

**A1**  
**Maidstone Borough Local Plan**  
**Objector Site 224,**  
**Land at Fisher's Farm, Staplehurst**  
**Agricultural Land Classification**  
**Report and Map**  
**November 1996**

**Resource Planning Team**  
**Guildford Statutory Group**  
**ADAS Reading**

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# AGRICULTURAL LAND CLASSIFICATION REPORT

## MAIDSTONE BOROUGH LOCAL PLAN OBJECTOR SITE 224, LAND AT FISHERS FARM, STAPLEHURST, KENT

### Introduction

1. This report presents the findings of a detailed Agricultural Land Classification (ALC) survey of approximately 18 hectares of land at Fisher's Farm, to the north east of Staplehurst, Kent. The survey was carried out during November 1996.
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 the Maidstone Borough Local Plan. The results of this survey supersede any previous ALC information for this land.
3. The work was conducted by members of the Resource Planning Team in the Guildford Statutory Group of ADAS. 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 agricultural land on this site was in grassland. The areas of the site shown as Other Land consist of ponds, woodland and farm buildings.

### 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 below.

Table 1: Area of grades and other land

Grade/Other land	Area (hectares)	% site area	% surveyed area
3a	10.4	62.7	58.1
3b	6.2	37.3	34.6
Other Land	1.3	-	7.3
Total site area	17.9	100	100

7. The fieldwork was conducted at an average density of 1 boring per hectare. A total of 19 borings and 1 soil pit were described.
8. The land at this site has been classified as Subgrades 3a (good quality) and 3b (moderate quality). The key limitation is soil wetness.
9. The soils are derived from deposits of Weald Clay and as such comprise clay loam topsoils overlying subsoils which become heavier with depth. Soil drainage is impeded to

varying extents across the site by the presence of clayey horizons. The depth to these horizons determines the severity of the wetness restriction and therefore, the ALC grade. The resultant waterlogging will restrict seed germination and growth as well as limit the timing of cultivations. Wet soils such as these are susceptible to structural damage through trafficking by agricultural machinery and grazing livestock.

## Factors Influencing ALC Grade

### Climate

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

11. 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

	Units	Values
Grid reference	N/A	TR 789 441
Altitude	m,AOD	20
Accumulated Temperature	day°C	1488
Average Annual Rainfall	mm	647
Field Capacity Days	days	135
Moisture Deficit, Wheat	mm	125
Moisture Deficit, Potatoes	mm	123

12. 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.

13. 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.

14. 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

15. The agricultural land at this site lies at an altitude of 15-30m AOD. The majority of the land at the site is very gently sloping with slight undulations. Nowhere does gradient or microrelief affect agricultural land quality.

## **Geology and soils**

16. The published geological information for the site (BGS, 1976) shows the site to be underlain completely by Weald Clay.

17. The most recently published soil information for the site (SSEW, 1983) shows the Wickham 1 association to cover the area. These soils are described as 'slowly permeable seasonally waterlogged fine silty over clayey, fine loamy over clayey and clayey soils. (SSEW, 1983). Soils consistent with this description were found to exist across the site upon detailed field examination.

## **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 III.

### *Subgrade 3a*

20. Good quality land has been mapped across the northern part of the site. The land is affected by soil wetness restrictions.

21. Soil profiles comprise mainly non-calcareous, medium silty clay loam or occasionally medium clay loam topsoils which are gleyed and stoneless. These overlie stoneless, non calcareous medium clay loam, heavy clay loam, heavy silty clay loam and clay upper subsoils. These subsoils are gleyed but are porous and moderately structured. At variable depths, clay lower subsoils occur which are gleyed and slowly permeable between 38cm and 59cm depth. As a result, soil drainage will be impeded to the extent that wetness classes III is appropriate, which when combined with local climatic conditions, gives rise to a land classification of Subgrade 3a on the basis of soil wetness. Pit 1 (see Appendix III) is typical of these soils.

### *Subgrade 3b*

22. The Subgrade 3b mapping unit which covers the southern part of the site is also limited by soil wetness/workability. Here, medium silty clay loam and occasionally heavy silty clay loam topsoils overlie mainly calcareous clay or calcareous silty clay subsoils with no stones. The soil inspection pit 1 (see Appendix III) reveals these lower subsoils to be poorly structured. This was slowly permeable at shallow depths, typically within 35cm (or less) of the surface. The heavier topsoil textures will also restrict the timing of cultivations as trafficking by agricultural machinery or grazing by livestock may lead to structural damage. Wetness Class IV, Subgrade 3b is therefore considered appropriate for this land.

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## SOURCES OF REFERENCE

British Geological Survey (1976) Sheet No. 288, Maidstone 1:63,360 scale (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*.  
SSEW: Harpenden.

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

## 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 that 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 that restricts use to permanent pasture or rough grazing, except for occasional pioneer forage crops.

## APPENDIX II

### SOIL WETNESS CLASSIFICATION

#### Definitions of Soil Wetness Classes

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.

Wetness Class	Duration of waterlogging <sup>1</sup>
I	The soil profile is not wet within 70 cm depth for more than 30 days in most years. <sup>2</sup>
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.

#### Assessment of Wetness Class

Soils have been allocated to wetness classes by the interpretation of soil profile characteristics and climatic factors using the methodology described in *Agricultural Land Classification of England and Wales: Revised guidelines and criteria for grading the quality of agricultural land* (MAFF, 1988).

<sup>1</sup> The number of days is not necessarily a continuous period.

<sup>2</sup> 'In most years' is defined as more than 10 out of 20 years.

**APPENDIX III**

**SOIL DATA**

**Contents:**

**Sample location map**

**Soil abbreviations - Explanatory Note**

**Soil Pit Descriptions**

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

**Database Printout - Horizon Level Information**



## 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>DCW:</b> Deciduous Wood		
<b>HTH:</b> Heathland	<b>BOG:</b> Bog or Marsh	<b>FLW:</b> Fallow
<b>PLO:</b> Ploughed	<b>SAS:</b> Set aside	<b>OTH:</b> Other
<b>HRT:</b> Horticultural Crops		

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.

**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.

<b>OC:</b> Overall Climate	<b>AE:</b> Aspect	<b>EX:</b> Exposure
<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>ST:</b> Topsoil Stoniness		

## 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. **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.

<b>HR:</b> all hard rocks and stones	<b>SLST:</b> soft oolitic or dolomitic limestone
<b>CH:</b> chalk	<b>FSST:</b> soft, fine grained sandstone
<b>ZR:</b> soft, argillaceous, or silty rocks	<b>GH:</b> gravel with non-porous (hard) stones
<b>MSST:</b> soft, medium grained sandstone	<b>GS:</b> gravel with porous (soft) stones
<b>SI:</b> 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:

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

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

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

10. structural condition recorded for the purpose of calculating good **M**: moderate **P**: poor

<b>SUBS</b>	<b>STR</b>	Subsoil profile droughtiness:	<b>G</b>
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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 : MAIDSTONE LP STAPLEHURST Pit Number : 1P

Grid Reference: TQ78904420 Average Annual Rainfall : 647 mm  
 Accumulated Temperature : 1488 degree days  
 Field Capacity Level : 135 days  
 Land Use : Permanent Grass  
 Slope and Aspect : degrees

HORIZON	TEXTURE	COLOUR	STONES >2	TOT.STONE	LITH	MOTTLES	STRUCTURE	CONSIST	SUBSTRUCTURE	CALC
0- 20	MZCL	10YR53 00	0	0		C				
20- 44	HCL	25Y 53 63	0	0		C	MDCSAB	FM	M	
44- 59	C	25Y 53 63	0	2	HR	M	MDCSAB	FM	M	
59- 85	C	25Y 52 53	0	0		M	STCOAB	FM	P	

Wetness Grade : 3A Wetness Class : III  
 Gleying : 0 cm  
 SPL : 059 cm

Drought Grade : APW : 000mm MBW : 0 mm  
 APP : 000mm MBP : 0 mm

FINAL ALC GRADE : 3A  
 MAIN LIMITATION : Wetness

SAMPLE NO.	GRID REF	ASPECT USE	--WETNESS--				--WHEAT--		--POTS--		M.REL		EROSN EXP	FROST DIST	CHEM LIMIT	ALC	COMMENTS
			GRDNT	GLEYS	SPL	CLASS	GRADE	AP	MB	AP	MB	DRT					
1	TQ78804440	PGR	0	055	3	3A	000	0	000	0				Y	WE	3A	DISTURBED
1P	TQ78904420	PGR	0	059	3	3A	000	0	000	0					WE	3A	BORING 7
2	TQ78904440	PGR	0	055	3	3A	000	0	000	0					WE	3A	
3	TQ78754427	PGR	028	050	3	3A	000	0	000	0					WE	3A	
4	TQ78904430	PGR	0	030	4	3B	000	0	000	0					WE	3B	
5	TQ79004430	PGR	0	045	3	3A	000	0	000	0					WE	3A	
6	TQ78804420	PGR	0	025	4	3B	000	0	000	0					WE	3B	HOLLOW
7	TQ78904420	PGR	030	055	3	3A	000	0	000	0					WE	3A	
8	TQ79004420	PGR	0	045	3	3A	000	0	000	0					WE	3A	
9	TQ78804410	PGR	0	042	3	3A	000	0	000	0					WE	3A	
10	TQ78904410	PGR	0	032	4	3B	000	0	000	0					WE	3B	
11	TQ79004410	PGR	0	048	3	3A	000	0	000	0					WE	3A	
12	TQ79104410	PGR	030	030	4	3B	000	0	000	0					WE	3B	
13	TQ78804400	PGR	0	048	3	3A	000	0	000	0					WE	3A	
14	TQ78904400	PGR	0	038	3	3A	000	0	000	0					WE	3A	BORDERLINE 3B
15	TQ79004400	PGR	0	032	4	3B	000	0	000	0					WE	3B	
16	TQ79104400	PGR	0	032	4	3B	000	0	000	0					WE	3B	
17	TQ78804390	PGR	0	035	4	3B	000	0	000	0					WE	3B	
18	TQ78904390	PGR	0	042	3	3A	000	0	000	0					WE	3A	
19	TQ79004390	PGR	0	030	4	3B	000	0	000	0					WE	3B	

SAMPLE	DEPTH	TEXTURE	COLOUR	---MOTTLES---			PED		---STONES---			STRUCT/ CONSIST	SUBS			CALC	
				COL	ABUN	CONT	COL.	GLEYS	>2	>6	LITH		TOT	STR	POR		IMP
1	0-30	mzc1	10YR41 00 75YR46 00 C					Y	0	0	0						
	30-55	mc1	25 Y63 00 75YR58 00 C				25	Y72	00	Y	0	0	0	M			
	55-80	c	25 Y63 00 75YR46 00 C				25	Y72	00	Y	0	0	0	P		Y	DISTURBED
1P	0-20	mzc1	10YR53 00 10YR56 00 C					Y	0	0	0						
	20-44	hc1	25Y 53 63 75YR58 00 C				00M	N00	00	Y	0	0	0	MDCSAB	FM	M	
	44-59	c	25Y 53 63 75YR58 00 M				00M	N00	00	Y	0	0	HR	2	MDCSAB	FM	M
	59-85	c	25Y 52 53 75YR58 00 M				00M	N00	00	Y	0	0	0	STCOAB	FM	P	Y
2	0-30	mzc1	10YR53 00 10YR56 62 C					Y	0	0	0						
	30-55	mc1	25Y 63 64 10YR58 00 C				00M	N00	00	Y	0	0	0	M			
	55-70	c	25Y 63 00 10YR58 00 C				00M	N00	00	Y	0	0	0	P	Y	Y	
3	0-28	mzc1	10YR42 53 10YR56 00 F							0	0	0					
	28-40	hc1	25 Y53 63 10YR56 58 C				00M	N00	00	Y	0	0	0	M			
	40-50	c	25 Y62 63 10YR58 00 M				00M	N00	00	Y	0	0	HR	2	M		
	50-80	c	25 Y52 62 10YR58 00 M					Y	0	0	0			P		Y	
4	0-30	mzc1	10YR42 53 10YR56 62 C					Y	0	0	0						
	30-60	c	10YR52 62 10YR58 00 M				00M	N00	00	Y	0	0	0	P	Y	Y	
5	0-30	mc1	10YR42 00 10YR58 00 C					Y	0	0	0						
	30-45	c	25 Y63 00 10YR58 00 C				25	Y73	00	Y	0	0	0	M			
	45-80	c	25 Y53 00 75YR56 00 C				00M	N00	00	Y	0	0	0	P		Y	
6	0-25	mzc1	25 Y41 00 10YR58 00 C					Y	0	0	0						
	25-60	c	25Y 52 00 10YR58 00 M				00M	N00	00	Y	0	0	0	P	Y	Y	
7	0-30	mzc1	10YR53 00 10YR56 62 C					Y	0	0	0						
	30-55	hc1	25Y 53 63 10YR56 00 M				00M	N00	00	Y	0	0	0	M			
	55-80	c	10YR53 63 10YR58 00 M				00M	N00	00	Y	0	0	0	P	Y	Y	
8	0-28	mzc1	10YR52 00 75YR56 00 C					Y	0	0	0						
	28-45	hc1	25 Y63 00 10YR58 00 C					Y	0	0	0			M			
	45-80	c	25 Y62 00 75YR68 00 C				00M	N00	00	Y	0	0	0	P		Y	
9	0-28	mzc1	10YR42 53 10YR58 00 C					Y	0	0	0						
	28-42	mc1	25Y 53 63 10YR56 00 C				00M	N00	00	Y	0	0	0	M			
	42-70	c	25Y 62 63 10YR58 00 M				00M	N00	00	Y	0	0	0	P	Y	Y	
10	0-32	mzc1	10YR52 00 75YR58 00 C					Y	0	0	0						
	32-45	c	25 Y62 00 75YR68 00 C				00M	N00	00	Y	0	0	0	P		Y	
	45-80	c	10YR71 00 75YR68 00 M					Y	0	0	0			P		Y	
11	0-29	mzc1	10YR52 00 75YR46 00 C					Y	0	0	0						
	29-48	hc1	25 Y63 00 75YR58 00 C				00M	N00	00	Y	0	0	0	M			
	48-60	c	10YR71 00 75YR68 00 M					Y	0	0	0			P		Y	
	60-80	c	10YR71 00 75YR68 00 M					Y	0	0	0			P		Y	

SAMPLE	DEPTH	TEXTURE	COLOUR	----MOTTLES-----			PED		----STONES----			STRUCT/ CONSIST	SUBS			CALC
				COL	ABUN	CONT	COL.	GLE	>2	>6	LITH		TOT	STR	POR	
12	0-30	hzc1	10YR52 00						0	0	0					
	30-70	zc	25 Y63 00	10YR58 00	M		00M00 00	Y	0	0	0		P			Y
13	0-28	mzc1	10YR52 00	10YR58 00	C			Y	0	0	0					
	28-48	hzc1	10YR53 00	10YR58 00	C		00M00 00	Y	0	0	0		M			
	48-80	c	10YR62 00	75YR58 00	M		00M00 00	Y	0	0	0		P			Y
14	0-28	mzc1	10YR52 00	10YR58 00	C			Y	0	0	0					
	28-38	hzc1	25 Y63 00	75YR58 00	C		00M00 00	Y	0	0	0		M			
	38-80	c	10YR71 00	75YR68 00	M			Y	0	0	0		P			Y
15	0-32	mzc1	10YR52 00	10YR58 00	C			Y	0	0	0					
	32-45	zc	25 Y63 00	75YR58 00	C		00M00 00	Y	0	0	0		P			Y
	45-75	c	10YR71 00	75YR68 00	M			Y	0	0	0		P			Y
16	0-32	mzc1	10YR52 00	75YR46 00	C			Y	0	0	0					
	32-55	zc	25 Y62 00	10YR58 00	C		00M00 00	Y	0	0	0		P			Y
	55-75	c	10YR71 00	75YR68 00	M		00M00 00	Y	0	0	0		P			Y
17	0-30	mzc1	10YR52 00	75YR46 00	C			Y	0	0	0					
	30-35	hzc1	10YR63 00	75YR58 00	C		10YR71 00	Y	0	0	0		M			
	35-80	c	10YR71 00	75YR68 00	M			Y	0	0	0		P			Y
18	0-30	mzc1	10YR52 00	10YR58 00	C			Y	0	0	0					
	30-42	hzc1	10YR62 00	10YR58 00	C		10YR71 00	Y	0	0	0		M			
	42-80	c	10YR71 00	75YR58 00	M			Y	0	0	0		P			Y
19	0-30	mzc1	10YR52 00	10YR58 00	C			Y	0	0	0					
	30-75	c	10YR61 00	75YR68 00	M			Y	0	0	0		P			Y