

A1

**TEST VALLEY BOROUGH LOCAL PLAN
Land West of Enham Alamein Hampshire**

**Agricultural Land Classification
Semi Detailed Survey
ALC Map and Report**

February 1998

**Resource Planning Team
Eastern Region
FRCA Reading**

**RPT Job Number 1512/008/98
MAFF Reference EL 15/01484**

AGRICULTURAL LAND CLASSIFICATION REPORT

TEST VALLEY BOROUGH LOCAL PLAN LAND WEST OF ENHAM ALAMEIN HAMPSHIRE SEMI DETAILED SURVEY

INTRODUCTION

1 This report presents the findings of a semi detailed Agricultural Land Classification (ALC) survey of approximately 48 hectares of land west of Enham Alamein north of Andover in Hampshire. The survey was carried out during February 1998.

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 MAFF's statutory input to the Test Valley Borough 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 most of the land was under winter cereal production with one field ploughed. The areas mapped as 'Other land' include wooded field boundaries and the A343 Newbury Road which bisects the survey area in the north east.

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.

Table 1 Area of grades and other land

Grade/Other land	Area (hectares)	% surveyed area	% site area
2	35.3	77.1	74.1
3a	10.5	22.9	22.1
Other land	1.8		3.8
Total surveyed area	45.8	100	96.2
Total site area	47.6		100

7 The fieldwork was conducted at an average density of 1 boring every 2 hectares of agricultural land. In total 24 borings and 3 soil pits were described.

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

8 Most of the site has been mapped as Grade 2 very good quality agricultural land with the remainder classified as Subgrade 3a good quality agricultural land. The majority of the land suffers from a soil droughtiness limitation. In places topsoil stoniness and/or topsoil workability are equally restricting.

9 Grade 2 agricultural land typically comprises fine silty topsoils which overlie heavier subsoils. Soils are slightly to moderately flinty throughout. Moisture balance calculations which take account of the soil properties and the prevailing local climate indicate that there is minor soil droughtiness which restricts the amount of available water for crops. Occasionally soil profiles are equally limited by a topsoil stone restriction and/or topsoil workability.

10 Subgrade 3a agricultural land typically comprises soil profiles which are variably calcareous and distinguished by shallower depth over stony or chalky horizons. The stony (predominantly chalky rubble) subsoils restrict the amount of water the soil profile can hold and this is reflected in the moisture balance calculations which suggest more significant soil droughtiness than land assigned to Grade 2. Subgrade 3a is therefore appropriate.

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 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	
		SU 364 497	SU 367 499
Grid reference	N/A	SU 364 497	SU 367 499
Altitude	m AOD	100	110
Accumulated Temperature	day C (Jan June)	1427	1416
Average Annual Rainfall	mm	784	786
Field Capacity Days	days	173	173
Moisture Deficit Wheat	mm	99	98
Moisture Deficit Potatoes	mm	89	87
Overall climatic grade	N/A	Grade 1	Grade 1

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.

15 The combination of rainfall and temperature at this site mean that there is no overall climatic limitation. Local climatic factors such as exposure and frost risk do not affect land quality at this location. The site is climatically Grade 1. However climatic factors do interact with soil properties to influence soil wetness and soil droughtiness. At this locality the climate is moist with average temperatures in regional terms.

Site

16 The site lies at altitudes in the range 95-115 m AOD. The highest ground occurs along the north eastern boundary and falls gently to the west where the lowest land is found in a small valley. Elsewhere the majority of the land is relatively flat in topographical terms. Site restrictions (i.e. gradient, micro relief or flooding) do not affect this site.

Geology and soils

17 The most detailed published geological information for the site (BGS 1974) maps most of the area as Upper Chalk, the remainder of the land along the north east boundary is shown as clay with flints.

18 The most detailed published soils information covering the area (SSEW 1983) shows most of it to be soils of the Carstens association. These soils are described as well drained fine silty over clayey, clayey and fine silty soils, often very flinty (SSEW 1983). Soils consistent with this description are found over most of the site, well drained fine silty over clayey soils, variably flinty. Along the eastern boundary a slither of Charity 2 association soils is shown. These soils are described as well drained flinty fine silty soils in valley bottoms, Calcareous fine silty soils over chalk or chalk rubble on valley sides, sometimes shallow (SSEW 1983). Soils consistent with this description are found in two discrete areas, well drained fine silty soils over chalk or chalk rubble.

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, page 1.

20 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.

Grade 2

21 Land of very good quality is found over the majority of the site. Soil droughtiness is the principal limitation, in places topsoil stoniness and workability are equally limiting.

22 Most of the land classified as Grade 2 is affected by a soil droughtiness limitation with the remainder restricted by a topsoil stone limitation. Soils comprise non calcareous medium silty clay loam or occasionally heavy silty clay loam topsoils. These may contain up to 10% total flints by volume (0.6% > 2 cm in size). Topsoils overlie heavier textures of heavy silty clay loam or clay upper subsoils. These may contain up to 35% total flints by volume (range 10-35%). Lower subsoils are clayey with up to 25% total flints by volume.

which are commonly impenetrable to the soil auger between 48 and 90 cm depth. Soil Pit 3 (see Appendix II) is typical of these soils. The stony nature of the subsoil restricts the moisture content of these profiles and moisture balance calculations indicate there may not be sufficient available water for the needs of a growing crop. The resulting drought stress may cause the level and consistency of yields to be depressed.

23 Topsoil stone measurements of 6 % flints greater than 2 cm are recorded using a 2 cm mesh sieve. This restricts land quality to Grade 2. The main effect of stoniness is to act as an impediment to cultivation, harvesting and crop growth and to cause a reduction in the available water capacity of the soil.

24 Some of this land suffers from a workability limitation where topsoils are heavy silty clay loams. These soils are well drained and equate to wetness class 1 but the interaction between heavy topsoils and the a relatively moist local climate restricts land quality to Grade 2. This land needs to be carefully managed in order that they can be effectively cultivated.

Subgrade 3a

25 There are two discrete areas of good quality land which suffers from a soil droughtiness limitation. The first of these is located in the north east of the site along the course of a small valley the second is found on slightly lower land adjacent to the southern boundary. Both parcels of land are coincident with soils of the Charity 2 association.

26 Soils within the Subgrade 3a mapping unit are well drained, variably calcareous and proved to be impenetrable to the soil auger from 28-90 cm depth. Profiles comprise heavy silty clay loam topsoils with up to 15 % total flints by volume (4-11% >2cm). These overlie similar or clayey upper subsoils with up to 10 % total flints by volume. Lower subsoils are clayey with up to 50 % total chalk rubble by volume. These overlie hard Chalk which is impenetrable to the soil auger. Soil pits 1 and pit 2 (Appendix II) are typical of these soils. In particular, in the deeper of the two pits (see pit 1) rooting extended 10 cm into the Chalk and this finding was used to calculate the available water capacity of these soil profiles. Moisture balance calculations indicate that these soils are slightly droughty and the resulting stress may cause the level and consistency of yields to be depressed. Subgrade 3a is appropriate.

Colin Pritchard
Resource Planning Team
Eastern Region
FRCA Reading

SOURCES OF REFERENCE

British Geological Survey (1974) *Sheet No 283 Andover 1 50 000 Solid & Drift Edition*
BGS London

Ministry of Agriculture Fisheries and Food (1988) *Agricultural Land Classification of England and Wales Revised guidelines and criteria for grading the quality of agricultural land*
MAFF London

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

Soil Survey of England and Wales (1983) *Sheet 6 Soils of South East England 1 250 000*
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

Sample location map

Soil abbreviations explanatory note

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

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 **GLEYS/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	FM firm	EH extremely hard
VF very friable	VM very firm	
FR friable	EM extremely firm	

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	WETNESS		WHEAT		POTS		M REL		EROSN EXP	FROST DIST	CHEM LIMIT	ALC	COMMENTS
			GRDNT	GLEYSPL	CLASS	GRADE	AP	MB	AP	MB					
1	SU36305000	CER NE	1		1	1	88	11	94	5	3A			DR 3A	POSS 2 DR
2	SU36705000	CER SW	1		1	1	109	10	109	20	2			DR 2	
3	SU36204990	CER NE	1		1	1	104	5	111	22	2			DR 2	Q SPL 65
4	SU36404990	CER SW	1		1	2	95	4	105	16	3A			DR 3A	
5	SU36604990	CER SW	1		1	1	130	31	108	19	1			TS 2	
6	SU36104980	CER SW	1		1	1	100	1	111	22	3A			DR 3A	PROB 2 DR
7	SU36304980	CER SE	1		1	1	82	17	90	1	3A			DR 3A	
8	SU36504980	CER SW	1		1	2	98	1	105	16	3A			DR 3A	DRT072SEE1P
9	SU36204970	CER SE	1		1	1	139	40	116	27	1			1	
10	SU36404970	CER E	2		1	1	76	23	76	13	3B			TS 3A	
11	SU36104960	CER			1	1	92	7	102	13	3A			DR 3A	PROB 2 DR
12	SU36304960	CER SE	1		1	1	119	20	117	28	2			DR 2	
13	SU36204950	CER			1	2	109	10	109	20	2			DR 2	2WK
14	SU36404950	CER NE	1		1	1	102	3	113	24	3A			DR 3A	PROB 2 DR
15	SU36104940	CER			1	1	98	1	110	21	3A			DR 3A	PROB 2 DR
16	SU36304940	CER			1	1	74	25	74	15	3B			DR 3A	
17	SU36504940	CER			1	1	142	43	118	29	1			1	
18	SU36204930	CER			1	1	96	3	103	14	3A			DR 3A	PROB 2 DR
19	SU36404930	CER			1	1	105	6	112	23	2			DR 2	
20	SU36604930	PLO E	1		1	1	106	7	114	25	2			DR 2	
21	SU36104920	CER SE	1		1	1	95	4	105	16	3A			DR 3A	PROB 2 DR
22	SU36304920	CER			1	1	92	7	102	13	3A			DR 3A	
23	SU36504920	CER			1	2	111	12	109	20	3A			DR 3A	
24	SU36404910	CER			1	2	104	5	103	14	3A			DR 3A	
1P	SU36404910	CER			1	2	96	3	102	13	3A			DR 3A	
2P	SU36404910	CER			1	2	88	11	91	2	3A			DR 3A	
3P	SU36504940	CER			1	1	121	22	108	19	2			DR 2	

SAMPLE	DEPTH	TEXTURE	COLOUR	MOTTLES		PED		STONES			STRUCT/ CONSIST	SUBS			SPL	CALC
				COL	ABUN	CONT	COL	GLE	2	6		LITH	TOT	STR		
1	0 27	MZCL	10YR43					6	0	HR	10					
	27 40	MZCL	10YR44					0	0	HR	10		M			
	40 60	MZCL	10YR44.54					0	0	HR	20		M			IMP GRAVELLY
2	0 29	MZCL	10YR44					4	1	HR	7					
	29 39	HZCL	75YR44					0	0	HR	15		M			
	39 90	C	75YR46					0	0	HR	15		M			IMP FLINTS
3	0 28	MZCL	10YR43					3	0	HR	6					
	28 65	C	75YR46	75YR56		F		0	0	HR	10		M			
	65 80	C	05YR46					0	0	HR	10		M			IMP FLINTS
4	0 27	HZCL	10YR44					6	1	HR	10					
	27 34	C	75YR44					0	0	HR	10		M		Y	
	34 72	ZC	75YR46					0	0	CH	15		M		Y	IMP FLINTS
5	0 29	MZCL	10YR43					7	0	HR	12					
	29 49	HZCL	75YR44					0	0	HR	15		M			
	49 120	C	75YR46					0	0	HR	10		M			
6	0 30	MZCL	10YR43					4	0	HR	8				Y	
	30 35	HZCL	10YR44	10YR68		F		0	0	HR	10		M			
	35 75	C	75YR46	75YR56		C		S	0	0	HR	10		M		IMP FLINTS
7	0 30	MZCL	10YR43					4	0	HR	8					
	30 65	C	05YR46					0	0	HR	35		M			IMP FLINTS
8	0 27	HZCL	10YR44					4	0	HR	7					
	27 47	C	75YR44					0	0	HR	5		M			
	47 62	ZC	75YR46					0	0	CH	50		M		Y	
	62 72	CH	10YR81					0	0	HR	5		P		Y	IMP FLINTS
9	0 28	MZCL	10YR43					3	0	HR	5					
	28 42	HZCL	75YR46					0	0	HR	5		M			
	42 120	C	75YR46					0	0	HR	5		M			
10	0 29	MZCL	10YR44					11	0	HR	15					
	29 49	MZCL	75YR44					0	0	HR	15		M			IMP FLINTS
11	0 29	MZCL	75YR43					4	0	HR	7					
	29 64	C	75YR46					0	0	HR	10		M			IMP FLINTS
12	0 28	MZCL	10YR43					3	0	HR	5					
	28 42	HZCL	75YR43					0	0	HR	5		M			
	42 120	C	75YR46					0	0	HR	5		M			
13	0 22	HZCL	75YR43					0	0	HR	7					
	22 90	C	75YR46					0	0	HR	10		M			IMP CHALK

SAMPLE	DEPTH	TEXTURE	COLOUR	MOTTLES			PED		STONES			STRUCT/	SUBS			SPL	CALC
				COL	ABUN	CONT	COL	GLEY	2	6	LITH	TOT	CONSIST	STR	POR		
14	0 27	MZCL	10YR43						2	0	HR	3					
	27 35	HZCL	10YR44						0	0	HR	5		M			
	35 70	HZCL	10YR64						0	0	CH	25		M		Y	IMP FLINTS
15	0 30	MZCL	75YR43						0	0	HR	4					
	30 45	HZCL	75YR44						0	0	HR	10		M			
	45 70	ZC	75YR46						0	0	HR	15		M			IMP FLINTS
16	0 30	MZCL	75YR43						0	0	HR	4					
	30 48	HZCL	75YR44						0	0	HR	10		M			IMP FLINTS
17	0 27	MZCL	10YR43						2	0	HR	4					
	27 60	HZCL	10YR44						0	0	HR	5		M			
	60 75	C	75YR46						0	0	HR	5		M			
	75 120	C	75YR46	05YR46		C		S	0	0	HR	5		M			
18	0 32	MZCL	75YR43						0	0	HR	4					
	32 52	ZC	75YR44						0	0	CH	5		M		Y	
	52 62	HZCL	10YR46						0	0	CH	30		M		Y	IMP FLINTS
19	0 28	MZCL	10YR43						2	0	HR	4					
	28 40	HZCL	10YR5464						0	0	CH	10		M		Y	
	40 75	HZCL	10YR64						0	0	CH	30		M		Y	IMP FLINTS CHDRIFT
20	0 29	MZCL	10YR42						3	0	HR	7					
	29 50	HZCL	10YR4454						0	0	HR	10		M			
	50 65	C	75YR46	75YR56		C D		S	0	0	HR	5		M			
	65 80	C	05YR46						0	0	HR	10		M			IMP FLINTS
21	0 30	MZCL	75YR43						6	1	HR	10					
	30 47	ZC	75YR44						0	0	CH	5		M			
	47 65	HZCL	10YR46						0	0	CH	20		M		Y	IMP FLINTS
22	0 29	MZCL	75YR43						4	0	HR	7					
	29 64	C	75YR46						0	0	HR	10		M			IMP CHALK
23	0 27	HZCL	10YR4344						4	0	HR	8					
	27 45	C	05YR46						0	0	HR	5		M			
	45 60	C	05YR46						0	0	CH	10		M		Y	
	60 65	C	05YR46						0	0	CH	50		M		Y	
	65 90	CH	10YR81						0	0		0		P		Y	IMP CHALK
24	0 30	HZCL	10YR4344						3	0	HR	5				Y	
	30 45	HZCL	10YR54						0	0	CH	5		M		Y	
	45 80	CH	10YR81						0	0		0		P		Y	IMP CHALK
1P	0 25	HZCL	75YR43						6	1	HR	12				Y	
	25 65	HZCL	75YR44						0	0	CH	35	WDCSAB FR	M		Y	
	65 75	CH	10YR81						0	0	HR	5		P		Y	ROOTS TO 75CM

SAMPLE	DEPTH	TEXTURE	COLOUR	MOTTLES		PED	STONES		STRUCT/ SUBS		SPL	CALC		
				COL	ABUN	CONT	COL	GLE	2	6			LITH	TOT
2P	0 28	HZCL	75YR43					6	1	HR	12	WDCSAB FR		Y
	28 75	CH	10YR81					0	0	CH	5		P	Y
3P	0 22	MZCL	10YR44					3	0	HR	10			
	22 50	HZCL	75YR44					0	0	HR	10	MDCSAB FR M		
	50 64	C	75YR46					0	0	HR	10	STCSAB FR M		
	64 120	C	05YR46					0	0	HR	35	WDCSAB FM M	Y	TOO STONY FOR SP