricultural machinery or poaching by grazing livestock.

SOURCES OF REFERENCE

British Geological Survey (1978), Sheet No. 315, Southampton, 1:50,000 Series (drift edition).

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

Meteorological Office (1989), Climatological Data for Agricultural Land Classification.

Soil Survey of England and Wales (1983), Sheet 6, Soils of South East England, 1:250,000 and accompanying legend.

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, religious buildings, cemeteries. 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 apply.

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

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 : WINCH LP DURLEY Pit Number : 1P

Grid Reference: SU51501600 Average Annual Rainfall : 826 mm
Accumulated Temperature : 1527 degree days
Field Capacity Level : 172 days
Land Use : Permanent Grass
Slope and Aspect : 01 degrees S

HORIZON	TEXTURE	COLOUR	STONES >2	TOT.STONE	LITH	MOTTLES	STRUCTURE	CONSIST	SUBSTRUCTURE	CALC
0- 28	MCL	75YR33 00	5	8	HR					
28- 45	MCL	10YR43 00	0	15	HR	F	WKCSAB	FR	M	
45- 75	SCL	25Y 53 00	0	0		M	WKVCSA	FM	P	
75- 95	SCL	05YR62 61	0	0		F	WKVCSA	FM	P	
95-120	MS	25Y 72 00	0	0		F	SGRAIN		M	

Wetness Grade : 2 Wetness Class : III
Gleying :045 cm
SPL :045 cm

Drought Grade : 2 APW : 122mm MBW : 14 mm
APP : 102mm MBP : 0 mm

FINAL ALC GRADE : 3A
MAIN LIMITATION : Wetness

SOIL PIT DESCRIPTION

Site Name : WINCH LP DURLEY Pit Number : 2P

Grid Reference: SU51701640
Average Annual Rainfall : 826 mm
Accumulated Temperature : 1527 degree days
Field Capacity Level : 172 days
Land Use :
Slope and Aspect : 01 degrees S

HORIZON	TEXTURE	COLOUR	STONES >2	TOT.STONE	LITH	MOTTLES	STRUCTURE	CONSIST	SUBSTRUCTURE	CALC
0- 28	MSL	75YR33 00	6	10	HR					
28- 63	MSL	75YR43 00	0	35	HR				M	
63-120	MS	25Y 73 00	0	0		M			M	

Wetness Grade : 1
Wetness Class : I
Gleying :063 cm
SPL : No SPL

Drought Grade : 3A
APW : 98 mm MBW : -10 mm
APP : 82 mm MBP : -20 mm

FINAL ALC GRADE : 3A
MAIN LIMITATION : Droughtiness

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
1	SU51801650	STB	S	01	055	055	3	1	105	-3	94	-8	3A				DR	3A	WT AT 70
1P	SU51501600	PGR	S	01	045	045	3	2	122	14	102	0	2				WE	3A	
2	SU51701640	STB	S	01	028	075	2	1	110	2	85	-17	3A				DR	3A	WT AT 90
2P	SU51701640	STB	S	01	063		1	1	98	-10	82	-20	3A				DR	3A	
3	SU51801640	STB	S	01			1	1	102	-6	88	-14	3A				DR	3A	WT AT 80
4	SU51601630	PGR	W	01			1	1	98	-10	105	3	3A				DR	3A	I65 FLINTS
5	SU51701630	PGR	E	01	055		1	1	109	1	94	-8	3A				DR	3A	
6	SU51501620	PGR	W	01	0	030	4	3B	120	12	108	6	2				WE	3B	
7	SU51601620	PGR			050	075	2	1	122	14	93	-9	2				DR	2	
8	SU51501610	PGR			040	090	2	1	146	38	115	13	1					1	
9	SU51601610	PGR			070		1	1	119	11	107	5	2				DR	2	
10	SU51501600	PGR			040	040	3	3A	122	14	103	1	2				WE	3A	

SAMPLE	DEPTH	TEXTURE	COLOUR	MOTTLES COL	MOTTLES ABUN	MOTTLES CONT	PED COL.	GLEY	STONES >2	STONES >6	STONES LITH	STONES TOT	STRUCT/ CONSIST	SUBS STR	SUBS POR	SUBS IMP	SUBS SPL	SUBS CALC	
1	0-30	msl	10YR33 00						7	0	HR	12							
	30-55	msl	10YR44 00						0	0	HR	30		M					
	55-70	scl	25Y 63 00	10YR68 00	M			Y	0	0	HR	2		M			Y		
	70-120	ms	10YR64 68						0	0		0		M					
1P	0-28	mcl	75YR33 00						5	0	HR	8							
	28-45	mcl	10YR43 00	10YR46 00	F				0	0	HR	15	WKCSAB FR	M					
	45-75	scl	25Y 53 00	10YR68 00	M			Y	0	0		0	WKVCSA FM	P	Y		Y		
	75-95	scl	05YR62 61	10YR56 00	F				0	0		0	WKVCSA FM	P	Y		Y		
	95-120	ms	25Y 72 00	10YR66 00	F				0	0		0	SGRAIN	M					
2	0-28	msl	75YR33 00						6	0	HR	10							
	28-60	msl	10YR43 00	75YR46 00	C			Y	0	0	HR	25		M					
	60-75	ms	25Y 64 00	10YR68 00	C			Y	0	0	HR	3		M					
	75-90	scl	25Y 73 00	10YR68 00	M			Y	0	0		0		M			Y		
	90-120	ms	25Y 72 00	10YR68 00	C			Y	0	0		0		M					
2P	0-28	msl	75YR33 00						6	0	HR	10							
	28-63	msl	75YR43 00						0	0	HR	35		M					TOO STONY TO ASSES
	63-120	ms	25Y 73 00	75YR68 00	M			S	0	0		0	SGRAIN	M					
3	0-25	msl	75YR43 00						5	0	HR	7							
	25-60	mcl	10YR54 64						0	0	HR	25		M					
	60-120	ms	25Y 74 00						0	0		0		M					
4	0-28	mszl	75YR43 00						1	0	HR	2							
	28-50	mcl	10YR55 00						0	0		0		M					
	50-65	hcl	10YR55 00						0	0	HR	30		M					
5	0-30	msl	75YR43 00						4	0	HR	7							
	30-55	msl	10YR44 00						0	0	HR	5		M					
	55-70	lms	10YR54 00	75YR58 00	C			S	0	0		0		M					
	70-120	ms	10YR73 00	75YR58 00	C			Y	0	0		0		M					
6	0-30	mszl	10YR43 00	10YR54 00	C			Y	3	0	HR	6							
	30-65	scl	25Y 54 00	10YR68 00	C	25Y 62 00		Y	0	0	HR	2		M			Y		
	65-120	ms	25Y 73 00	10YR68 00	C			Y	0	0		0		M					
7	0-30	mszl	10YR33 00	10YR56 00	F				6	0	HR	10							
	30-50	mszl	10YR43 00						0	0	HR	20		M					
	50-75	lms	10YR56 00	10YR56 00	C			Y	0	0	HR	5		M					
	75-120	hcl	25Y 53 00	10YR68 00	C			Y	0	0	HR	2		P			Y		
8	0-40	mszl	75YR33 00						7	0	HR	10							
	40-55	mcl	10YR44 00	10YR56 00	C			Y	0	0	HR	5		M					
	55-90	hcl	25Y 63 00	10YR66 00	C			Y	0	0	HR	3		M					
	90-110	scl	25Y 63 00	10YR66 00	C			Y	0	0	HR	3		M			Y		
	110-120	ms	25Y 72 00					Y	0	0		0		M					

SAMPLE	DEPTH	TEXTURE	COLOUR	MOTTLES COL	MOTTLES ABUN	MOTTLES CONT	PED COL.	GLEY	STONES >2	STONES >6	STONES LITH	STONES TOT	STRUCT/ CONSIST	SUBS STR	SUBS POR	SUBS IMP	SUBS SPL	SUBS CALC
9	0-35	msl	10YR33 00						0	0	HR	5						
	35-70	msl	10YR43 00						0	0	HR	5		M				
	70-120	ms	25Y 63 00	10YR68 00	C			Y	0	0		0		M				
10	0-40	mcl	10YR33 00						10	0	HR	12						
	40-65	scl	25Y 53 00	10YR68 00	M			Y	0	0	HR	2		P			Y	
	65-85	scl	05Y 62 00	10YR68 00	F				0	0	HR	2		M			Y	
	85-120	ms	25Y 72 00	10YR66 00	F				0	0		0		M				