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**Aylesbury Vale District Local Plan
Land at Cheddington
Agricultural Land Classification
ALC map and Report**

October 1997

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

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AGRICULTURAL LAND CLASSIFICATION REPORT

AYLESBURY VALE DISTRICT LOCAL PLAN LAND AT CHEDDINGTON

INTRODUCTION

1. This report presents the findings of a detailed Agricultural Land Classification (ALC) survey on approximately 36 hectares of land to the north, north-west and east of Cheddington, in the Aylesbury Vale District of Buckinghamshire. The survey was carried out during October 1997.
2. The survey was undertaken by the Farming and Rural Conservation Agency (FRCA)¹, on behalf of the Ministry of Agriculture, Fisheries and Food (MAFF), in connection with the Aylesbury Vale District Local Plan. This survey supersedes any previous ALC information for this land.
3. The work was conducted by members of the Resource Planning Team in the Eastern Region of 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 approximately half of the agricultural land on this site was under permanent grassland, being grazed by sheep or cattle. The other half comprised a partially over-grown orchard. The areas shown as 'Other Land' comprise farm buildings and trackways, woodland, a pond, allotments gardens and a recreation ground.

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)	% surveyed area	% site area
3b	29.8	100.0	83.0
Other land	6.1	-	17.0
Total surveyed area	29.8	100.0	83.0
Total site area	35.9	-	100.0

¹ FRCA is an executive agency of MAFF and the Welsh Office.

7. The fieldwork was conducted at an average density of 1 boring per hectare. In total, 33 borings and two soil inspection pits were described.

8. All of the agricultural land on this site has been classified as Subgrade 3b (moderate quality). The key limitations are soil wetness and workability.

9. The soils on this site are derived from the Upper Greensand and Gault. They are relatively uniform across the site comprising heavy clay loam and clay topsoils over calcareous clay subsoils. These subsoils are generally poorly structured and therefore impede drainage through the profile causing prolonged waterlogging. Even where the poorly structured subsoils do not occur until moderate depths, the combination of heavy topsoil textures, restricted drainage and the local climatic regime acts to significantly reduce the flexibility of cropping, stocking and cultivations. This land cannot, therefore, be classified higher than Subgrade 3b.

FACTORS INFLUENCING ALC GRADE

Climate

10. Climate affects the grading of 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

Factor	Units	Values	Values	Values
Grid reference	N/A	SP 919 176	SP 925 171	SP 923 178
Altitude	m. AOD	100	100	105
Accumulated Temperature	day°C (Jan-June)	1385	1385	1379
Average Annual Rainfall	mm	679	681	681
Field Capacity Days	days	147	148	147
Moisture Deficit, Wheat	mm	104	103	103
Moisture Deficit, Potatoes	mm	94	94	93
Overall climatic grade	N/A	Grade 1	Grade 1	Grade 1

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. However, climatic factors can interact with soil properties to influence soil wetness and droughtiness.

15. Local climatic factors such as frost risk and exposure do not adversely affect agricultural land quality at this location. The site is climatically Grade 1.

Site

16. The land within this survey area is relatively flat, lying at approximately 105m AOD. However, around the boundary of the site the land slopes gently away on all sides to approximately 100m AOD.

17. Adverse gradient, micro-relief and flooding do not affect land quality in this area.

Geology and soils

18. The relevant geological sheet (BGS, 1946) maps the majority of the site as the Upper Greensand and Gault which are described as sandy micaceous marls passing to dark clays. A narrow band of glacial gravel, running north to south, is also mapped in the north of the site.

19. The most detailed published soils information for this area (SSEW, 1968) maps the Wicken soil series across the majority of the surveyed area with a small area of the Challow soil series in the east. The Wicken series is described as comprising 'olive, very stiff, finely mottled clay with occasional sandy or gravelly layers, passing to light grey, calcareous clay.' (SSEW, 1968). The Challow series are said to be similar, comprising 'olive to grey, very stiff or plastic clay with yellow mottling and occasional sandy or gravelly layers.' (SSEW, 1983).

20. Detailed field examination broadly confirmed the existence of soils similar to those described above. However, the sandy and gravelly layers were not encountered.

AGRICULTURAL LAND CLASSIFICATION

21. 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.

22. 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.

Subgrade 3b

23. All of the agricultural land on this site has been classified as Subgrade 3b (moderate quality land), due to a significant soil wetness and/or workability limitations. Most soil profiles are typified by soil inspection Pits 1 and 2 (see Appendix II). The topsoils typically comprise very slightly flinty (0-5% total stone, 1% >2cm in diameter), non-calcareous or occasionally calcareous, gleyed clays, heavy clay loams or heavy silty clay loams. These overlie calcareous clay subsoils containing 5% soft limestone and 0-5% flints. The clay subsoils are generally poorly structured and slowly permeable from shallow depths (20-30cm

from the surface), thus impeding drainage and causing significant waterlogging. In this local climatic regime these soils are therefore assigned to Wetness Class IV. Occasional profiles, where the slowly permeable clays occur at greater depths (40-75cm), have however been classified as Wetness Class II and III. Despite the variation in drainage characteristic of this site, all of this land has been assigned to Subgrade 3b as soil wetness can adversely affect seed germination and crop growth. This, in combination with the heavy topsoil textures and the local climatic regime, reduces the flexibility of land utilisation where over-trafficking by agricultural machinery or by grazing livestock can lead to structural damage.

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SOURCES OF REFERENCE

British Geological Survey (1946) *Sheet No. 238. Aylesbury*. 1:63360 Series. 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 (1968), *Sheet 238, Aylesbury*. 1:63360 scale.
SSEW: London.

Soil Survey of England and Wales (1968), *Soils of Aylesbury and Hemel Hempstead*.
SSEW: London.

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.

SOIL PROFILE DESCRIPTIONS: EXPLANATORY NOTE

Soil pit and auger boring information collected during ALC fieldwork is held on a computer database. This uses notations and abbreviations as set out below.

Boring Header Information

1. **GRID REF:** national 100 km grid square and 8 figure grid reference.
2. **USE:** Land use at the time of survey. The following abbreviations are used:

ARA: Arable	WHT: Wheat	BAR: Barley
CER: Cereals	OAT: Oats	MZE: Maize
OSR: Oilseed rape	BEN: Field beans	BRA: Brassicae
POT: Potatoes	SBT: Sugar beet	FCD: Fodder crops
LIN: Linseed	FRT: Soft and top fruit	FLW: Fallow
PGR: Permanent pasture	LEY: Ley grass	RGR: Rough grazing
SCR: Scrub	CFW: Coniferous woodland	OTH: Other
DCW: Deciduous woodland	BOG: Bog or marsh	SAS: Set-Aside
HTH: Heathland	HRT: Horticultural crops	PLO: Ploughed
3. **GRDNT:** Gradient as estimated or measured by a hand-held optical clinometer.
4. **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:

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

Soil Pits and Auger Borings

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

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

For the sand, loamy sand, sandy loam and sandy silt loam classes, the predominant size of sand fraction will be indicated by the use of the following prefixes:

F:	Fine (more than 66% of the sand less than 0.2mm)
M:	Medium (less than 66% fine sand and less than 33% coarse sand)
C:	Coarse (more than 33% of the sand larger than 0.6mm)

The clay loam and silty clay loam classes will be sub-divided according to the clay content:

M: Medium (<27% clay) **H:** Heavy (27-35% clay)

2. **MOTTLE COL:** Mottle colour using Munsell notation.
3. **MOTTLE ABUN:** Mottle abundance, expressed as a percentage of the matrix or surface described:
F: few <2% **C:** common 2-20% **M:** many 20-40% **VM:** very many 40% +
4. **MOTTLE CONT:** Mottle contrast:
F: faint - indistinct mottles, evident only on close inspection
D: distinct - mottles are readily seen
P: prominent - mottling is conspicuous and one of the outstanding features of the horizon
5. **PED. COL:** Ped face colour using Munsell notation.
6. **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:

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

Stone contents (>2cm, >6cm and total) are given in percentages (by volume).

8. **STRUCT**: the degree of development, size and shape of soil peds are described using the following notation:

Degree of development	WK : weakly developed	MD : moderately developed
	ST : strongly developed	
Ped size	F : fine	M : medium
	C : coarse	
Ped shape	S : single grain	M : massive
	GR : granular	AB : angular blocky
	SAB : sub-angular blocky	PR : prismatic
	PL : platy	

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

L : loose	VF : very friable	FR : friable	FM : firm	VM : very firm
EM : extremely firm		EH : extremely hard		

10. **SUBS STR**: Subsoil structural condition recorded for the purpose of calculating profile droughtiness: **G**: good **M**: moderate **P**: poor
11. **POR**: Soil porosity. If a soil horizon has less than 0.5% biopores >0.5 mm, a 'Y' will appear in this column.
12. **IMP**: If the profile is impenetrable to rooting a 'Y' will appear in this column at the appropriate horizon.
13. **SPL**: Slowly permeable layer. If the soil horizon is slowly permeable a 'Y' will appear in this column.
14. **CALC**: If the soil horizon is calcareous, a 'Y' will appear in this column.
15. Other notations:

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

SAMPLE		ASPECT			--WETNESS--				-WHEAT-		-POTS-		M.REL		EROSN	FROST	CHEM	ALC	COMMENTS
NO.	GRID REF	USE	GRDNT	GLEYS	SPL	CLASS	GRADE	AP	MB	AP	MB	DRT	FLOOD	EXP	DIST	LIMIT			
1P	SP ORC	SW	1	26	26	4	3B	93	-11	98	4	3A					WE	38	
2P	SP PGR	NE	3	22	22	4	3B	87	-17	99	5	3A					WE	38	

SAMPLE NO.	GRID REF	ASPECT USE	--WETNESS--		-WHEAT-		-POTS-		M. REL		EROSN	FROST	CHEM	ALC	COMMENTS
			GRDNT	GLEY	SPL	CLASS	GRADE	AP	MB	AP	MB	DRT	FLOOD	EXP	
1	SP92001800	ORC		65	65	2	3A	128	24	109	15	2			WK 3A
2	SP92101800	ORC W	3	30	30	4	3B		0		0				WE 3B
3	SP92001790	ORC W	1	22	22	4	3B		0		0				WE 3B
4	SP92101790	ORC SW	1	28	28	4	3B		0		0				WE 3B
5	SP92301790	ORC E	3	20		2	3B		0		0				WK 3B
6	SP92401792	ORC SE	1	75	75	2	3B		0		0				WK 3B
7	SP91901780	ORC		28	28	4	3B		0		0				WE 3B
8	SP92001780	ORC S	1	22	22	4	3B		0		0				WE 3B
9	SP92101780	ORC SW	1	30	30	4	3B		0		0				WE 3B
10	SP92201780	ORC		22	22	4	3B		0		0				WE 3B
11	SP92301780	ORC		25	25	4	3B		0		0				WE 3B
12	SP92401780	ORC		25	25	4	3B		0		0				WE 3B
13	SP91801770	PGR		30	30	4	3B		0		0				WE 3B
14	SP92201770	ORC		20	20	4	3B		0		0				WE 3B
15	SP92301770	RGR		28	28	4	3B		0		0				WE 3B
16	SP92301799	ORC S	2	35	35	4	3B		0		0				WE 3B
17	SP91701760	PGR NE	3	28	28	4	3B		0		0				WE 3B
18	SP91801760	PGR		30	30	4	3B		0		0				WE 3B
19	SP91901760	PGR		30	30	4	3B		0		0				WE 3B
20	SP91951770	ORC		30	30	4	3B		0		0				WE 3B QWC3 3B
21	SP91701750	PGR NE	3	25	25	4	3B		0		0				WE 3B
22	SP91801750	PGR NE	1	28	28	4	3B		0		0				WE 3B
23	SP91901750	PGR N	3	28	28	4	3B		0		0				WE 3B
24	SP92401750	PGR		25	25	4	3B		0		0				WE 3B
25	SP91801740	PGR		20	20	4	3B		0		0				WE 3B
26	SP91901740	PGR NE	3	25	25	4	3B		0		0				WE 3B
27	SP92501740	PGR		25	25	4	3B		0		0				WE 3B
28	SP91801730	PGR		39	39	4	3B		0		0				WE 3B
29	SP92401730	PGR		28	28	4	3B		0		0				WE 3B
30	SP92501730	PGR		25	50	3	3A		0		0				WE 3A
31	SP92401720	PGR		0	30	4	3B		0		0				WE 3B
32	SP92501720	PGR		28	28	4	3B		0		0				WE 3B
33	SP92501710	PGR		28	28	4	3B		0		0				WE 3B

SAMPLE	DEPTH	TEXTURE	COLOUR	----MOTTLES-----			PED		----STONES----			STRUCT/	SUBS							
				COL	ABUN	CONT	COL.	GLEY	>2	>6	LITH		TOT	CONSIST	STR	POR	IMP	SPL	CALC	
1P	0-26	C	25Y 31						1	0	HR	5								Y
	26-50	C	05Y 52	10YR5666	C	D	05Y 62	Y	0	0	HR	2	STVCPR	VM	P	Y			Y	Y
	50-80	C	05Y 71	10YR5666	C	D	05Y 62	Y	0	0	SLST	5	STCPR	VM	P	Y			Y	Y
2P	0-22	C	25Y 31						1	0	HR	2								Y
	22-50	C	05Y 41	10YR66	C	F	25Y 41	Y	0	0		0	STVCAB	VM	P	Y			Y	Y
	50-70	C	05Y 62	10YR66	C	D	05Y 52	Y	0	0		0	STVCAB	VM	P	Y			Y	Y

SAMPLE	DEPTH	TEXTURE	COLOUR	----MOTTLES-----			PED COL.	----STONES----			STRUCT/ CONSIST	SUBS			CALC	
				COL	ABUN	CONT		GLE	>2	>6		LITH	TOT	STR		POR
1	0-28	C	25Y 31						0	0	HR	5				Y
	28-65	C	05Y 42						0	0	HR	5	P		Y	Y
	65-120	C	05Y 62	10YR68	C	D		Y	0	0	SLST	5	P		Y	Y
2	0-30	C	25Y 31						0	0	HR	10				
	30-50	C	05Y 62	10YR56	C	D		Y	0	0	HR	5	P		Y	Y
	50-70	C	25Y 62	10YR68	C	D		Y	0	0	HR	10	P		Y	Y
3	0-22	C	25Y 41						0	0	HR	2				Y
	22-30	C	05Y 62	10YR58	C	D		Y	0	0		0	P		Y	Y
	30-80	C	05Y 61	10YR68	C	D		Y	0	0	SLST	5	P		Y	Y
4	0-28	C	25Y 31						0	0	HR	2				
	28-55	C	05Y 52	10YR56	C	F		Y	0	0		0	P		Y	
	55-90	C	05Y 61	10YR68	M	D		Y	0	0	SLST	5	P		Y	Y
5	0-20	C	25Y 31						0	0	HR	5				
	20-40	C	25Y 41	10YR66	C	F		Y	0	0		0	P			
	40-120	HZCL	05Y 72	10YR66	C	F		Y	0	0	SLST	20	M		Y	Y
6	0-25	C	25Y 42						0	0	HR	2				
	25-75	C	05Y 41						0	0	SLST	2	M		Y	
	75-120	C	05Y 6171	10YR58	C	D		Y	0	0	SLST	5	P		Y	Y
7	0-28	C	25Y 41						0	0	HR	2				
	28-50	C	25Y 51	10YR56	C	F		Y	0	0		0	P		Y	
	50-65	C	05Y 52	10YR56	C	D		Y	0	0		0	P		Y	Y
	65-90	C	05Y 6171	10YR58	C	D		Y	0	0	SLST	5	P		Y	Y
8	0-22	C	25Y 3141						0	0	HR	2				Y
	22-35	C	25Y 62	10YR56	C	F		Y	0	0		0	P		Y	Y
	35-120	C	05Y 62	10YR68	C	D		Y	0	0	SLST	5	P		Y	Y
9	0-30	C	25Y 31						0	0	HR	2				
	30-55	C	05Y 51	10YR56	M	F		Y	0	0		0	P		Y	
	55-120	C	05Y 61	10YR68	C	D		Y	0	0	SLST	5	P		Y	Y
10	0-22	C	25Y 31						0	0	HR	5				
	22-45	C	05Y 4252	10YR66	C	F		Y	0	0	HR	2	P		Y	
	45-70	C	05Y 62	10YR56	C	D		Y	0	0	SLST	5	P		Y	Y
11	0-25	C	25Y 31						0	0	HR	5				Y
	25-80	C	25Y 41	10YR66	C	F		Y	0	0	SLST	5	P		Y	Y
	80-120	C	05Y 62	10YR56	C	F		Y	0	0	SLST	5	P		Y	Y
12	0-25	HZCL	25Y 31						0	0		0				
	25-55	ZC	25Y 42	10YR56	C	F		Y	0	0		0	P		Y	Y
	55-70	ZC	25Y 62	10YR56	C	D		Y	0	0		0	P		Y	Y
	70-90	ZC	05Y 72	25Y 56	C	F		Y	0	0		0	P		Y	Y

Q CFOM LIKE 2P

IMP FLINTS

NOT DEEP ENOUGH
V. CRUMBLY

Q CFOM LIKE 2P

SAMPLE	DEPTH	TEXTURE	COLOUR	----MOTTLES----			PED		----STONES----			STRUCT/ CONSIST	SUBS			CALC
				COL	ABUN	CONT	COL.	GLE	>2	>6	LITH		TOT	STR	POR	
13	0-20	HCL	25Y 32						0	0	0					Y
	20-30	C	25Y 42						0	0	0		P			Y
	30-58	C	25Y 42	10YR56	C	D		Y	0	0	0		P		Y	Y
	58-70	C	25Y 62	10YR56	C	D		Y	0	0	0		P		Y	Y
14	0-20	C	25Y 31						0	0	HR	5				
	20-66	C	05Y 62	10YR56	C	F		Y	0	0	0		P		Y	
	66-120	ZC	05Y 71	10YR56	C	D		Y	0	0	SLST	5	P		Y	Y
15	0-28	HZCL	25Y 31						0	0	0					Y
	28-80	C	05Y 62	25Y 56	C	F		Y	0	0	0		P		Y	Y
16	0-35	C	05Y 3132						0	0	HR	2				Y
	35-65	C	05Y 51	10YR66	C	F		Y	0	0	SLST	5	P		Y	Y
	65-90	C	05Y 62	10YR68	C	D		Y	0	0	SLST	5	P		Y	Y
17	0-28	C	25Y 41						0	0	HR	2				
	28-48	C	25Y 62	10YR66	C	F		Y	0	0	HR	2	P		Y	
	48-80	C	05Y 71	10YR66	C	D	00MN00	Y	0	0	SLST	10	P		Y	Y
18	0-30	C	10YR42						0	0	0					
	30-55	C	25Y 53	10YR56	C	D		Y	0	0	0		P		Y	
	55-70	C	05Y 63	10YR68	C	D		Y	0	0	0		P		Y	
19	0-30	C	10YR42	10YR56	F				0	0	0					Y
	30-60	C	25Y 42	10YR56	C	D		Y	0	0	0		P		Y	Y
	60-75	C	25Y 62	10YR68	C	D		Y	0	0	0		P		Y	Y
20	0-30	C	25Y 3141						0	0	0					
	30-50	C	25Y 52	10YR56	C	F		Y	0	0	0		P		Y	
	50-65	C	05Y 72	10YR6676	C	D		Y	0	0	0		P		Y	Y
	65-120	C	05Y 61	10YR66	M	D		Y	0	0	0		P		Y	Y
21	0-25	C	25Y 31						0	0	HR	2				
	25-48	C	25Y 41	10YR66	C	F		Y	0	0	0		P		Y	
	48-68	C	05Y 62	10YR66	C	D	00MN00	Y	0	0	0		P		Y	Y
	68-90	C	05Y 71	10YR66	C	D	00MN00	Y	0	0	SLST	5	P		Y	Y
22	0-28	C	25Y 41						0	0	HR	2				
	28-48	C	25Y 62	10YR66	C	F		Y	0	0	HR	2	P		Y	Y
	48-80	C	05Y 71	10YR66	C	D	00MN00	Y	0	0	SLST	10	P		Y	Y
23	0-28	C	25Y 41						0	0	HR	5				Y
	28-70	C	05Y 41	10YR66	C	F		Y	0	0	SLST	1	P		Y	Y
24	0-25	HZCL	25Y 3242						0	0	HR	2				
	25-70	C	05Y 53	10YR58	C	D		Y	0	0	0		P		Y	Y
	70-90	C	05Y 61	10YR68	C	D		Y	0	0	SLST	5	P		Y	Y

Q CFOM LIKE 2P

SAMPLE	DEPTH	TEXTURE	COLOUR	----MOTTLES-----			PED	----STONES----			STRUCT/	SUBS						
				COL	ABUN	CONT	COL.	GLEY	>2	>6	LITH	TOT	CONSIST	STR	POR	IMP	SPL	CALC
25	0-20	HCL	10YR32						0	0	0							
	20-35	C	25Y 42	10YR56	C	F		Y	0	0	0		P			Y	Y	
	35-70	C	25Y 52	10YR66	C	D		Y	0	0	0		P			Y	Y	
26	0-25	C	10YR41						0	0	SLST 2						Y	
	25-70	C	05Y 62	10YR66	C	F		Y	0	0	SLST 2		P			Y	Y	
27	0-25	HZCL	25Y 31						0	0	HR 2							
	25-80	C	05Y 5352	10YR58	C	D		Y	0	0	HR 2		P			Y		
28	0-20	HCL	25Y 32						0	0	CH 1						Y	
	20-39	C	25Y 42	10YR56		F			0	0	CH 1		M				Y	
	39-70	C	25Y 52	10YR56	C			Y	0	0	CH 1		P			Y	Y	
29	0-28	C	25Y 42	10YR56		F			0	0	0						Y	
	28-55	C	25Y 53	10YR68	C			Y	0	0	0		P			Y	Y	
	55-80	C	25Y 62	10YR56	C			Y	0	0	0		P			Y	Y	
30	0-25	HZCL	25Y 31						0	0	HR 2						Y	
	25-50	HZCL	05Y 61	10YR58	C	D		Y	0	0	SLST 15		M				Y	
	50-65	C	05Y 53	10YR68	C	D		Y	0	0	0		P			Y	Y	
	65-120	C	05Y 61	10YR68	C	D		Y	0	0	SLST 5		P			Y	Y	
31	0-30	C	10YR42	10YR46	C	D		Y	0	0	HR 1						Y	
	30-60	C	25Y 52	10YR56	C	D		Y	0	0	0		P			Y	Y	
	60-80	C	25Y 5253	10YR58	C	D		Y	0	0	0		P			Y	Y	
32	0-28	C	25Y 41						0	0	HR 2							
	28-50	C	05Y 52	10YR66	C	F		Y	0	0	HR 10		P			Y	Y	
	50-80	C	05Y 71	10YR66	C	D		Y	0	0	SLST 10		P			Y	Y	
33	0-28	HZCL	25Y 41						0	0	HR 2							
	28-80	C	05Y 52	10YR66	C	F	00M00	Y	0	0	0		P			Y		

CRUMBLY