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**ISLE OF WIGHT UNITARY DEVELOPMENT PLAN  
OBJECTOR SITES  
Land at Upper Hyde Farm, Shanklin**

**Agricultural Land Classification  
ALC Map and Report**

**November 1998**

**Resource Planning Team  
Eastern Region  
FRCA Reading**

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# AGRICULTURAL LAND CLASSIFICATION REPORT

## ISLE OF WIGHT UNITARY DEVELOPMENT PLAN - OBJECTOR SITES LAND AT UPPER HYDE FARM, SHANKLIN

### INTRODUCTION

1. This report presents the findings of a detailed Agricultural Land Classification (ALC) survey of 27.2 ha of land to the north of Upper Hyde Lane and to the east of America and Apsecastle Woods, near Shanklin on the Isle of Wight. The survey was carried out during November 1998.
2. The survey was undertaken by the Farming and Rural Conservation Agency (FRCA)<sup>1</sup> on behalf of the Ministry of Agriculture, Fisheries and Food (MAFF), in connection with its statutory input to the Isle of Wight Unitary Development Plan. The survey covers two areas put forward as objector sites; these are outlined on the accompanying map. In order to provide a context for appraising these sites, further, adjacent land was also surveyed. 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 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 use on the site comprised arable (cereal and maize stubble, winter cereal and set-aside). The areas mapped as 'Other land' comprises woodland, farm buildings and tracks.

### 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 objector sites and all of the surveyed land are summarised in Tables 1 to 3 inclusive.

Table 1: Area of grades - Objector Site (western)

Grade/Other land	Area (hectares)	% site area
3b	2.1	100.0
Total site area	2.1	100.0

<sup>1</sup> FRCA is an executive agency of MAFF and the Welsh Office

**Table 2: Area of grades and other land - Objector Site (eastern)**

Grade/Other land	Area (hectares)	% surveyed area	% site area
2	1.6	42.1	35.6
3a	2.2	57.9	48.9
Other Land	0.7	-	15.5
Total surveyed area	3.8	100.0	84.5
Total site area	4.5	-	100.0

**Table 3: Area of grades and other land - Total of Land Surveyed at Shanklin**

Grade/Other land	Area (hectares)	% surveyed area	% site area
2	3.1	13.4	11.4
3a	7.5	32.3	27.6
3b	9.8	42.2	36.0
4	2.8	12.1	10.3
Other Land	4.0	-	14.7
Total surveyed area	23.2	100.0	85.3
Total site area	27.2	-	100.0

7. The fieldwork was conducted at an average density of 1 boring per hectare of agricultural land. In total, 21 borings and three soil pits were described.
8. The eastern section of the site has been classified as 'best and most versatile', Grade 2 (very good quality) and Subgrade 3a (good quality). The remainder of the site has been classified as Subgrade 3b (moderate quality) and Grade 4 (poor quality). All soils on the site suffer from wetness and workability problems to varying degrees, which act to restrict the flexibility of cropping, stocking and cultivations.
9. Where Grade 2 land is mapped, profiles typically comprise deep, well drained medium textured soils with a minor topsoil workability limitation. Some of this land is also subject to a minor soil droughtiness limitation, particularly where sandier variants occur. Land classified as Subgrade 3a is similar in the upper layers, but passes into clay loam and clay subsoils at moderate depths which act to impede soil drainage. Where these clay loam and clay subsoils occur at shallow depth, the drainage will be poor and the land is classified as Subgrade 3b, or Grade 4 where the topsoils are heavy in texture.
10. Parts of the areas mapped as Subgrade 3b and Grade 4 in the west of the site are restricted by a gradient limitation. Slope measurements of 7.5-9° act to limit the range of agricultural machinery that can be safely and efficiently utilised. This land has been assessed as Subgrade 3b. Steeper slopes of 11.5-14° have been downgraded to Grade 4 since the gradient limitation is more severe.

## FACTORS INFLUENCING ALC GRADE

### Climate

11. Climate affects the grading of 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 4 and were obtained from the published 5km grid datasets using the standard interpolation procedures (Met. Office, 1989).

Table 4: Climatic and altitude data

Factor	Units	Values		
Grid reference	N/A	SZ 573 821	SZ 573 817	SZ 569 818
Altitude	m, AOD	45	55	75
Accumulated Temperature	day°C (Jan-June)	1515	1504	1481
Average Annual Rainfall	mm	895	902	918
Field Capacity Days	days	185	186	188
Moisture Deficit, Wheat	mm	111	111	108
Moisture Deficit, Potatoes	mm	106	105	101
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 within this survey area means that there is no overall climatic limitation. However, climatic factors do interact with soil properties to influence soil wetness and soil droughtiness. At this locality, the field capacity day values are above average for this region. The likelihood of soil wetness problems may therefore be increased. With regard to local climatic factors, exposure risk is not believed to adversely affect the land quality on the site.
16. However, unpublished information suggests that this locality may be rather frost prone (Met. Office, 1968). At the time of survey, there was no evidence of any impediment to cold air drainage. All of the land on the site is, therefore, climatically Grade 1.

### Site

17. The site occupies undulating land, with steeper slopes occurring across the west of the site. The lowest land, which lies at 40m AOD, occurs in the north-east of the site. The land rises gently, through gradients of 1-4°, in a westerly and south-westerly direction to the track

running north-south through the centre of the site. Nowhere in the eastern third of the site does gradient impose a limitation to land quality. Across the remaining area, however, the land tends to be much more undulating. Here, altitudes vary between 83m AOD, the highest point on the site, falling to 55m AOD along the western site boundary and 50m AOD in the north-west of the site. Much of this land is steeply sloping, typically with gradients of 7.5-14°. Where slopes of 7.5-11° occur, the land can be graded no higher than Subgrade 3b. The steeper slopes of 11.5-14° have been downgraded to Grade 4. Nowhere on the site does microrelief impose a limitation to land quality. A risk of erosion is likely to be a problem where the steeper land has been mapped as Grade 4; however, gradient is likely to be the overriding limitation to land quality across this area.

### Geology and soils

18. The published geological information for this area (BGS, 1976) shows most of the site to be underlain by Sandrock Beds. The flatter, lower-lying land in the east of the site is shown as Ferruginous Sands.
19. The most recent published soils information covering the area (SSEW, 1983) shows the entire site to comprise soils of the Fyfield 4 Association. These soils are described as 'Deep well drained often stoneless coarse loamy and sandy soils. Some fine loamy soils with slowly permeable subsoils and slight seasonal waterlogging, and some slowly permeable seasonally waterlogged fine loamy over clayey soils. Risk of water erosion.' (SSEW, 1983). Detailed field survey work found soils similar to this description.

### AGRICULTURAL LAND CLASSIFICATION

20. 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 Tables 1-3, pages 1 and 2.
21. 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 2

22. Two discrete parcels of land have been classified as Grade 2 (very good quality). In the north of the site the land is subject to slight soil workability limitations; elsewhere, these limitations occur in conjunction with minor soil droughtiness limitations. In the north of the site, topsoils comprise non-calcareous medium clay loams which pass into similarly textured or heavy (silty) clay loam subsoils. In the south of the site, the profiles are slightly sandier. Here, topsoils comprise non-calcareous sandy clay loams or medium clay loams. These pass into sandy clay loam or medium sandy loam upper subsoils and loamy medium sand lower subsoils. All topsoils were found to be very slightly stony (0-1% flints >2 cm and 2-5% total flints). From Pit 1, which represents such profiles, these subsoils were assessed as permeable and moderately structured. These profiles are well drained (Wetness Class I).
23. Although well drained, the medium textured topsoils and wet prevailing climate means that this land is subject to minor soil workability limitations. Consequently, this land may be subject to slight restrictions on the flexibility of cropping, stocking and cultivations. In the

south of the site, the sandier textures reduces the amount of soil available water and makes such land slightly drought prone. Consequently, this land may also be subject to lower and less consistent crop yields.

### **Subgrade 3a**

24. Land in the east of the site has been classified as Subgrade 3a (good quality). Profiles typically comprise non-calcareous medium clay loam topsoils which pass into permeable, brownish similarly textured or heavy clay loam upper subsoils. At approximately 45-65 cm depth, these pass into slowly permeable lower subsoils, comprising clay, heavy clay loam or sandy clay loam. Soil inspection pits 2 and 3, dug in the Subgrade 3b mapping unit, have been used to determine which of these subsoils are permeable. The lower subsoils in this mapping unit are gleyed and, at this locality, these profiles have been assigned as imperfectly drained (Wetness Class III). The interaction between the medium textured topsoils, imperfect soil drainage and the wet prevailing climate results in some soil wetness and workability limitations. This land may be subject to some restrictions on the flexibility of cropping, stocking and cultivations.

### **Subgrade 3b**

25. Land in the western two-thirds of site has been classified as Subgrade 3b (moderate quality). The key limitations are soil wetness/workability and gradient. Where soil wetness is limiting, topsoils comprise non-calcareous medium clay loams. These directly overlie subsoils which are gleyed and slowly permeable. These profiles are represented by soil pits 2 and 3. At this locality, these profiles have been assessed as poorly drained (Wetness Class IV). The interaction between the medium textured topsoils, poor soil drainage and the wet prevailing climate means that this land is limited to Subgrade 3b by soil wetness. Soil wetness can adversely affect seed germination and survival and can inhibit the development of a good root system. It also influences the sensitivity of soil to structural damage and is, therefore, a major factor in determining the number of days when cultivation, trafficking or grazing can take place. Within the mapping unit some slightly better drained (Wetness Class III) profiles occur. However, they occur sporadically and in conjunction with areas of more broken relief. Consequently, they are appropriately included in this mapping unit.
26. Land limited to Subgrade 3b by gradient tends to occur adjacent to the land mapped as Grade 4. Slopes in the range of 7.5-11° may act to restrict the range of agricultural machinery which can be safely and efficiently used.

### **Grade 4**

27. Discrete areas have been classified as Grade 4 (poor quality). The key limitations are soil wetness/workability and gradient. Immediately north of Upper Hyde Farm, the former is limiting. Here, topsoils comprise non-calcareous heavy clay loams. These directly pass into clay subsoils which are gleyed, slowly permeable and poorly structured. At this locality, these profiles have been assessed as poorly drained (Wetness Class IV). The heavier topsoils

and moist local climate exacerbate workability restrictions and, consequently, Grade 4 is appropriate. Elsewhere, the land is limited to Grade 4 because of slope restrictions. Gradients of 11.5°-14° are likely to preclude the use of certain agricultural machinery and thus restrict the range of crops which could be grown.

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## SOURCES OF REFERENCE

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## APPENDIX I

### 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:**

**Sample location map**

**Soil abbreviations - explanatory note**

**Soil pit and soil boring descriptions (boring and horizon levels)**

## 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:

<b>ARA:</b>	Arable	<b>WHT:</b>	Wheat	<b>BAR:</b>	Barley
<b>CER:</b>	Cereals	<b>OAT:</b>	Oats	<b>MZE:</b>	Maize
<b>OSR:</b>	Oilseed rape	<b>BEN:</b>	Field beans	<b>BRA:</b>	Brassicae
<b>POT:</b>	Potatoes	<b>SBT:</b>	Sugar beet	<b>FCD:</b>	Fodder crops
<b>LIN:</b>	Linseed	<b>FRT:</b>	Soft and top fruit	<b>FLW:</b>	Fallow
<b>PGR:</b>	Permanent pasture	<b>LEY:</b>	Ley grass	<b>RGR:</b>	Rough grazing
<b>SCR:</b>	Scrub	<b>CFW:</b>	Coniferous woodland	<b>OTH:</b>	Other
<b>DCW:</b>	Deciduous woodland	<b>BOG:</b>	Bog or marsh	<b>SAS:</b>	Set-Aside
<b>HTH:</b>	Heathland	<b>HRT:</b>	Horticultural crops	<b>PLO:</b>	Ploughed

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

4. **GLEYSPL:** 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:

<b>MREL:</b>	Microrelief limitation	<b>FLOOD:</b>	Flood risk	<b>EROSN:</b>	Soil erosion risk
<b>EXP:</b>	Exposure limitation	<b>FROST:</b>	Frost prone	<b>DIST:</b>	Disturbed land
<b>CHEM:</b>	Chemical limitation				

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

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

### Soil Pits and Auger Borings

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

<b>S:</b>	Sand	<b>LS:</b>	Loamy Sand	<b>SL:</b>	Sandy Loam
<b>SZL:</b>	Sandy Silt Loam	<b>CL:</b>	Clay Loam	<b>ZCL:</b>	Silty Clay Loam
<b>ZL:</b>	Silt Loam	<b>SCL:</b>	Sandy Clay Loam	<b>C:</b>	Clay
<b>SC:</b>	Sandy Clay	<b>ZC:</b>	Silty Clay	<b>OL:</b>	Organic Loam
<b>P:</b>	Peat	<b>SP:</b>	Sandy Peat	<b>LP:</b>	Loamy Peat
<b>PL:</b>	Peaty Loam	<b>PS:</b>	Peaty Sand	<b>MZ:</b>	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:

<b>F:</b>	Fine (more than 66% of the sand less than 0.2mm)
<b>M:</b>	Medium (less than 66% fine sand and less than 33% coarse sand)
<b>C:</b>	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. **GLEYS:** 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:

- |  |   |
|--|---|
| <b>HR:</b> all hard rocks and stones               | <b>FSST:</b> soft, fine grained sandstone       |
| <b>ZR:</b> soft, argillaceous, or silty rocks      | <b>CH:</b> chalk                                |
| <b>MSST:</b> soft, medium grained sandstone        | <b>GS:</b> gravel with porous (soft) stones     |
| <b>SI:</b> soft weathered igneous/metamorphic rock | <b>GH:</b> 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 | <b>WK:</b> weakly developed    | <b>MD:</b> moderately developed |
|                       | <b>ST:</b> strongly developed  |                                 |
| Ped size              | <b>F:</b> fine                 | <b>M:</b> medium                |
|                       | <b>C:</b> coarse               |                                 |
| Ped shape             | <b>S:</b> single grain         | <b>M:</b> massive               |
|                       | <b>GR:</b> granular            | <b>AB:</b> angular blocky       |
|                       | <b>SAB:</b> sub-angular blocky | <b>PR:</b> prismatic            |
|                       | <b>PL:</b> platy               |                                 |

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

- |                         |                           |                           |
|-------------------------|---------------------------|---------------------------|
| <b>L:</b> loose         | <b>FM:</b> firm           | <b>EH:</b> extremely hard |
| <b>VF:</b> very friable | <b>VM:</b> very firm      |                           |
| <b>FR:</b> friable      | <b>EM:</b> extremely firm |                           |

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

SAMPLE NO.	GRID REF	ASPECT USE	--WETNESS--		-WHEAT-		-POTS-		M. REL		EROSN EXP	FROST DIST	CHEM LIMIT	ALC COMMENTS
			GRDNT	GLEYSPL	CLASS	GRADE	AP	MB	AP	MB				
1	SZ57208220	STB E	2	50 50	3	3A		0	0				WE	3A
2	SZ57308220	STB E	2	45 45	3	3A		0	0				WE	3A
3	SZ57408220	STB E	2		1	2	154	43 116	11	1			WK	2
4	SZ57208210	STB N	1	35 35	4	3B		0	0				WE	3B
5	SZ57308210	STB E	3		1	2	154	43 118	13	1			WK	2
8	SZ57108200	SAS NE	2	33 62	3	3A		0	0				WE	3A
9	SZ57208200	STB E	3	35 35	4	3B		0	0				WE	3B
10	SZ57308200	STB E	4	60 60	3	3A		0	0				WE	3A
13	SZ57108190	SAS NE	3	30 30	4	4		0	0				WE	4
14	SZ57228190	CER E	3	40 40	4	3B		0	0				WE	3B
15	SZ57308190	CER E	3	65 65	3	3A		0	0				WE	3A
16	SZ56908180	STB SW	5	55 55	3	3A		0	0				WE	3A
18	SZ57108182	STB E	4	30 30	4	4		0	0				WE	4
19	SZ57198182	CER E	3	30 30	4	3B		0	0				WE	3B
20	SZ57308180	CER E	2	33 65	3	3A		0	0				WE	3A
21	SZ56948180	STB W	5	50 50	3	3A		0	0				WE	3A
22	SZ56908170	STB W	5	30 30	4	3B		0	0				WE	3B
23	SZ57108180	STB NE	2		1	2	151	40 111	6	2			WD	2
24	SZ57208180	STB N	2	45	1	1	121	10 102	-3	2			DR	2
25	SZ57308180	STB NE	2	37	2	3A		0	0				WE	3A
26	SZ57108170	STB NE	2		1	2	143	32 111	6	2			WD	2
1P	SZ57108170	STB NE	2		1	2	151	40 113	8	2			WD	2
2P	SZ57228192	CER E	2	31 31	4	3B	153	42 112	7	2			WE	3B
3P	SZ57208210	STB E	2	28 28	4	3B	96	-15 91	-14	3A			WE	3B

Sandy loam t/s

Deep SCL soils

Sandy soils

Gr 2 wk + dr

Interbedded

3a dr to 70

SAMPLE	DEPTH	TEXTURE	COLOUR	----MOTTLES-----			PED COL.	----STONES-----			STRUCT/ CONSIST	SUBS					
				COL	ABUN	CONT		GLE	>2	>6		LITH	TOT	STR	POR	IMP	SPL
1	0-30	MCL	10YR43						1	0	HR	5					
	30-50	HCL	75YR56 54						0	0	MSST	10		M			
	50-60	C	25Y 62	75YR56	M	D		Y	0	0	HR	2		P			Y
	60-75	HCL	25Y 62	75YR56	M	D		Y	0	0	HR	2		M			Y
	75-85	MCL	75YR46						0	0	HR	2		M			
	85-120	LFS	10YR56						0	0		0		G			
2	0-35	MCL	10YR43						1	0	HR	5					
	35-45	HCL	10YR54						0	0		0		M			
	45-60	C	05Y 62	10YR68	C	D		Y	0	0		0		P			Y
	60-80	SCL	25Y 53	10YR56	C	D		Y	0	0		0		M			Y
	80-120	C	05Y 62	10YR56	C	D		Y	0	0		0		P			Y
3	0-35	MCL	10YR43						1	0	HR	5					
	35-65	HCL	10YR54						0	0		0		M			
	65-120	MCL	10YR44						0	0		0		M			
4	0-35	MCL	10YR43						1	0	HR	5					
	35-70	C	05Y 62 53	10YR56	M	D		Y	0	0	MSST	2		P			Y
5	0-35	MCL	10YR43						1	0	HR	5					
	35-50	MCL	10YR46						0	0		0		M			
	50-120	HZCL	10YR46						0	0		0		M			
8	0-33	MSL	10YR33						1	0	HR	5					
	33-62	MSL	10YR41 61	75YR46	C	D		Y	0	0		0		M			
	62-100	SCL	25Y 73	10YR68	C	D		Y	0	0		0		M			Y
	100-120	C	05Y 72	10YR68	C	D		Y	0	0		0		P			Y
9	0-35	MCL	10YR44						1	0	HR	5					
	35-60	MCL	25Y 62	10YR68	M	D		Y	0	0		0		M			Y
	60-85	C	05Y 61 63	75YR58	C	D		Y	0	0	MSST	4		P			Y
	85-105	MCL	05Y 62 63	75YR58	M	D		Y	0	0		0		M			Y
	105-120	HCL	05Y 62 63	75YR58	M	D		Y	0	0		0		M			Y
10	0-30	MCL	10YR43						0	0	HR	2					
	30-60	HCL	10YR44 54	10YR58	C	D		S	0	0		0		M			St. gleyed
	60-120	HCL	10YR53	10YR58	C	D		Y	0	0		0		M			Y
13	0-30	HCL	10YR33						3	0	HR	8					
	30-55	C	10YR52 54	10YR56	M	D		Y	0	0	HR	10		P			Y
	55-85	C	05Y 52	10YR58	M	D		Y	0	0		0		P			Y
14	0-40	MCL	10YR42						0	0	HR	3					
	40-60	HCL	25Y 53	10YR56	C	F		Y	0	0		0		M			Y
	60-120	HCL	05Y 53	10YR58	C	D		Y	0	0		0		M			Y
15	0-40	SCL	10YR43						0	0	HR	2					
	40-65	MCL	10YR44	10YR56	F	F			0	0		0		M			
	65-120	HCL	10YR53	10YR58	C	D		Y	0	0		0		M			Y

SAMPLE	DEPTH	TEXTURE	COLOUR	---MOTTLES---			PED COL.	---STONES---			STRUCT/ CONSIST	SUBS			SPL	CALC
				COL	ABUN	CONT		GLE	>2	>6		LITH	TOT	STR		
16	0-28	LMS	10YR32					0	0	0						
	28-45	LMS	10YR41					0	0	0		M				
	45-55	MSL	10YR44	10YR46	C	D		S	0	0	0	M				St. gleyed
	55-70	HCL	25Y 52	10YR66	C	D		Y	0	0	0	M			Y	
	70-100	HCL	05Y 52	10YR66	M	D		Y	0	0	0	M			Y	
100-120	HCL	05Y 62	10YR58	M	D		Y	0	0	0	M			Y		
18	0-30	HCL	10YR42					0	0	0						
	30-50	C	05Y 42	10YR58	C	D		Y	0	0	0	P			Y	
	50-90	C	05Y 42 52	10YR58	M	D		Y	0	0	0	P			Y	
	90-120	C	05Y 52	75YR58	M	D		Y	0	0	0	P			Y	
19	0-30	MCL	10YR33					0	0	HR	3					
	30-80	HCL	10YR42 53	10YR46	C	F		Y	0	0	0	M			Y	
	80-120	SCL	05Y 62	10YR58	C	D		Y	0	0	0	M			Y	
20	0-33	MCL	10YR43					0	0	HR	2					
	33-65	HCL	10YR64	10YR58	C	D		Y	0	0	0	M				Prob not spl
	65-120	HCL	25Y 63	10YR58	C	D		Y	0	0	0	M			Y	
21	0-32	MCL	10YR33					0	0	HR	2					
	32-50	MCL	10YR44					0	0	HR	2	M				
	50-75	HCL	10YR53	10YR5666	C	D		Y	0	0	0	M			Y	
	75-120	HCL	25Y 52	10YR58	M	D		Y	0	0	0	M			Y	
22	0-30	MSL	10YR33					0	0	HR	2					
	30-75	HCL	25Y 53	10YR58	M	D		Y	0	0	HR	5	M		Y	
	75-120	HCL	25Y 53 62	10YR58	M	D		Y	0	0	0	M			Y	
23	0-33	SCL	10YR43					0	0	HR	2					
	33-70	SCL	10YR44					0	0	0	0	M				
	70-120	SCL	10YR44					0	0	0	0	M				
24	0-30	MSL	10YR31					0	0	HR	2					
	30-45	MSL	10YR41					0	0	0	0	M				
	45-60	MSL	25Y 52	10YR56	C	D		Y	0	0	0	M				
	60-120	MS	25Y 62					0	0	0	0	G				
25	0-37	MCL	10YR43					0	0	HR	2					
	37-120	HCL	10YR64	10YR58	C	D		Y	0	0	0	M			Y	Prob not spl
26	0-35	SCL	10YR43					0	0	HR	2					
	35-90	MSL	10YR46					0	0	0	0	M				
	90-120	LMS	25Y 56					0	0	0	0	G				
1P	0-35	MCL	10YR43					1	0	HR	5					
	35-80	MSL	75YR44					0	0	0	0	MDCSAB	FR	M		
	80-120	LMS	75YR43					0	0	HR	2	WKCSAB	FR	G		

SAMPLE	DEPTH	TEXTURE	COLOUR	----MOTTLES-----			PED	----STONES-----			STRUCT/	SUBS					
				COL	ABUN	CONT	COL.	GLEY >2	>6	LITH	TOT	CONSIST	STR	POR	IMP	SPL	CALC
2P	0-31	MCL	10YR43						1	0	HR	5					
	31-58	HCL	25Y 53 63 75YR68	M	D			Y	0	0	HR	8	MDCAB	FR	M	Y	Y
	58-96	MCL	05Y 62 75YR5868	M	D			Y	0	0		0	MDCAB	FR	M	Y	Y
	96-120	MSL	05Y 61 05YR46	M	D			Y	0	0		0	MDCAB	FR	M	Y	
3P	0-28	MCL	10YR42 43						0	0	HR	2					
	28-70	C	05Y 52 62 10YR56	M	D			Y	0	0	HR	10	WKCSAB	FM	P	Y	Y