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NEW FOREST DISTRICT LOCAL PLAN
Objection Sites 2 and 4
Land North and South of Milford Road
Pennington
Agricultural Land Classification
ALC Map and Report

February 1997

Resource Planning Team
Eastern Region
FRCA Reading

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AGRICULTURAL LAND CLASSIFICATION REPORT

NEW FOREST DISTRICT LOCAL PLAN
OBJECTION SITES 2 AND 4
LAND NORTH AND SOUTH OF MILFORD ROAD, PENNINGTON
HAMPSHIRE

Introduction

1 This report presents the findings of a detailed Agricultural Land Classification (ALC) survey of approximately 20 hectares of land to the north and south of Milford Road Pennington near Lymington 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 Part of the site currently being considered was surveyed in 1990 (FRCA Ref 1508/11/90) This land has subsequently been worked for minerals land filled and the soils reinstated The land has been in aftercare for less than 5 years As a result it has not been surveyed this time round

3 Prior to the 1st 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 on this site was in permanent grassland The areas of the site shown as Other Land consist of woodland farm buildings and tracks ponds or residential development

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 over the page

7 The fieldwork was conducted at an average density of 1 boring per hectare A total of 11 borings and 2 soil pits were described

8 The land at this site has been classified as Subgrade 3a (good quality) and Subgrade 3b (moderate quality) The key limitations are soil wetness and/or soil droughtiness

Table 1 Area of grades and other land

Grade/Other land	Area (hectares)	% Survey area	% Total site area
3a	7 9	83 2	38 7
3b	1 6	16 8	7 9
Other land	8 0	-	39 2
Agricultural land not surveyed	2 9	-	14 2
Total Survey Area	9 5	100	
Total site area	20 4	-	100

9 Approximately half of the soil profiles display wetness problems to varying degrees The topsoils are dominantly clay loams These usually overlie similar subsoils which either directly or indirectly rest over poorly structured clay The depth to these clayey horizons will determine the degree of impeded drainage and therefore the final ALC grade Where clay horizons are shallow the drainage will be severely restricted and land is classified as Subgrade 3b whereas clay horizons deeper in the profile give rise to Subgrade 3a Occasional profiles which suffer from wetness problems also become impenetrable to the auger at depth

10 The remainder of the soil profiles display similar characteristics to those described above but are generally sandier and sometimes much stonier at varying depths All of these profiles are impenetrable to the auger to differing degrees As a consequence borings of slightly worse or better quality are found The combination of these soil properties and the prevailing climate results in a slight soil droughtiness limitation where these soil types occur and the land is classified as Subgrade 3a

Factors Influencing ALC Grade

Climate

11 Climate affects the grading of the 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 and were obtained from the published 5km grid datasets using the 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

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

Table 2 Climatic and altitude data

	Units	Values	Values
Grid reference	N/A	SZ 313 941	SZ 307 944
Altitude	m AOD	10	15
Accumulated Temperature	day°C	1555	1550
Average Annual Rainfall	mm	800	811
Field Capacity Days	days	166	168
Moisture Deficit Wheat	mm	114	112
Moisture Deficit Potatoes	mm	110	108

15 The combination of rainfall and temperature at this site mean that there is no overall climatic limitation Frost risk is not believed to adversely affect the land quality on the site though unpublished information suggests that the site may be rather exposed (Met Office 1968) However site assessment suggests this is not the case the land being sheltered from the prevailing south westerlies by housing development All of the land on the site is climatically Grade 1

Site

16 The agricultural land at this site lies at an altitude of 5-15m AOD The majority of the land at the site is flat or very gently sloping with slight undulations Nowhere does gradient or microrelief affect agricultural land quality

Geology and soils

17 The published geological information for the site (BGS 1975) shows the site to be underlain plateau gravel (drift) and Osbourne and Headon Beds (solid Oligocene deposit) The Osbourne deposits comprise brackish and freshwater clays and marls with occasional hard bands of concretionary limestone The Headon Beds consist of coloured clays occasional sand beds some lignite and bands of limestone

18 The most recently published soil information for the site (SSEW 1983) shows the Efford 1 association to be mapped in the eastern half of the site and the Shabbinton association mapped in the western half The former soils are described as well drained fine loamy soils often over gravel associated with similar permeable soils variably affected by groundwater (SSEW 1983) The latter soil types are described as deep fine loamy and fine loamy over sandy soils variably affected by groundwater Some slowly permeable seasonally waterlogged fine loamy over clayey soils (SSEW 1983)

19 Upon detailed field examination soils consistent with the above description were found to exist across the site

Agricultural Land Classification

20 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

21 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

22 The majority of the site to the north and west is mapped as good quality agricultural land The land is affected by a combination of wetness and droughtiness restrictions The soil falls into two variants

23 Firstly many of the profiles comprise non-calcareous stoneless or very slightly stony (0-6% total flints with 0 3% > 2cm) medium clay loam topsoils These rest over stoneless or slightly stony (0 10% total flints) medium or heavy clay loam or occasionally sandy clay loam upper subsoils Lower subsoils consist of similar textures but sometimes become lighter at depths between 55 and 67 cm These subsoils are often gleyed between 30 and 45 cm (wetness classes I and II) and become more gravelly with depth (up to 49% total flints) eventually becoming impenetrable to the soil auger at depths between 50 and 80 cm Pit 1 is typical of these soils The combination of soil texture and hard stone restricts the water availability to crops such that there is a slight risk of drought stress to plants in most years Within the prevailing climatic conditions Subgrade 3a is most appropriate Land of this quality could be expected to produce moderate yields of a wide range of crops including oilseed rape and potatoes and moderate to high yields of a narrow range of crops principally cereals and grass

24 The second group of soils within the Subgrade 3a unit comprise soils where drainage is impeded due to the presence of slowly permeable clay at moderate depths (48 60 cm) This impeded drainage gives rise to gleyed medium clay loam or medium silty clay loam topsoils that are stoneless or very slightly stony (0 5% total flints with 0 3% > 2cm diameter) which overlie similar subsoils that become heavier with depth Pit 2 is representative of these soils Such profiles were thereby assessed as wetness class III the principal limitation being soil wetness which restricts the agricultural land quality to a maximum of Subgrade 3a

Subgrade 3b

25 A small area of moderate quality land has been mapped to the south east of the site This land is limited by soil wetness

26 Within this unit profiles encountered had impeded drainage arising from the occurrence of slowly permeable clay horizons at shallow depths (< 45cm) The majority of profiles consist of stoneless or very slightly stony (0 1% total flints and 0% > 2cm diameter) non calcareous often gleyed medium clay loam topsoils sometimes lying over shallow heavy clay loam upper subsoil horizons with similar characteristics to the topsoils Profiles pass to slowly permeable clay at shallow depth This has the effect of slowing water flow through the profile to the extent that air is excluded from the soil by water for long periods leading to poor root development and plant growth Excessive soil wetness also leads to a reduction in the opportunities for cultivation and/or grazing such that within the prevailing local climatic regime wetness class IV Subgrade 3b is appropriate for this unit

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SOURCES OF REFERENCE

British Geological Survey (1975) Sheet No 330 Lymington 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 (1968) *Unpublished climatic data relating to old series OS 1 63 360 scale Sheet 180* Met Office Bracknell

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

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

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 **GLEY/SPL** 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 **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

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

SOIL PIT DESCRIPTION

Site Name NEW FOREST DLP- SITE 2 Pit Number 1P

Grid Reference SZ30809440 Average Annual Rainfall 800 mm
Accumulated Temperature 1555 degree days
Field Capacity Level 168 days
Land Use Permanent Grass
Slope and Aspect degrees

HORIZON	TEXTURE	COLOUR	STONES >2	TOT STONE	LITH	MOTTLES	STRUCTURE	CONSIST	SUBSTRUCTURE	CALC
0- 30	MCL	10YR41 42	3	5	HR					
30- 42	MCL	10YR42 00	0	10	HR		MDCSAB	FR	M	
42- 55	HCL	10YR52 00	0	35	HR	C			M	
55- 60	C	10YR53 00	0	55	HR	M			M	
60- 75	LCS	10YR53 00	0	55	HR	M			M	

Wetness Grade Wetness Class
Gleying 042 cm
SPL cm

Drought Grade 3B APW 086mm MBW -28 mm
APP 090mm MBP -20 mm

FINAL ALC GRADE 3A
MAIN LIMITATION Droughtiness

SOIL PIT DESCRIPTION

Site Name NEW FOREST DLP- SITE 2 Pit Number 2P

Grid Reference SZ30709450

Average Annual Rainfall	800 mm
Accumulated Temperature	1555 degree days
Field Capacity Level	168 days
Land Use	Permanent Grass
Slope and Aspect	01 degrees N

HORIZON	TEXTURE	COLOUR	STONES >2	TOT STONE	LITH	MOTTLES	STRUCTURE	CONSIST	SUBSTRUCTURE	CALC
0- 25	MCL	10YR41 42	3	5	HR	C				
25- 52	MCL	10YR52 00	0	10	HR	C	MDCSAB	FR	M	
52- 90	C	25 Y72 00	0	0		M	WKCSAB	FM	P	

Wetness Grade 3A

Wetness Class	III
Gleying	0 cm
SPL	052 cm

Drought Grade

APW	000mm	MBW	0 mm
APP	000mm	MBP	0 mm

FINAL ALC GRADE 3A
MAIN LIMITATION Wetness

SAMPLE NO	GRID REF	USE	ASPECT	GRDNT	GLEY	SPL	WETNESS CLASS	WETNESS GRADE	WHEAT AP	WHEAT MB	POTS AP	POTS MB	M REL DRT	FLOOD	EROSN EXP	FROST DIST	CHEM LIMIT	ALC	COMMENTS
1P	SZ30809440	PGR			042				086	-28	090	-20	3B				DR	3A	ASSUME TO 120
2	SZ30709450	PGR	N	01	0	060	3	3A	000	0	000	0					WE	3A	SEE PIT 2
2P	SZ30709450	PGR	N	01	0	052	3	3A	000	0	000	0					WE	3A	
3	SZ30809448	PGR			040		1	1	079	-35	079	-31	3B				DR	3A	IMP 50 SEE PIT
4	SZ30709440	PGR			030		2	2	066	-48	066	-44	3B				DR	3B	IMP 40 SEE PIT
5	SZ30809440	PGR			030		2	2	088	-26	093	-17	3B				DR	3A	IMP 60 SEE PIT
6	SZ30809430	PGR					1	1	109	-5	107	-3	3A				DR	3A	IMP 80 SEE PIT
7	SZ30909430	PGR			022		2	2	110	-4	110	0	3A				DR	3A	IMP 79 SEE PIT
8	SZ31209418	PGR	NE	02	0	048	3	3A	000	0	000	0					WE	3A	SEE PIT 2
9	SZ31309420	PGR			0	028	4	3B	082	-32	087	-23	3B				WE	3B	IMP 58 SEE PIT
10	SZ31139409	PGR			0		2	2	093	-21	098	-12	3B				DR	3A	IMP 60 SEE PIT
11	SZ31209410	PGR			032	040	4	3B	090	-24	098	-12	3B				WE	3B	IMP 70 SEE PIT
12	SZ31309410	PGR			020	035	4	3B	000	0	000	0					WE	3B	SEE PIT 2

SAMPLE	DEPTH	TEXTURE	COLOUR	MOTTLES COL	MOTTLES ABUN	MOTTLES CONT	PED COL	PED GLEY	STONES >2	STONES >6	STONES LITH	STONES TOT	STRUCT/ CONSIST	SUBS STR	SUBS POR	SUBS IMP	SUBS SPL	CALC
1P	0-30	mcl	10YR41 42						3	0	HR	5						
	30-42	mcl	10YR42 00						0	0	HR	10	MDCSAB FR	M				
	42-55	hcl	10YR52 00	75YR58 00	C		00MN00 00	Y	0	0	HR	35		M				
	55-60	c	10YR53 00	75YR58 00	M			Y	0	0	HR	55		M				
	60-75	lcs-	10YR53 00	75YR58 00	M			Y	0	0	HR	55		M				ASSUME TO 120
2	0-30	mcl	10YR42 00	75YR46 00	C			Y	0	0	HR	2						WITH MS
	30-60	mcl	10YR53 00	75YR46 00	C			Y	0	0	HR	10		M				
	60-90	c	10YR53 00	75YR58 00	C			Y	0	0	HR	2		P		Y		
2P	0-25	mcl	10YR41 42	75YR46 00	C			Y	3	0	HR	5						WITH MS
	25-52	mcl	10YR52 00	75YR56 00	C			Y	0	0	HR	10	MDCSAB FR	M				
	52-90	c	25 Y72 00	75YR68 00	M			Y	0	0		0	WKCSAB FM	P	Y		Y	
3	0-30	mcl	10YR42 00						0	0	HR	5						WITH MS
	30-40	mcl	10YR43 00						0	0	HR	10		M				
	40-50	mcl	10YR53 00	75YR58 00	C			Y	0	0	HR	20		M				IMP GRAVELLY
4	0-30	mcl	10YR42 00	10YR56 00	F				0	0	HR	2						WITH MS
	30-40	mcl	10YR52 00	75YR56 00	C			Y	0	0	HR	20		M				IMP GRAVELLY
5	0-30	mcl	10YR42 00						0	0	HR	5						WITH MS
	30-45	mcl	10YR52 00	75YR56 00	C			Y	0	0	HR	5		M				
	45-55	hcl	10YR52 00	75YR56 00	C			Y	0	0	HR	15		M				
	55-60	c	10YR53 00	75YR68 00	M			Y	0	0	HR	20		P				IMP GRAVELLY
6	0 25	mcl	10YR42 32						0	0	HR	6						WITH MS
	25-43	mcl	10YR41 42						0	0	HR	4		M				
	43-55	scl	10YR42 00						0	0	HR	10		M				
	55-80	msl	10YR43 52						0	0	HR	10		M				IMP GRAVELLY
7	0-22	mcl	10YR32 42						0	0		0						WITH MS
	22-50	scl	10YR41 42	10YR56 00	C			Y	0	0	HR	1		M				
	50-67	scl	10YR52 00	10YR58 00	M		00MN00 00	Y	0	0	HR	4		M				
	67-79	msl	10YR44 00	75YR58 00	M		00MN00 00	Y	0	0	HR	8		M				IMP GRAVELLY
8	0-25	mzcl	10YR41 31	75YR44 00	C			Y	0	0		0						
	25-38	hcl	10YR41 51	75YR46 00	C			Y	0	0	HR	1		M				
	38-48	hcl	10YR41 51	75YR58 00	M			Y	0	0	HR	4		M				
	48-70	c	25 Y51 52	75YR58 00	M			Y	0	0	HR	6		P		Y		
9	0-28	mcl	10YR31 32	75YR46 00	C			Y	0	0	HR	1						
	28-55	c	10YR52 51	75YR58 00	M			Y	0	0	HR	5		P		Y		
	55-58	c	10YR52 51	75YR58 00	M			Y	0	0	HR	20		P		Y		IMP GRAVELLY
10	0-25	mcl	10YR41 00	75YR46 00	C			Y	0	0		0						
	25-50	hcl	10YR51 00	75YR56 00	C			Y	0	0		0		M				
	50-60	hcl	10YR53 00	75YR58 00	C			Y	0	0	HR	20		M				IMP GRAVELLY

SAMPLE	DEPTH	TEXTURE	COLOUR	----MOTTLES----- COL	ABUN	CONT	PED COL	GLEY	----STONES---- >2	>6	LITH	TOT	STRUCT/ CONSIST	SUBS STR	POR	IMP	SPL	CALC	
11	0-32	mcl	10YR42 00	10YR56 00	F				0	0		0							
	32-40	hcl	25 Y52 00	10YR58 00	C			Y	0	0	HR	5		M					
	40-65	c	25 Y63 00	75YR58 00	C			Y	0	0	HR	20		P		Y			
	65-70	lcs	25 Y63 00	75YR58 00	C			Y	0	0	HR	50		M		Y			IMP GRAVELLY
12	0-20	mcl	10YR42 00						0	0		0							
	20-35	c	25 Y52 00	10YR58 00	C			Y	0	0	HR	2		M					WET
	35-70	c	25 Y62 00	75YR58 00	M			Y	0	0	HR	2		P		Y			DRIER