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**WYCOMBE DISTRICT LOCAL PLAN  
Loudwater and Wooburn Moor  
Park and Ride  
High Wycombe, Buckinghamshire**

**Agricultural Land Classification  
ALC Map and Report**

**April 1999**

**Resource Planning Team  
Eastern Region  
FRCA Reading**

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**AGRICULTURAL LAND CLASSIFICATION REPORT**  
**WYCOMBE DISTRICT LOCAL PLAN**  
**LOUDWATER AND WOORBURN MOOR PARK AND RIDE**  
**HIGH WYCOMBE, BUCKINGHAMSHIRE**

**INTRODUCTION**

1. This report presents the findings of a detailed Agricultural Land Classification (ALC) survey of 26 hectares of land at Loudwater and Wooburn Moor, south-east of High Wycombe, Buckinghamshire. The survey was carried out during April 1999.
2. The survey was undertaken by the Farming and Rural Conservation Agency (FRCA) on behalf of the Ministry of Agriculture, Fisheries and Food (MAFF), in connection with the Wycombe 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 the 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 was permanent grass and orchard. The areas of the site shown as 'Other Land' consist of woodland and scrub, residential dwellings and farmsteads.

**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 overleaf.
7. The fieldwork was conducted at an average density of 1 boring per hectare of agricultural land. A total of 16 borings and 3 soil pits were described.
8. The majority of agricultural land has been classified as Subgrade 3b (moderate quality), with Subgrade 3a (good quality), and a very small area of Grade 4 (poor quality) making up the remainder. The land is predominantly limited by gradient with soil droughtiness and/or topsoil stoniness being equally or more restricting in places.

**Table 1: Area of grades and other land**

Grade/Other land	Area (hectares)	% surveyed area	% site area
3a	4.8	20.7	18.5
3b	17.6	75.9	67.7
4	0.8	3.4	3.1
Other Land	2.8	-	10.7
Total surveyed area	23.2	100	89.3
Total site area	26.0	-	100

9. Most of the survey area is restricted by a gradient limitation. Slopes are generally in the range of 8-10° which results in a classification of Subgrade 3b, due to the restrictions these place on the safe and efficient use of farm machinery. A small area of Grade 4 agricultural land (poor quality) has been mapped in the north-west of the site where the land is very steep (11.5 - 16°) and therefore unsuited to arable cultivation.
10. Where gradients are not limiting, parts of the site are limited by soil droughtiness. Profiles are of three main types. The first (and most common) consist of well drained, fine silty soils, which lie over chalk deposits at shallow depths and suffer from a slight to moderate soil droughtiness restriction. The second group of soils are deeper, and consist of fine loamy or clayey soils which lie over chalky drift. Land comprising both of these soil types has been assessed as Subgrade 3a. The third soil type occurs on the higher land in the north-east of the site and comprises shallow gravelly soils which will have significantly restricted reserves of soil water. Subgrade 3b is appropriate for this land.
11. In addition to the limitations described above, parts of the site may also be limited by topsoil stoniness. In these circumstances, the volume of topsoil stones in excess of 2cm diameter was found to range between 11% and 15% and, as a result, Subgrade 3a is appropriate. The presence of large stones in the topsoil has the effect of increasing production costs caused by extra wear and tear to equipment and reducing crop quality and establishment.

## **FACTORS INFLUENCING ALC GRADE**

### **Climate**

12. Climate affects the grading of land through the assessment of an overall climatic limitation and also through interactions with soil characteristics.
13. A detailed assessment of the prevailing climate was made by interpolation from the published 5km grid point datasets (Met. Office, 1989). Due to the range in altitude on this site, (i.e. 52m-102m) interpolations were performed at 5m altitude increments (a total of 16 interpolations) to assess the degree of climatic variation across the site. Four interpolations are given in Table 2 overleaf representing the climatic and altitude range at the site.

14. 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.

**Table 2: Climatic and altitude data**

Factor	Units	Values			
		SU 909 903	SU 910 902	SU 911 904	SU 912 906
Grid reference	N/A	SU 909 903	SU 910 902	SU 911 904	SU 912 906
Altitude	m, AOD	55	75	88	102
Accumulated Temperature	day°C (Jan-June)	1449	1426	1411	1395
Average Annual Rainfall	mm	683	690	696	702
Field Capacity Days	days	146	147	148	149
Moisture Deficit, Wheat	mm	103	100	99	97
Moisture Deficit, Potatoes	mm	94	91	89	87
Overall climatic grade	N/A	Grade 1	Grade 1	Grade 1	Grade 1

15. 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.
16. 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 effect on the site. The site is climatically Grade 1.

#### Site

17. The altitude of the land varies considerably with the majority of the land falling from the north and east towards the south and west to the River Wye Valley. The highest land lies at about 100m AOD and occurs in the north-east of the site. The lowest land lies at approximately 55m AOD and occurs in the south-west of the site at the bottom of a marked dry valley feature which runs in a north-south direction from the railway line to the London Road. Land quality is limited to Subgrade 3b and occasionally Grade 4 by steep gradients in the range 7.5-16° across much of the site. On the ridge tops and the lower valley slopes the land is more gently sloping with gradients measuring between 2-6°. Nowhere does microrelief or flood risk affect agricultural land quality.

#### Geology and soils

18. The most detailed published geological information (Geological Survey of England and Wales, 1948) shows higher land in the north-east corner of the site (towards White House Farm) to be underlain by Glacial Gravel (with Bunter Pebbles) over Upper Chalk. The remainder of the site (i.e. the majority) is shown to lie directly over Upper Chalk.
19. The most detailed published soils information for this area (SSEW, 1983) shows two soil types to occur across the site which correspond with the geological deposits. The

Marlow Association is mapped in the north-east of the site on the higher ground. This is described as 'Well drained fine loamy over clayey and clayey soils. Some coarse and fine loamy over clayey soils with slowly permeable layers and slight seasonal waterlogging' (SSEW, 1984). The remainder of the site is mapped as Andover I Association which is described as 'Shallow well drained soils over chalk on slopes and crests. Deeper calcareous and non-calcareous soils in valley bottoms'. (SSEW, 1984).

20. Upon detailed field examination, soils were found to be similar to the above descriptions.

## AGRICULTURAL LAND CLASSIFICATION

21. The details of the classification of the site are shown on the attached ALC map and the area statistics for each grade are given in Table 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 3a

23. Subgrade 3a land (good quality) has been mapped on the lower slopes of the site in two isolated units which run along the south-east, and south-west, edges of the survey area. This land is limited mainly by soil droughtiness restrictions with topsoil stoniness being equally, or more restricting in places. Gradient are less than 7°, typically 3-6°.
24. Soil profiles within this unit most commonly comprise calcareous, medium silty clay loam topsoils which are slightly to moderately stony (containing up to 20% total flint, and/or up to 10% total chalk fragments). These sometimes lie over shallow upper subsoils which are similar in nature to the topsoils (but usually contain higher percentages of chalk fragments). At depths between 28cm and 40cm, chalk bedrock is encountered. The profiles are well drained (Wetness Class I). Soil Pit 2 (see Appendix II) is considered representative of this soil type. Where chalk occurs at shallow depths, there is a significant decrease in the amount of water available for crops due to the comparatively low available water capacity (AWC) of the chalk bedrock and restrictions to rooting. Pit evidence indicates rooting was confined to the uppermost 38cm of the chalk, and this value was used in moisture balance calculations. Moisture balance calculations were adjusted for altitude at each individual auger boring. Soil droughtiness reduces the flexibility of the land by affecting the level and consistency of yields, particularly in the drier years, to such an extent that Subgrade 3a is appropriate.
25. In addition to soil droughtiness, topsoil stoniness is equally or more restricting in places. Soil inspection Pit 1 (see Appendix II) is considered representative of this soil type. The pit observation indicates that the topsoil comprises calcareous, moderately stony, heavy clay loam (which contain 18% total flints, of which 12% >2cm and 4% >6cm diameter). This rests over relatively deep, calcareous, fine loamy and clayey drift deposits which are moderately drained. At depth, chalky drift is encountered. On the whole, it is the presence of large stones in the topsoil which limits this land to Subgrade

3a. Topsoil stoniness has the effect of increasing production costs caused by extra wear and tear to equipment and reducing crop quality and establishment.

### **Subgrade 3b**

26. Over 75% of the surveyed area has been mapped as Subgrade 3b (moderate quality). The main limitations within this mapping unit are gradient and soil droughtiness.
27. Land limited to Subgrade 3b on the basis of gradient occurs extensively in the centre and the north-west of the site, with a very small section occurring in the far east of the survey area. Here, slopes measurements are generally in the range of 8-10°. Excessive gradients (such as these) will affect the safe and effective use of farm machinery.
28. The higher land in the north-east corner of the survey area is limited to Subgrade 3b on the basis of soil droughtiness. Here, all of the soil profiles were impenetrable (to the soil auger) at shallow depths due to high volumes of flints in the upper part of the soil profile. Soil inspection Pit 3 (see Appendix II) is considered to be representative of this soil type. The pit observation indicates that the topsoil comprises medium sandy loam which is moderately stony (containing 20% total flint, with 12% > 2cm, 2% > 6cm diameter). This rests over a similar, but more stony, upper subsoil which contains 69% total flint (assessed by a wet sieving method). At a moderate depth (43cm) gravel (>70% flint) is encountered. These soils are assessed as Wetness Class I due to their coarse textured and freely draining nature. Due to the combination of soil characteristics and the local climate regime, these soils have restricted amounts of water in the profile, such that the land suffers a moderate to severe droughtiness limitation and crop growth and yield will be adversely affected.

### **Grade 4**

29. A small area of Grade 4 agricultural land (poor quality) has been mapped in the north-west of the site where the land is very steep (11.5 - 16°) and unsuited for arable cultivation, due to restrictions on mechanised operations.

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## SOURCES OF REFERENCE

Geological Survey of England and Wales(1948) *Sheet No. 255, Beaconsfield, Drift Edition, 1:63,360 scale*. BGS: London.

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Met. Office (1989) *Climatological Data for Agricultural Land Classification*.  
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Soil Survey of England and Wales (1983) *Soils of England and Wales, Sheet 6, Soils of South East England. 1:250,000 scale, and accompanying legend*.  
SSEW: Harpenden.

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

## 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>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.

<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>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 dolimitic 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:

degree of development    **WK:** weakly developed    **MD:** moderately developed  
   **ST:** strongly developed

ped size                            **F:** fine                                    **M:** medium  
   **C:** coarse                                **VC:** very 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 NO.	GRID REF	ASPECT USE	GRDNT	--WETNESS--		-WHEAT-		-POTS-		M. REL		EROSN EXP	FROST DIST	CHEM LIMIT	ALC	COMMENTS
				SPL	CLASS	GRADE	AP	MB	AP	MB	DRT					
1	SU90709070	PGR S	6		1	1	91	-8	95	6	3A			DR	3A	I35 CH SEE 2P
2	SU91209060	PGR			1	1	82	-21	87	-7	3B		Y	DR	3B	Q DISTURBED
3	SU91309060	RGR			1	1	49	-54	51	-43	4			DR	3B	I30 SEE 3P
4	SU90909050	PGR W	2		1	1	87	-15	90	-4	3A			DR	3A	CH 35 SEE 2P
5	SU91209050	PGR S	3		1	1	47	-56	49	-45	4			DR	3B	I30 SEE 3P
6	SU91309050	PGR			1	1	46	-57	48	-46	4			DR	3B	I30 SEE 3P
7	SU90879040	PGR W	2		1	1	97	-6	98	4	3A			DR	3A	CH 40 SEE 2P
8	SU91109040	LEY SW	5		1	1	34	-69	35	-59	4			DR	3B	I20 SEE 3P
9	SU91209040	PGR SW	4		1	1	46	-57	47	-47	4			DR	3B	I30 SEE 3P
10	SU90889030	PGR W	3		1	1	78	-25	83	-11	3B			DR	3B	CH 28 SEE 2P
11	SU91029030	LEY SW	5		1	1	43	-60	43	-51	4			DR	3B	I23 SEE 3P
12	SU91109030	FRT SW	5		1	2	46	-54	46	-44	4			DR	3B	I30 SEE 3P
13	SU91189028	FRT SW	4		1	2	82	-17	88	-1	3A			ST	3A	SEE 1P
14	SU91009020	FRT SW	6		1	1	90	-13	90	-4	3A			DR	3A	CH 40 SEE 2P
15	SU91109020	FRT SW	5		1	1	75	-25	81	-10	3B			DR	3A	CH 30 SEE 2P
16	SU91209020	FRT SW	4		1	1	80	-20	86	-5	3A			DR	3A	BORDERLINE 3B
1P	SU91189028	FRT SW	3	20	2	2	115	16	89	0	2			ST	3A	
2P	SU91109020	FRT SW	5		1	1	82	-18	82	-9	3A			DR	3A	
3P	SU91209050	PGR SE	3		1	1	57	-41	54	-37	3B			DR	3B	3A/3B T/S ST

SAMPLE	DEPTH	TEXTURE	COLOUR	-----MOTTLES-----		PED COL.	-----STONES-----			STRUCT/ CONSIST	SUBS					
				COL	ABUN		CONT	GLE	>2		>6	LITH	TOT	STR	POR	IMP
1	0-25	MZCL	10YR3132				0	0	CH	10						Y
	25-35	MZCL	10YR41				0	0	CH	30		M				Y
	35-73	CH	10YR81				0	0		0		P				Y
2	0-35	MSL	10YR32				12	2	HR	18						
	35-57	MCL	10YR31				0	0	HR	15		M				IMP FLINTS
3	0-30	MCL	10YR42				12	2	HR	20						IMP FLINTS
4	0-20	MZCL	10YR42				0	0	CH	10						Y
	20-35	MZCL	10YR52				0	0	CH	60		M				Y
	35-73	CH	10YR81				0	0		0		M				Y
5	0-30	MSL	10YR4232				12	3	HR	18						IMP FLINTS
6	0-30	MSL	10YR42				13	3	HR	20						IMP FLINTS
7	0-30	MZCL	10YR4252				0	0	CH	10						Y
	30-40	MZCL	10YR5262				0	0	CH	50		M				Y
	40-78	CH	10YR81				0	0		0		M				Y
8	0-20	MCL	10YR4243				0	0	HR	15						Y IMP FLINTS
9	0-30	MSL	10YR32				11	2	HR	20						IMP FLINTS
10	0-18	MCL	10YR42				5	0	CH	5						Y
	18-28	MCL	10YR43				5	0	CH	40		M				Y
	28-66	CH	10YR81				0	0		0		M				Y
11	0-23	MZCL	10YR42				0	0	CH	10						Y IMP FLINTS
12	0-25	HCL	10YR42				11	3	HR	15						Y
	25-30	C	10YR5642				0	0	HR	15		M				Y IMP FLINTS
13	0-24	HCL	10YR4232				12	3	HR	20						
	24-50	C	10YR4278				0	0	HR	5		M				
	50-60	C	10YR58				0	0	CH	20		M				Y IMP FLINTS
14	0-25	MCL	10YR42				8	2	HR	15						Y
	25-40	HCL	10YR43				0	0	CH	30		M				Y
	40-78	CH	10YR81				0	0		0		P				Y
15	0-15	MCL	10YR42				12	3	HR	15						Y
	15-30	MCL	10YR43				0	0	CH	50		M				Y
	30-68	CH	10YR81				0	0		0		P				Y
16	0-22	MCL	10YR42				8	2	HR	10						Y
	22-32	MCL	10YR43				0	0	CH	60		M				Y
	32-70	CH	10YR81				0	0		0		P				Y

SAMPLE	DEPTH	TEXTURE	COLOUR	----MOTTLES----			PED COL.	----STONES----			STRUCT/ CONSIST	SUBS			SPL	CALC	
				COL	ABUN	CONT		GLEY	>2	>6		LITH	TOT	STR			POR
1P	0-20	HCL	10YR3132					12	4	HR	18					Y	
	20-38	C	10YR53	75YR58	C	F		Y	0	0	HR	30	MDCAB	FM	M	Y	POROUS
	38-82	C	10YR5363	10YR58	C	D		Y	0	0	CH	30	MDCSAB	FM	M	Y	VARIABLE
	82-120	HZCL	10YR5363						0	0	CH	65			M	Y	CHALK RUBBLE
2P	0-23	MZCL	10YR4232					11	3	HR	20					Y	
	23-40	HCL	10YR4344					0	0	CH	50			M		Y	LOOSE
	40-78	CH	10YR81					0	0	HR	10			P		Y	ROOTS 38CM
3P	0-30	MSL	10YR32					12	2	HR	20						
	30-43	MSL	10YR43					0	0	HR	69			M			LOOSE
	43-120	GH						0	0		0			P			