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**ARUN DISTRICT LOCAL PLAN REVIEW**  
**Objector Site 7:**  
**Land North of Sefter Road, Rose Green,**  
**Bognor Regis.**  
**Agricultural Land Classification**  
**ALC Map and Report**

**March 1997**

**Resource Planning Team**  
**Eastern Region**  
**FRCA Reading**

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# AGRICULTURAL LAND CLASSIFICATION REPORT

## ARUN DISTRICT LOCAL PLAN REVIEW OBJECTOR SITE 7: LAND NORTH OF SEFTER ROAD, ROSE GREEN, BOGNOR REGIS.

### INTRODUCTION

1. This report presents the findings of a detailed Agricultural Land Classification (ALC) survey of 14.5 ha of land north of Sefter Road, Rose Green, Bognor Regis. The survey was carried out during March 1997.
2. The survey was commissioned by the Ministry of Agriculture, Fisheries and Food (MAFF), from its Land Use Planning Unit in Reading, in connection with MAFF's statutory input to the Arun District Local Plan. This survey supersedes previous ALC information for this land.
3. Prior to 1 April 1997, the work was conducted by members of the Resource Planning Team in the Guildford Statutory group of ADAS. After this date, the work was completed by the same team as part of the Farming and Rural Conservation Agency (FRCA, Reading). 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 1.
4. At the time of survey the land use on the site was predominantly under permanent grassland, although no animals were grazing the site at the time of the survey. The areas mapped as 'Other', located to the west of the site, comprise an area 'not surveyed' where access to survey the land was not obtained and an area comprising a tarmac road, a warehouse and some caravans.

### 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
2	3.6	29.0	24.8
3a	6.2	50.0	42.8
3b	2.6	21.0	17.9
Agricultural land not surveyed	1.3	N/A	9.0
Other land	0.8	N/A	5.5
Total surveyed area	12.4	100	85.5
Total site area	14.5		100

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

8. Land on this site has been classified in the range Grade 2 (very good quality agricultural land) to Subgrade 3b (moderate quality agricultural land). Soils comprise deep, but variably drained silty clay loam profiles which become heavier and less permeable with depth. Land assigned to Grade 2 has minor limitations of soil wetness and/or droughtiness. Land in Subgrades 3a and 3b is affected solely by soil wetness restriction, the degree of impeded drainage determining the severity of the limitations and therefore the ALC grade.

## FACTORS INFLUENCING ALC GRADE

### Climate

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

10. 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

Factor	Units	Values	Values	Values
Grid reference	N/A	SZ 903 996	SZ 901 995	SU 899 996
Altitude	m, AOD	7	6	6
Accumulated Temperature	day°C (Jan-June)	1544	1545	1545
Average Annual Rainfall	mm	741	740	741
Field Capacity Days	days	150	150	150
Moisture Deficit, Wheat	mm	121	121	121
Moisture Deficit, Potatoes	mm	118	118	118
Overall climatic grade	N/A	1	1	1

11. 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.

12. 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.

13. The combination of rainfall and temperature at this site mean that there is no overall climatic limitation. However, climatic factors can interact with soil properties to influence soil wetness and soil droughtiness. At this locality the crop adjusted soil moisture deficits are relatively high because the climate is warm. Correspondingly, the field capacity day (FCD) values are low thus decreasing the likelihood of soil wetness.

14. Local climatic factors such as frost risk and exposure are unlikely to adversely affect land use on this site. The site is climatically Grade 1.

#### Site

15. The survey area is relatively flat, lying at 6-7m AOD. Gradient, microrelief and flooding do not affect land quality in this area.

#### Geology and soils

16. The most detailed published geological information for the area (BGS, 1975) maps the site as Brickearth drift deposits over London Clay.

17. The most detailed soils information for the area (SSEW, 1967) maps the site entirely as soil of the Park Gate Series. Most of the Park Gate Series on the site is mapped as the deep phase variety with small areas shown as shallow phase over loamy pebbly drift. Soils of the deep phase are described as 'deep, imperfectly to poorly drained, stoneless loamy soils variably affected by groundwater' (SSEW, 1967). Those of the shallow phase are described as 'shallow, imperfectly to poorly drained, stoneless loamy soils over a chalky horizon or stony layer variably affected by groundwater' (SSEW, 1967).

#### AGRICULTURAL LAND CLASSIFICATION

18. 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, page 1.

19. 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

20. Grade 2 (very good quality) agricultural land extends from the south west to the centre of the survey area. The principal restriction is a combination of minor soil wetness and soil droughtiness limitations as observed in Pit 1.

21. Typically, Grade 2 land comprises deep, very slightly stony medium silty clay loam or silt loam topsoils. These cover similarly stony and textured upper subsoils before passing into stoneless to very slightly stony heavy silty clay loam lower subsoils. Occasionally, stoneless clay is encountered at depth.

22. The pit showed evidence of wetness, in the form of gleying, caused by a slowly permeable heavy silty clay loam horizon, which impedes drainage from approximately 35cm. The structure in the lower subsoil was assessed as moderate consisting of friable, moderately developed coarse prismatic peds, and slowly permeable because the texture was composed of more than 18 % clay. This degree of wetness places these soils in Wetness Class II. This wetness class, in combination with the topsoil textures and the prevailing climate (150 FC days), restricts this land to Grade 2. This limitation (will slightly reduce) the number of days

when the soil is in a suitable condition for cultivation, trafficking by machinery or grazing by livestock.

23. *This land also experiences a minor soil droughtiness limitation. The combination of textures, depths, structures and stone contents means that there is insufficient water for crop growth at critical times of the season. Moisture balance calculations, in conjunction with the warm local climate, means that this land can be classified no higher than Grade 2. The lack of water at critical times of the growing season will impair crop growth and result in lower or less consistent yields.*

### **Subgrade 3a**

24. Most of the site has been classified as Subgrade 3a (good quality) agricultural land. It is mapped as a sinuous swath stretching from the west to the east and down to the south east on the site. The principal restriction is a slight soil wetness limitation. Although there is no specific pit information for the Subgrade 3a land, information was used from an adjacent survey (4202/061/94) where the soils were found to have very similar characteristics to Subgrade 3a land on this site.

25. Subgrade 3a land comprises very similar soil profiles to those described as Grade 2. However, wetness in the form of gleying is found within 40cm which has been caused by a slowly permeable layer generally beginning in the upper subsoil thus increases the severity of waterlogging. This degree of wetness places these soils in Wetness Class III which, with a medium textured topsoil, restricts the land to Subgrade 3a. This limitation will again reduce the number of days when the soil is in a suitable condition for cultivation, trafficking by machinery or grazing by livestock as well as adversely affecting crop growth and development.

### **Subgrade 3b**

26. The remainder of the survey area has been classified as Subgrade 3b (moderate quality agricultural land) and is mapped running parallel to the northern boundary of the site. The principal limitation of this land is a moderate wetness restriction. A previous survey (4202/060/94) to the north east of the present site was mapped as predominantly Subgrade 3b and pit information from the adjacent survey was used in the grading of this site.

27. Typically, soil profiles comprise deep, slightly stony silt loam or medium clay loam topsoils. These pass into slightly stony, medium silty clay loam or heavy silty clay loam upper subsoils. These cover stoneless to slightly stony, medium silty clay loam or heavy silty clay loam or heavy clay loam or clay lower subsoils. These soils are gleyed with a slowly permeable layer (SPL) within 40 cm. The structure of the SPL has been assessed as weakly developed coarse prismatic (Pit 2, 4202/060/94). This degree of wetness places these soils in Wetness Class IV which, with the topsoil texture, results in land that cannot be classified any higher than Subgrade 3b.

28. Subgrade 3b land imposes moderate to severe restrictions on crop growth and cultivations. Excessive soil wetness adversely affects seed germination and survival and also reduces the number of days when the soil is in suitable condition for cultivation, trafficking by machinery or grazing by livestock.

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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 descriptions**

**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:

<b>APW:</b>	available water capacity (in mm) adjusted for wheat
<b>APP:</b>	available water capacity (in mm) adjusted for potatoes
<b>MBW:</b>	moisture balance, wheat
<b>MBP:</b>	moisture balance, potatoes

SOIL PIT DESCRIPTION

Site Name : ARUN DLP SITE 7

Pit Number : 1P

Grid Reference: SU90209960 Average Annual Rainfall : 740 mm  
 Accumulated Temperature : 1545 degree days  
 Field Capacity Level : 150 days  
 Land Use : Permanent Grass  
 Slope and Aspect : degrees

HORIZON	TEXTURE	COLOUR	STONES >2	TOT.STONE	LITH	MOTTLES	STRUCTURE	CONSIST	SUBSTRUCTURE	CALC
0- 29	MZCL	10YR53 43	0	3	HR					
29- 46	MZCL	10YR53 63	0	1	HR		MDVCSB	FR	M	
46- 56	MZCL	10YR62 63	0	0		C	MDCSAB	FR	M	
56- 78	HZCL	10YR62 63	0	0		C	MDCPR	FR	M	
78-120	MZCL	10YR64 00	0	0		C	MDCSAB	FR	M	

Wetness Grade : 2                      Wetness Class : II  
 Gleying : 046 cm  
 SPL : 056 cm

Drought Grade : 2                      APW : 159mm    MBW : 38 mm  
 APP : 123mm    MBP : 5 mm

FINAL ALC GRADE : 2  
 MAIN LIMITATION : Soil Wetness/Droughtiness

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						DRT
1	SU89909970	PGR	038	060	3	3A	170	49	134	16	1			WE	3A	SPLSEE1P
1P	SU90209960	PGR	046	056	2	2	159	38	123	5	2			WD	2	AT B9
2	SU90009970	PGR	037	037	4	3B	170	49	134	16	1			WE	3B	SPLSEE1P
3	SU90109970	PGR	025	035	4	3B	170	49	134	16	1			WE	3B	SPLSEE1P
4	SU90209970	PGR	025	035	4	3B	170	49	134	16	1			WE	3B	SPLSEE1P
5	SU90309970	PGR	000	042	3	3A	126	5	109	-9	2			WE	3A	BORDER3B
6	SU89909960	PGR	025	040	3	3A	159	38	123	5	2			WE	3A	BORDER3B
8	SU90109960	PGR	000	067	3	3A	143	22	122	4	2			WE	3A	SPLSEE1P
9	SU90209960	PGR	000	074	2	2	141	20	123	5	2			WD	2	SPLSEE1P
10	SU90309960	PGR	000	095	2	3	150	29	122	4	3A			WE	3A	SPLSEE1P
13	SU90109950	PGR	052	071	2	2	162	41	147	29	1			WE	2	SPLSEE1P
14	SU90209950	PGR	000	075	2	2	141	20	123	5	2			WD	2	SPLSEE1P
15	SU90309950	PGR	000	035	4	3B	159	38	124	6	2			WD	2	SPLSEE1P
16	SU90209940	PGR	000	033	4	3B	129	8	107	-11	3A			WE	3B	SPLSEE1P
17	SU90209940	PGR	000		2	2	158	37	123	5	2			WD	2	SPLSEE1P

SAMPLE	DEPTH	TEXTURE	COLOUR	----MOTTLES-----			PED COL.	----STONES----			STRUCT/ CONSIST	SUBS			CALC	
				COL	ABUN	CONT		GLY	>2	>6		LITH	TOT	STR		POR
1	0-28	z1	10YR43 53					0	0	HR	2					
	28-38	mzc1	10YR54 53					0	0		0		M			
	38-60	mzc1	10YR63 53 75YR58 00 M				00M00 00 Y	0	0	HR	1		M			
	60-100	hzc1	25Y 63 53 75YR58 00 M				00M00 00 Y	0	0		0		M		Y	SEE1P
	100-120	hzc1	25Y 62 00 75YR58 00 M				00M00 00 Y	0	0		0		M		Y	SEE1P
1P	0-29	mzc1	10YR53 43					0	0	HR	3					
	29-46	mzc1	10YR53 63					0	0	HR	1	MDVCSB	FR	M		
	46-56	mzc1	10YR62 63 10YR56 00 C				00M00 00 Y	0	0		0	MDCSAB	FR	M		
	56-78	hzc1	10YR62 63 10YR56 00 C				00M00 00 Y	0	0		0	MDCPR	FR	M	Y	Y
	78-120	mzc1	10YR64 00 10YR56 00 C				00M00 00 Y	0	0		0	MDCSAB	FR	M	Y	
2	0-28	z1	10YR43 53 00M00 00 F					0	0	HR	2					
	28-37	mzc1	10YR54 00 10YR58 00 F					0	0	HR	2		M			
	37-90	hzc1	25Y 62 63 75YR58 00 M				00M00 00 Y	0	0		0		M		Y	SEE1P
	90-120	hc1	25Y 62 00 75YR58 00 M				00M00 00 Y	0	0		0		M		Y	SEE1P
3	0-25	z1	10YR43 53 00M00 00 F					0	0		0					
	25-35	mzc1	10YR54 00 10YR56 00 C					S	0	0	0		M			
	35-50	hzc1	10YR63 53 10YR58 00 M				00M00 00 Y	0	0		0		M		Y	SEE1P
	50-60	hzc1	10YR62 63 10YR58 00 M				00M00 00 Y	0	0		0		M		Y	SEE1P
	60-70	hzc1	10YR63 53 10YR58 00 M				00M00 00 Y	0	0		0		M		Y	SEE1P
	70-120	mzc1	10YR63 53 10YR58 00 M					Y	0	0	0		M			
4	0-25	z1	10YR43 00					0	0		0					
	25-35	mzc1	10YR53 00 10YR56 00 C					Y	0	0	0		M			
	35-60	hzc1	10YR63 53 10YR58 00 M				00M00 00 Y	0	0		0		M		Y	
	60-120	mzc1	10YR53 63 10YR58 00 M				00M00 00 Y	0	0		0		M		Y	
5	0-34	mzc1	10YR52 54 75YR46 00 C					Y	0	0	HR	2				
	34-42	mzc1	10YR72 66 10YR56 00 M					Y	0	0	HR	2		M		
	42-120	hzc1	10YR72 00 10YR56 00 M				00M00 00 Y	0	0	HR	5		M		Y	SEE1P
6	0-25	mzc1	10YR53 43 00M00 00 F					0	0	HR	2					
	25-40	mzc1	10YR53 00 10YR58 00 C				00M00 00 Y	0	0	HR	2		M			
	40-80	hzc1	10YR62 53 10YR58 00 M				00M00 00 Y	0	0		0		M		Y	SEE1P
	80-120	hc1	10YR62 53 10YR58 00 M					Y	0	0	0		M		Y	SEE1P
8	0-34	mzc1	10YR52 62 10YR46 00 C					Y	0	0	HR	2				
	34-55	mzc1	10YR62 54 10YR56 00 C				00M00 00 Y	0	0	HR	2		M			
	55-67	hzc1	10YR61 54 10YR56 00 C				00M00 00 Y	0	0	HR	2		M		Y	SEE1P
	67-120	c	10YR62 54 10YR56 00 C				00M00 00 Y	0	0	HR	2		P		Y	
9	0-33	mzc1	10YR51 53 75YR56 00 C					Y	0	0	HR	2				
	33-57	mzc1	10YR62 54 10YR56 00 C					Y	0	0	HR	2		M		
	57-74	mzc1	10YR62 64 10YR56 00 C				00M00 00 Y	0	0	HR	2		M			
	74-120	hzc1	10YR62 54 10YR56 00 M				00M00 00 Y	0	0	HR	2		M		Y	SEE1P

SAMPLE	DEPTH	TEXTURE	COLOUR	----MOTTLES-----			PED		----STONES----			STRUCT/ CONSIST	SUBS				
				COL	ABUN	CONT	COL.	GLE	>2	>6	LITH		TOT	STR	POR	IMP	SPL
10	0-26	mzc1	10YR52 54 75YR56 00 C					Y	0	0	HR	2					
	26-36	mzc1	10YR62 54 75YR56 00 C					Y	0	0	HR	2	M				
	36-65	mzc1	25Y 72 64 10YR56 00 C					00M00	00	Y	0	0	HR	2	M		
	65-95	hzc1	25Y 72 63 10YR56 00 C					00M00	00	Y	0	0	HR	2	M	Y	SEE1P
	95-120	c	25Y 73 64 10YR56 00 C					00M00	00	Y	0	0	HR	2	P	Y	FIRM
13	0-30	z1	10YR53 00 10YR56 00 F						0	0	HR	1					
	30-52	z1	10YR64 00						0	0	HR	1	M				
	52-71	mzc1	10YR72 00 10YR56 00 C					Y	0	0	HR	1	M				
	71-120	hzc1	10YR72 63 10YR58 00 M					00M00	00	Y	0	0	HR	2	M	Y	FIRM
14	0-28	mzc1	10YR53 52 10YR56 00 C					Y	0	0	HR	2					
	28-45	mzc1	10YR63 00 10YR68 00 C					Y	0	0	HR	2	M				
	45-75	mzc1	10YR72 00 10YR68 58 M					00M00	00	Y	0	0	0	M			FRIABLE
	75-120	hzc1	10YR72 64 10YR68 00 M					00M00	00	Y	0	0	0	M	Y	FIRM	
15	0-35	mzc1	10YR53 00 75YR58 00 C					Y	0	0	HR	2					
	35-85	hzc1	10YR62 00 75YR68 00 C					00M00	00	Y	0	0	HR	2	M	Y	SEE1P
	85-120	mzc1	10YR63 00 10YR58 00 C					Y	0	0	HR	2	M	Y			
16	0-33	mzc1	10YR52 54 10YR56 00 C					00M00	00	Y	0	0	HR	2			
	33-55	hzc1	10YR62 53 10YR58 00 C					00M00	00	Y	0	0	HR	2	M	Y	SEE1P
	55-120	c	10YR62 63 10YR58 00 M					00M00	00	Y	0	0	HR	2	P	Y	
17	0-30	mzc1	10YR52-54 10YR56- C					-	Y	0	0	HR	2				
	30-90	mzc1	10YR62-54 10YR56- C						Y	0	0	HR	2	M			
	90-120	mzc1	10YR53-54						N	0	0	HR	2	M			