

**A1**

**New Forest District Local Plan  
Objector Site 34  
Land West of New Road,  
Buttsash, Hampshire  
Agricultural Land Classification  
ALC Map and Report**

**April 1997**

**Resource Planning Team  
Eastern Region  
FRCA Reading**

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**AGRICULTURAL LAND CLASSIFICATION REPORT**  
**NEW FOREST DISTRICT LOCAL PLAN**  
**OBJECTOR SITE 34 - LAND WEST OF NEW ROAD, BUTTSASH,**  
**HAMPSHIRE**

**INTRODUCTION**

1 This report presents the findings of a detailed Agricultural Land Classification (ALC) survey of 17.7 hectares of land located to the east of Buttsash and west of New Road close to the oil refinery at Fawley in Hampshire. The survey was carried out during February 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 its statutory input to the New Forest District Local Plan. The site is one of a number of objector sites. The results of this survey supersede any 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 I.

4 At the time of survey the agricultural land at this site was in grass, either a ley or as permanent grazing. The areas mapped as Other Land include an unmetalled established track running east-west across the site with an area of impenetrable scrub to the immediate south. In addition, towards the south-east of the site an area has been planted with trees, is also shown as Other Land.

**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. A total of 18 borings and two soil pits were described.

Table 1 Area of grades and other land

Grade/Other land	Area (hectares)	% site area	% surveyed area
3a	7.3	41.2	44.8
3b	5.0	28.3	30.7
4	4.0	22.6	24.5
Other Land	1.4	7.9	
<hr/>			
Total surveyed area	16.3	92.1	100.0
Total site area	17.7	100.0	

8 The agricultural land on this site has been classified as Subgrade 3a (good quality) Subgrade 3b (moderate quality) and Grade 4 (poor quality). The principal limitations to land quality include soil wetness and soil droughtiness.

9 Subgrade 3a land extends across the west of the site in a band from north to south. The land in this area is principally limited by soil wetness. The soils commonly comprise light or medium loam topsoils overlying medium loamy and clayey subsoils which are variably stony. There is evidence of drainage imperfections in this area, therefore Subgrade 3a is the most appropriate grade. Soil wetness restricts land utilisation by reducing the number of days when trafficking by machinery or grazing by animals may occur without damaging the soil.

10 The Subgrade 3b and Grade 4 land to the east and north of the site are principally limited by soil droughtiness. They are characterised by a single soil type. This comprises a moderately stony light loam topsoil over a similar upper subsoil passing to gravel at variable shallow depths. On occasion the upper subsoil was non-existent. In these cases the land was considered to be of poor quality. These poor quality areas are coincident with valley features present within the site. Soil droughtiness may affect plant growth, as the supply of available water may be deficient especially in drier years.

## FACTORS INFLUENCING ALC GRADE

### Climate

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

12 The key climatic variables used for grading this site are given in Table 2 overleaf were obtained from the published 5km grid datasets using standard interpolation procedures (Met Office 1989).

13 The climatic criteria are considered first when classifying land as climate can be overriding in the sense that severe limitations will restrict land to low grades irrespective of favourable site or soil conditions.

Table 2 Climatic and altitude data

Factor	Units	Values
Grid reference	N/A	SU 429 056
Altitude	m, AOD	35
Accumulated Temperature	day°C	1519
Average Annual Rainfall	mm	815
Field Capacity Days	days	167
Moisture Deficit, Wheat	mm	110
Moisture Deficit, Potatoes	mm	105

14 The main parameters used in the assessment of an overall climatic limitation are average annual rainfall (AAR) as a measure of overall wetness and accumulated temperature (AT0 January to June) as a measure of the relative warmth of a locality

15 The combination of rainfall and temperature at this site mean that there is no overall climatic limitation Other local climatic factors such as exposure and frost risk are also believed not to affect the site The site is climatically Grade 1

#### Site

16 The site lies at altitudes in the range 30 35m AOD The land across the majority of the site is flat Towards the east of the site are three valley features which have their source in the site At the time of survey these areas were wet to the surface

#### Geology and soils

17 The published geological information for the site (BGS 1987) shows the site to be underlain by river terrace drift deposits (mainly gravels)

18 The most detailed published soils information for the site (SSEW 1983 and 1984) shows this site as Urban The closest relevant soil type mapped is the Bolderwood association These are described as Naturally very acid coarse loamy over clayey soils with a bleached subsurface horizon slowly permeable subsoils and slight seasonal waterlogging Humose or peaty surface horizons locally Some shallow and very flinty soils (SSEW 1983) Soils of these types were found on this site

#### Agricultural Land Classification

19 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

20 The location of the auger borings and pits is shown on the attached sample location map and details of the soils data are presented in Appendix III

Subgrade 3b is appropriate in the local climate due to soil droughtiness. Soil droughtiness affects plant growth and yield potential especially in drier years.

*Grade 4*

27 Land of poor quality has been mapped in two areas towards the east of the site. The principal limitation to this land is soil droughtiness.

28 The soils in this area are essentially similar to those encountered in the Subgrade 3b mapping unit described above (para 26) except that the medium sandy loam topsoil is moderately stony (up to 25% v/v total flints including 12% > 2cm) and the upper subsoil horizon is absent i.e. the topsoil lies directly over the gravel horizon from between 25 and 34cm. This causes the water available to plants to be restricted further such that Grade 4 is appropriate in these parts of the site which coincide with the small valley features previously mentioned in para 16. As noted above soil droughtiness affects plant growth and yield potential but it is likely to be especially severe in this area.

Matthew Larkin  
Resource Planning Team  
Guildford Statutory Group  
ADAS Reading

## SOURCES OF REFERENCE

British Geological Survey (1987) *Sheet 315 Southampton Solid and Drift Edition*  
1 50 000 Scale 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

Meteorological Office (1989) *Climatological Data for Agricultural Land Classification*  
Met Office Bracknell

Soil Survey of England and Wales (1983) *Soils of South East England. 1 250 000 Scale*  
SSEW Harpenden

Soil Survey of England and Wales (1984) *Soils of South East England. Bulletin No 15*  
SSEW Harpenden

## 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 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.

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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

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#### 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)

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<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

- GRID REF** national 100 km grid square and 8 figure grid reference
- 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				
- GRDNT** Gradient as estimated or measured by a hand held optical clinometer
- GLEYSPL** Depth in centimetres (cm) to gleying and/or slowly permeable layers
- AP (WHEAT/POTS)** Crop-adjusted available water capacity
- MB (WHEAT/POTS)** Moisture Balance (Crop adjusted AP - crop adjusted MD)
- DRT** Best grade according to soil droughtiness
- 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				
- 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

- 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:

<b>M</b>	Medium (<27% clay)
<b>H</b>	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>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
- |                              |                               |                                |
|------------------------------|-------------------------------|--------------------------------|
| <u>degree of development</u> | <b>WK</b> weakly developed    | <b>MD</b> moderately developed |
|                              | <b>ST</b> strongly developed  |                                |
| <u>ped size</u>              | <b>F</b> fine                 | <b>M</b> medium                |
|                              | <b>C</b> coarse               | <b>VC</b> very coarse          |
| <u>ped shape</u>             | <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>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 **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 NEW FOREST DLP SITE 34 Pit Number 1P

Grid Reference SU42900560 Average Annual Rainfall 815 mm  
 Accumulated Temperature 1519 degree days  
 Field Capacity Level 167 days  
 Land Use Permanent Grass  
 Slope and Aspect 1 degrees NW

HORIZON	TEXTURE	COLOUR	STONES >2	TOT STONE	LITH	MOTTLES	STRUCTURE	CONSIST	SUBSTRUCTURE	CALC
0- 34	FSL	10YR32 00	12	25	HR					
34-120	GH	10YR44 56	0	0					P	

Wetness Grade 1 Wetness Class I  
 Gleying cm  
 SPL cm

Drought Grade 4 APW 57 mm MBW -53 mm  
 APP 54 mm MBP -51 mm

FINAL ALC GRADE 4  
 MAIN LIMITATION Droughtiness

SOIL PIT DESCRIPTION

Site Name NEW FOREST DLP SITE 34 Pit Number 2P

Grid Reference SU42830530 Average Annual Rainfall 815 mm  
 Accumulated Temperature 1519 degree days  
 Field Capacity Level 167 days  
 Land Use Permanent Grass  
 Slope and Aspect degrees

HORIZON	TEXTURE	COLOUR	STONES >2	TOT STONE	LITH	MOTTLES	STRUCTURE	CONSIST	SUBSTRUCTURE	CALC
0- 25	SCL	10YR42 00	1	7	HR					
25- 46	SCL	10YR42 52	0	7	HR		MDVCSB	FR	M	
46- 57	MCL	10YR54 64	0	10	HR	F	MDCSAB	FR	M	
57- 83	HCL	10YR64 00	0	15	HR	C	MDCAB	FM	P	
83- 95	SCL	10YR63 00	0	15	HR	M	MDVCPL	FR	P	
95-120	CSL	25Y 61 00	0	25	HR	M		FR	M	

Wetness Grade 3A Wetness Class III  
 Gleying 57 cm  
 SPL 57 cm

Drought Grade 2 APW 126mm MBW 16 mm  
 APP 99 mm MBP -6 mm

FINAL ALC GRADE 3A  
 MAIN LIMITATION Wetness

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	DIST	LIMIT	
1	SU42700580	PGR				1	1	52	-58	52	-53	4			DR	38	IMP40 DR38-120
1P	SU42900560	PGR	NW	1		1	1	57	-53	54	-51	4			DR	4	PIT60 DR 4-120
2	SU42800580	PGR			40	55	3	2	133	23	109	4	2		WD	2	
2P	SU42830530	PGR			57	57	3	3A	126	16	99	-6	2		WE	3A	PIT95 AUG110
3	SU42900580	PGR					1	1	58	-52	59	-46	4		DR	38	IMP55 DR38-120
4	SU42800570	PGR			55		1	1	79	-31	82	-23	3B		DR	38	IMP65 DR38-120
5	SU42900570	PGR					1	1	51	-59	51	-54	4		DR	4	IMP45 DR 4-120
6	SU42800560	PGR			35	55	3	2	111	1	106	1	3A		DR	3A	IMP FLINTS 90
7	SU42900560	PGR			43		1	1	58	-52	58	-47	4		DR	4	IMP45 DR 4-120
8	SU42800552	PGR			60		1	1	151	41	107	2	2		DR	2	
9	SU42900550	PGR					1	1	54	-56	54	-51	4		DR	4	IMP40 DR 4-120
10	SU42800540	PGR			65	65	2	1	132	22	107	2	2		DR	2	
11	SU42900540	PGR			45		1	1	66	-44	67	-38	3B		DR	3B	IMP60 DR38-120
12	SU42900530	PGR					1	1	53	-57	53	-52	4		DR	4	IMP45 DR 4-120
13	SU43000530	PGR	N	3	25		2	1	37	-73	37	-68	4		DR	4	IMP40 DR 4-120
14	SU42850520	LEY			33	48	3	3A	109	-1	107	2	3A		WE	3A	
15	SU42950520	LEY			30		2	2	149	39	108	3	2		WD	2	
16	SU42900510	LEY			30	48	3	3A	99	-11	107	2	3A		WE	3A	
17	SU42970507	PGR			10		2	1	74	-36	77	-28	3B		DR	3B	IMP58 DR38-120
18	SU42830530	PGR			65	50	3	2	103	-7	96	-9	3A		DR	3A	IMP 95 SEE 2P

SAMPLE	DEPTH	TEXTURE	COLOUR	----MOTTLES-----			PED COL	----STONES----			STRUCT/ CONSIST	SUBS			CALC		
				COL	ABUN	CONT		GLE	>2	>6		LITH	TOT	STR		POR	IMP
1	0-28	ms1	10YR41 00	10YR46	00	C		8	0	HR	20				SEE 1P		
	28-38	ms1	10YR42 52					0	0	HR	25		M				
	38-40	ms1	10YR42 52					0	0	HR	50		M		IMP GRAVEL 40		
1P	0-34	fs1	10YR32 00					12	0	HR	25						
	34-120	gh	10YR44 56					0	0		0		P		71% HR IN LMS/MSL		
2	0-25	msz1	10YR42 00					0	0	HR	5						
	25-40	msz1	10YR52 00	10YR56	58	F		0	0	HR	5		M				
	40-55	msz1	10YR62 00	10YR58	00	C		Y	0	0	HR	10		M	VERY WET		
	55-90	sc1	25Y 52 00	10YR58	00	M		Y	0	0	HR	15		P	Y	MOIST ONLY	
	90-120	c	05Y 61 00	05YR58	00	C		Y	0	0	HR	10		P	Y		
2P	0-25	sc1	10YR42 00					1	0	HR	7						
	25-46	sc1	10YR42 52					0	0	HR	7	MDVCSB	FR	M			
	46-57	mc1	10YR54 64	10YR58	00	F		0	0	HR	10	MDCSAB	FR	M	WITH FINE SAND		
	57-83	hc1	10YR64 00	10YR58	00	C		Y	0	0	HR	15	MDCAB	FM	P	Y	WITH FINE SAND
	83-95	sc1	10YR63 00	75YR58	00	M		Y	0	0	HR	15	MDVCPL	FR	P	Y	POCKETS OF CLAY
	95-120	cs1	25Y 61 00	75YR58	00	M		Y	0	0	HR	25		FR	M		
3	0-28	ms1	10YR31 41					5	0	HR	20				SEE 1P		
	28-40	ms1	10YR53 52					0	0	HR	25		M				
	40-55	lms	10YR52 00					0	0	HR	45		M		IMP GRAVEL 55		
4	0-30	ms1	10YR41 42	10YR46	00	F		3	0	HR	10				SEE 1P		
	30-55	ms1	10YR42 52					0	0	HR	15		M				
	55-65	lms	10YR52 00	10YR56	00	C		Y	0	0	HR	50		M	IMP GRAVEL 65		
5	0-30	ms1	10YR31 00					12	0	HR	25				SEE 1P		
	30-45	ms1	10YR42 52					0	0	HR	50		M		IMP GRAVEL 45		
6	0-23	fsz1	10YR42 00					0	0	HR	10						
	23-35	fs1	10YR41 51	10YR56	00	F		0	0	HR	10		M				
	35-55	sc1	10YR53 52	10YR58	00	C		Y	0	0	HR	15		M	WET		
	55-75	hc1	25Y 53 52	10YR58	00	M		Y	0	0	HR	20		P	Y	MOIST ONLY	
	75-90	sc1	25Y 53 52	10YR58	00	M		Y	0	0	HR	10		P	Y	IMP FLINTS 90	
7	0-33	ms1	10YR31 41					8	0	HR	20				SEE 1P		
	33-43	ms1	10YR32 42					0	0	HR	30		M				
	43-45	ms1	10YR53 00	10YR58	00	M		Y	0	0	HR	50		M	IMP GRAVEL 45		
8	0-30	fs1	10YR31 21					0	0	HR	5						
	30-60	ms1	10YR32 42					0	0	HR	10		M				
	60-85	ms1	25Y 53 00	10YR58	00	C		Y	0	0	HR	5		M			
	85-120	ms1	25Y 61 62	10YR58	68	M		Y	0	0	HR	5		M			
9	0-33	ms1	10YR42 00					8	0	HR	15				SEE 1P		
	33-40	ms1	10YR42 52					0	0	HR	50		M		IMP GRAVEL 40		

SAMPLE	DEPTH	TEXTURE	COLOUR	---MOTTLES---			PED COL	---STONES---			STRUCT/ CONSIST	SUBS			CALC	
				COL	ABUN	CONT		GLE	>2	>6		LITH	TOT	STR		POR
10	0-30	fs1	10YR32 42					0	0	HR	5				SEE 2P	
	30-45	fs1	10YR42 00					0	0	HR	10		M			
	45-65	ms1	10YR52 53 10YR56 00 F					0	0	HR	20		M		WET	
	65-120	c	25Y 52 00 10YR58 68 M					Y	0	0	HR	5		P	Y	MOIST ONLY
11	0-33	ms1	10YR31 41					5	0	HR	15				SEE 1P	
	33-45	ms1	10YR42 00					0	0	HR	30		M			
	45-60	lms	25Y 61 00 10YR68 00 C					Y	0	0	HR	50		M		IMP GRAVEL 60
12	0-30	ms1	10YR41 42					8	0	HR	20				SEE 1P	
	30-45	ms1	10YR42 52					0	0	HR	50		M		IMP GRAVEL 45	
13	0-25	ms1	10YR31 00						10	0	HR	25			SEE 1P	
	25-40	ms	25Y 61 00 10YR58 00 C					Y	0	0	HR	60		M		IMP GRAVEL 40
14	0-33	mc1	10YR42 00 10YR44 00 C						0	0	HR	5				
	33-48	hc1	10YR62 00 10YR56 00 C				00M00 00	Y	0	0	HR	8		M		
	48-65	c	25Y 64 00 75YR58 00 M					Y	0	0		0		P	Y	
	65-89	c	25Y 72 00 05Y 58 00 M					Y	0	0		0		P	Y	IMP FLINTS 90
15	0-30	mc1	10YR42 00						0	0	HR	5				
	30-53	mc1	10YR52 00 75YR58 00 C					Y	0	0	HR	5		M		SANDY
	53-65	sc1	25Y 62 00 10YR58 00 C					Y	0	0	HR	15		M		
	65-88	ms1	25Y 62 00 10YR58 00 C					Y	0	0	HR	15		M		
	88-110	sc1	05Y 62 00 75YR58 00 M					Y	0	0	HR	2		M		
	110-120	ms1	05Y 62 00 75YR58 00 M					Y	0	0	HR	2		M		
16	0-30	mc1	10YR42 00 10YR44 00 C						0	0	HR	5				
	30-48	mc1	10YR52 00 10YR56 00 C					Y	0	0	HR	2		M		
	48-58	hc1	10YR52 00 10YR56 00 C					Y	0	0	HR	2		P	Y	
	58-75	c	25Y 62 00 10YR58 00 M					Y	0	0	HR	2		P	Y	IMP FLINT 75
17	0-10	fs1	10YR42 00						0	0	HR	5				
	10-25	fs1	10YR42 00 10YR56 00 C					Y	0	0	HR	10		M		
	25-40	sc1	10YR51 00					Y	0	0	HR	15		M		
	40-58	sc1	10YR51 00					Y	0	0	HR	45		M		IMP 58 - GRAVELLY
18	0-23	ms1	10YR41 42						0	0	HR	10			SEE 2P	
	23-50	ms1	10YR44 54						0	0	HR	10		M		
	50-65	sc1	10YR54 00 10YR56 00 C					S	0	0	HR	10		P	Y	SL GLEYED & SPL
	65-85	c	25Y 52 62 75YR58 00 M					Y	0	0	HR	10		P	Y	
	85-95	cs1	25Y 54 00 75YR58 00 M					Y	0	0	HR	40		M		