

A1
Oxfordshire Structure Plan
Land West of Neithrop
Agricultural Land Classification Report
Semi detailed Survey
March 1996

Resource Planning Team
Guildford Statutory Group
ADAS Reading

ADAS Reference 3301/036/96
MAFF Reference EL 33/00838
LUPU Commission 2390

AGRICULTURAL LAND CLASSIFICATION REPORT

OXFORDSHIRE STRUCTURE PLAN LAND WEST OF NEITHROP

INTRODUCTION

1 This report presents the findings of a semi detailed Agricultural Land Classification (ALC) survey on approximately 33 hectares of land between Stratford Road and Withycombe Farm west of Neithrop Banbury in Oxfordshire The survey was carried out during March 1996

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 the Oxfordshire Structure Plan The results of this survey supersede any previous ALC information for this land

3 The work was conducted by members of the Resource Planning Team in the Guildford Statutory Group of ADAS 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 arable use and set aside The areas shown as Other Land comprised scrub

Summary

5 The findings of the survey are shown on the enclosed ALC map The map has been drawn at a scale of 1 10 000 It is accurate at this scale but any enlargement would be misleading

6 The area and proportions of the ALC grades and subgrades on the surveyed land are summarised in Table 1 below

Table 1 Area of grades and other land

Grade/Other land	Area (hectares)	% site area	/ surveyed area
1	5.3	15.8	15.8
2	24.5	72.9	73.4
3a	2.4	7.1	7.2
3b	1.2	3.6	3.6
Other Land	0.2	0.6	
<hr/>			
Total surveyed area	33.4		100.0
<hr/>			
Total site area	33.6	100.0	

7 The fieldwork was conducted at an average density of approximately 1 boring every 2 hectares. A total of 16 borings and two soil pits were described.

8 The majority of the agricultural land on this site has been classified as Grade 2 (very good quality) the key limitation being soil droughtiness. Grade 1 (excellent quality) also occurs in the north where there are no or only very minor limitations to agricultural land use. Along the eastern edge of the site the two small valley features have been mapped as slightly poorer quality land (Subgrade 3a and 3b) due to soil wetness restrictions.

9 The majority of soil profiles comprise very slightly to slightly stony medium clay loam or silty clay loams over distinctly stonier upper subsoils. The lower subsoils are generally heavier but become slightly less stony with depth. In this local climatic regime the combination of deep well drained soils with a moderate to high stone content acts to reduce the amount of profile available water for crops. This land has therefore been mapped as Grade 2 on the basis of a slight drought risk. The soils on the Grade 1 land are similar in texture and drainage status to the Grade 2 land but contain little or no stone.

10 The remaining land comprises moderately to poorly drained loamy over clayey profiles. Wet soils such as these can restrict germination and root development and also affect the timing of cultivations. Therefore this land has been assigned to Subgrade 3a and 3b according to the degree of drainage impedance and the severity of the soil wetness restriction.

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
Grid reference	N/A	SP 433 410
Altitude	m, AOD	145
Accumulated Temperature	day°C (Jan June)	1334
Average Annual Rainfall	mm	705
Field Capacity Days	days	159
Moisture Deficit Wheat	mm	98
Moisture Deficit Potatoes	mm	87

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 (ATO 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 (Climatic Grade 1) However climatic factors can interact with soil properties to influence soil wetness and droughtiness At this location the crop adjusted soil moisture deficits are relatively low thus decreasing the likelihood of soil droughtiness

16 Local climatic factors such as frost risk and exposure are not thought likely to adversely affect agricultural land use on this site

Site

17 The land on this site slopes gently from 154m AOD in the south west corner to 144m AOD in the north There are also two small dry valley features on the eastern edge of the site where the land falls to 140m AOD Gradient and microrelief do not affect agricultural land quality

18 Flooding does not appear to be limiting on this site

Geology and soils

19 The relevant geological sheet (BGS 1978) maps the majority of the site as the Marlstone Bedrock with a small area of Upper Lias Clay towards the north

20 The most recently published soils information for this area (SSEW 1983) maps the Banbury soil association across the entire site These soils are described as well drained brashy fine and coarse loamy ferruginous soils over Irontone Some deep fine loamy over clayey soils with slowly permeable subsoils and slight seasonal waterlogging (SSEW 1983)

Agricultural Land Classification

21 The details of the classification of the site are shown on the attached ALC map and the area statistics of each grade are given in Table 1 page 1

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

Grade 1

23 Excellent quality (Grade 1 agricultural land) has been mapped in the north of the site The soil profiles are typically deep and well drained comprising very slightly stony (2.8% total sandstone) medium clay loam or medium silty clay loam topsoils The subsoils are moderately structured sandy clay loams or heavy silty clay loams which contain slightly less stone (2.5% sandstone) These profiles therefore qualify for Wetness Class 1 Grade 1 (Appendix III) and contain sufficient profile available water for most crops As a result there is no significant limitation to the agricultural land use in this area

Grade 2

24 The majority of the site has been classified as Grade 2 (very good quality land) The soil profiles are typified by soil inspection Pit 1 (Appendix III) and generally comprise well drained very slightly to slightly stony (3 15% total sandstone of which 2 6% is larger than 2cm in diameter) medium clay loam or medium silty clay loam topsoils The upper subsoils range from moderately to very stony (20 15% total sandstone) medium and heavy silty clay loams or sandy clay loams At approximately 55 60cm depth the profile generally became impenetrable to the soil auger However soil Pit 2 revealed a moderately stony (20% total sandstone) heavy clay loam lower subsoil which continues to depth These profiles are generally consistent with Wetness Class I Grade 1 (Appendix III) However in this locally dry climatic regime the combination of soil textures structures and stone contents acts to slightly reduce the amount of profile available water for crops This land has therefore been assigned to Grade 2 on the basis of a minor soil droughtiness limitation

Subgrade 3a

25 A strip of Subgrade 3a (good quality land) occurs on the edge of a dry valley to the east of the site The soil profiles are moderately drained comprising very slightly stony (3 5% total sandstone) medium clay loam topsoils over heavy silty clay loam upper subsoils with 2 3% stone At 45cm depth a poorly structured slowly permeable silty clay lower subsoil occurs which acts to restrict drainage through the profile This land therefore qualifies for Wetness Class III (Appendix III) With the medium textured topsoils the timing of cultivations may also be slightly restricted as trafficking of the land with agricultural equipment or by grazing livestock may lead to structural damage This land is therefore limited to Subgrade 3a as a result of soil wetness

Subgrade 3b

26 A very small area of Subgrade 3b (moderate quality land) has been mapped in a dry valley feature towards the north east of the site The soil profiles are poorly drained comprising very slightly stony (2% total sandstone) medium clay loam topsoils over stone free moderately structured heavy silty clay loam upper subsoils At 40cm depth a poorly structured slowly permeable silty clay occurs This horizon significantly restricts drainage through the profile causing prolonged waterlogging which will limit seed germination and growth Trafficking of the land by farm machinery and grazing livestock may also cause increased damage to the soil structure thus limiting the time in which the land can effectively be used This land has therefore been assessed as Wetness Class IV (Appendix III) Subgrade 3b due to soil wetness and workability restrictions

Helen Goode
Resource Planning Team
Guildford Statutory Group
ADAS Reading

SOURCES OF REFERENCE

British Geological Survey (1978) *Sheet No 201 Banbury* 1 50 000 Series Solid & Drift
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*
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 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.

Wetness Class	Duration of waterlogging ¹
I	The soil profile is not wet within 70 cm depth for more than 30 days in most years ²
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

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).

¹ The number of days is not necessarily a continuous period

² 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

- 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	DCW Deciduous Wood
HTH Heathland	BOG Bog or Marsh	FLW Fallow
PLO Ploughed	SAS Set aside	OTH Other
HRT 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:

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	EX Exposure
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
ST Topsoil Stoniness		

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	SLST	soft oolitic or dolomitic limestone
CH	chalk	FSST	soft, fine grained sandstone
ZR	soft argillaceous or silty rocks	GH	gravel with non porous (hard) stones
MSST	soft medium grained sandstone	GS	gravel with porous (soft) stones
SI	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

SOIL PIT DESCRIPTION

Site Name OXON SP W OF NEITHROP Pit Number 1P

Grid Reference SP40204050
 Average Annual Rainfall 705 mm
 Accumulated Temperature 1334 degree days
 Field Capacity Level 159 days
 Land Use Ploughed
 Slope and Aspect 01 degrees N

HORIZON	TEXTURE	COLOUR	STONES	TOT STONE	LITH	MOTTLES	STRUCTURE	CONSIST	SUBSTRUCTURE	CALC
0 33	MZCL	75YR56 00	2	5	HR					
33 60	MZCL	75YR56 00	0	55	HR				M	
60 120	HCL	10YR58 00	0	20	HR		MDCSAB	FR	M	

Wetness Grade 1
 Wetness Class I
 Gleying cm
 SPL No SPL

Drought Grade 2
 APW 127mm MBW 29 mm
 APP 95 mm MBP 8 mm

FINAL ALC GRADE 2
 MAIN LIMITATION Droughtiness

SOIL PIT DESCRIPTION

Site Name OXON SP W OF NEITHROP P t N mbe 2P

Grid Reference SP43224130 A e age Ann al R f 11 705 mm
 Accumulated Temperat re 1334 degree days
 Field Capacity L vel 159 days
 Land Use Set aside
 Slope and Aspect degrees

HORIZON	TEXTURE	COLOUR	STONES	2	TOT STONE	LITH	MOTTLES	STRUCTURE	CONSIST	SUBSTRUCTURE	CALC
0 25	MCL	75YR44 00	0		2	HR					
25 120	MZCL	75YR46 00	0		5	HR		MDCSAB	FR	M	

Wetness Grade 1
 Wetness Class I
 Gleying cm
 SPL No SPL

Drought Grade 1
 APW 151mm MBW 53 mm
 APP 117mm MBP 30 mm

FINAL ALC GRADE 1
 MAIN LIMITATION

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	SP43304157	SAS			1	1	115	17	110	23	2			1	I85 See 1p
1P	SP40204050	PLO N	01		1	1	127	29	95	8	2		DR	2	At Bo ing 11
2	SP43304140	SAS		040 040	4	3B	96	2	106	19	3A		WE	3B	
2P	SP43224130	SAS			1	1	151	53	117	30	1			1	At Bo ing 3
3	SP43224130	SAS			1	1	155	57	119	32	1			1	
4	SP43304120	SAS			1	1	141	43	112	25	1			1	
5	SP43204100	CER			1	1	83	15	83	4	3A		DR	2	I50 See 1P
6	SP43304090	CER S	02	045 045	3	3A	112	14	109	22	2		WE	3A	
7	SP43304080	CER E	02	070 070	2	2	127	29	118	31	2		WE	2	
8	SP43204070	PLO			1	1	99	1	109	22	3A		DR	2	I65 See 1P
9	SP43404070	PLO NE	02	045 045	3	3A	98	0	101	14	3A		WE	3A	
10	SP43304060	PLO NE	01		1	1	90	8	97	10	3A		DR	2	I65 See 1P
11	SP43204050	PLO N	01		1	1	82	16	84	3	3A		DR	2	I55 See 1P
12	SP43404050	PLO NE	01		1	1	74	24	76	11	3B		DR	2	I55 See 1P
13	SP43304040	PLO			1	1	83	15	85	2	3A		DR	2	I55 See 1P
14	SP43504040	PLO			1	1	76	22	78	9	3B		DR	2	I55 See 1P
15	SP43404030	PLO N	01	058 058	2	2	106	8	115	28	2		WD	2	
16	SP43504020	PLO			1	1	152	54	117	30	1			1	

SAMPLE	DEPTH	TEXTURE	COLOUR	-MOTTLES			PED		STONES			STRUCT/		SUBS		SPL	CALC
				COL	ABUN	CONT	COL	GLE	2	6	LITH	TOT	CONSIST	STR	POR		
1	0 30	mc1	75YR44 00						0	0	HR	5					
	30 85	sc1	10YR46 00						0	0	HR	2		M			Imp Sst
1P	0 33	mzc1	75YR56 00						2	0	HR	5					
	33 60	mzc1	75YR56 00						0	0	HR	55		M			Well Rooted
	60 120	hc1	10YR58 00						0	0	HR	20	MDCSAB	FR M			Well Rooted
2	0 25	mc1	75YR44 00						0	0	HR	2					
	25 40	hzc1	10YR54 00						0	0		0		M			
	40 70	c	10YR62 00	10YR58 00	C			Y	0	0		0		P		Y	
2P	0 25	mc1	75YR44 00						0	0	HR	2					
	25 120	mzc1	75YR46 00						0	0	HR	5	MDCSAB	FR M			Well Rooted
3	0 30	mc1	75YR44 00						0	0	HR	3					
	30 70	hzc1	75YR46 00						0	0	HR	2		M			
	70 120	sc1	10YR54 00						0	0	HR	2		M			
4	0 30	mc1	75YR44 00						0	0	HR	2					
	30 80	sc1	10YR44 00						0	0	HR	2		M			
	80 110	sc1	10YR68 00						0	0	HR	2		M			Imp Sst
5	0 30	mc1	75YR44 00						0	0	HR	5					
	30 50	mc1	75YR46 00						0	0	HR	3		M			Imp Sst
6	0 30	mc1	75YR44 00						0	0	HR	5					
	30 45	hc1	10YR46 00						0	0	HR	3		M			
	45 60	c	10YR62 00	10YR68 00	C		00M00	00	Y	0	0	HR	2		P		Y
	60 85	hc1	75YR46 00						Y	0	0	HR	3		M		Y
7	0 30	mc1	75YR44 00						0	0	HR	3					
	30 50	mc1	75YR46 00						0	0	HR	2		M			
	50 70	msz1	10YR54 00						0	0		0		M			
	70 100	c	10YR62 00	75YR56 00	C			Y	0	0		0		P		Y	
8	0 30	mc1	75YR44 00						0	0	HR	5					
	30 65	hzc1	75YR46 00						0	0	HR	3		M			Imp Sst
9	0 30	mc1	75YR44 00						0	0	HR	3		M			
	30 45	h c1	75YR46 00						0	0	HR	2		M			
	45 80	zc	10YR62 00	75YR56 00	C			Y	0	0	HR	2		P		Y	
10	0 30	mz 1	75YR46 00						4	0	HR	12					
	30 60	h c1	75YR46 00						0	0	HR	20		M			
	60 65	sc1	10YR56 00						0	0	HR	30		M			Imp S t
11	0 30	mzc1	75YR46 00						4	0	HR	12					
	30 50	h c1	75YR46 00						0	0	HR	20		M			
	50 55	sc1	10YR56 00						0	0	HR	30		M			Imp Sst

SAMPLE	DEPTH	TEXTURE	COLOUR	MOTTLES		PED		STONES		STRUCT/ CONSIST	SUBS							
				COL	ABUN	CONT	COL	GLE	2		6	LITH	TOT	STR	POR	IMP	SPL	CALC
12	0 30	mzc1	75YR46 00					6	0	HR	15							
	30 55	sc1	10YR56 00					0	0	HR	30		M					Imp Sst
13	0 30	mzc1	75YR46 00					2	0	HR	10							
	30 50	mzc1	75YR46 56					0	0	HR	20		M					
	50 55	hzc1	75YR56 00					0	0	HR	30		M					Imp S t
14	0 30	mzc1	75YR46 00					3	0	HR	12							
	30 55	sc1	10YR56 00					0	0	HR	30		M					Imp Sst
15	0 30	mzc1	10YR46 00					1	0	HR	5							
	30 58	hzc1	75YR46 00					0	0	HR	5		M					
	58 75	c	10YR62 00	10YR66 00	C			Y	0	0	HR	5		P		Y		Imp Sst
16	0 30	mzc1	75YR46 00					0	0	HR	8							
	30 45	hzc1	75YR46 56					0	0	HR	5		M					
	45 120	hzc1	75YR56 00					0	0	HR	5		M					