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Oxfordshire Structure Plan
Land south west of Banbury
Agricultural Land Classification
Semi detailed Survey
ALC Map and Report
March 1996

Resource Planning Team
Guildford Statutory Group
ADAS Reading

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AGRICULTURAL LAND CLASSIFICATION REPORT

OXFORDSHIRE STRUCTURE PLAN LAND SOUTH WEST OF BANBURY

Introduction

1 This report presents the findings of a semi detailed Agricultural Land Classification (ALC) survey of 23.4 ha of land on the southwest side of Banbury Oxfordshire. The site is divided into two areas which are separated by Crouch Hill. The northerly site is bordered by a minor road to the north, with residential development to the east. The southerly site is bordered by minor roads to the north and east. The survey was carried out in 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 at the site in the north was in winter cereals. At the southerly site the land to the northeast was in cereal stubble and the remaining land to the northwest, south and southeast was in winter cereals.

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
2	3.7	15.8
3b	19.7	84.2
Total surveyed area	23.4	100.0

7 The fieldwork was conducted at an average density of one auger boring every two hectares. A total of 12 borings and 2 soil inspection pits were described.

8 One area of Grade 2 very good agricultural land has been identified in the most southerly part of the south site. The soils found here are similar to those on the adjacent land at Easington (ADAS Ref 3301/033/96). Moderately deep soils overlie marlstone with clay loam topsoils over heavy clay loam or clay subsoils which contain moderate amounts of hard and soft weathered marlstone. The major limitation associated with this area is soil droughtiness due to the moderately high stone content in the profile reducing the available water for plants.

9 The remaining parts of the site have been mapped as moderate agricultural land Subgrade 3b. Deep non calcareous soils overlie Upper Lias Clay. Heavy clay loam topsoils rest directly upon clay subsoils with very few stones. Soil wetness is the main limiting factor due to impeded soil drainage as a result of the slowly permeable clay horizon. Excessive soil wetness adversely affects crop germination and growth and restricts the opportunities for landwork.

Factors Influencing ALC Grade

Climate

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

11 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	Values
Grid reference	N/A	SP 439 390	SP 439 395
Altitude	m, AOD	135	135
Accumulated Temperature	day°C	1346	1346
Average Annual Rainfall	mm	699	699
Field Capacity Days	days	158	158
Moisture Deficit Wheat	mm	99	100
Moisture Deficit Potatoes	mm	89	89

12 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.

13 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

14 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

15 The agricultural land at this site lies at an altitude of 130 140m AOD The majority of the land at both the northerly and southerly sites is flat with slight undulations Nowhere does gradient or microrelief affect the land quality

Geology and soils

16 The published geological information for the sites (BGS 1982) show the northerly site to consist dominantly of Upper Lias Clay with a small section of Marlstone Rock Bed to the west At the southerly site the Upper Lias Clay dominates the entire area

17 The most recently published soil information for the site (SSEW 1983) shows the Denchworth Association to be mapped across the northern site and the majority of the north and central part of the southern site The Banbury Association is mapped to the extreme south of the area The former are described as slowly permeable seasonally waterlogged clayey soils Some fine loamy over clayey soils with only slight seasonal waterlogging and some slowly permeable calcareous clayey soils Land slips and associated irregular terrain locally (SSEW 1983) The latter are said to be well drained brashy fine and coarse loamy ferruginous soils over ironstone Some deep fine loamy over clayey soils with slowly permeable subsoils and slight seasonal waterlogging (SSEW 1983)

18 Detailed field survey broadly confirms the existence of such soils with clayey Denchworth predominating and Banbury soils occurring across the southern most part of the 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 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 III

Grade 2

21 Land of very good quality has been mapped across the most southerly part of the survey area. The principal limitations are soil droughtiness and workability.

22 The soil profiles in the Grade 2 area comprise freely draining medium clay loam and heavy clay loam topsoils overlying stony heavy clay loam and clay subsoils. The soils are non-calcareous and friable. The soils are assessed as Wetness Class 1. The soil inspection pits 1 and 3 at the adjacent site at Easington (ADAS Ref 3301/033/96) show that both the upper and lower subsoils are moderately structured. The soils are impenetrable to the auger at variable depths but the pits show that this was caused by harder sandstone and occasional fragments of ironstone. The sandstone was softer in places (especially at shallower depths) allowing the auger to penetrate it. Stone contents range from 5% to 20% in the upper subsoil to up to 45% in the lower subsoil. The combination of soil texture and the stone content of the soil given the prevailing climatic regime results in a slight droughtiness limitation restricting the land to Grade 2. Soil droughtiness limits the types of crops that can be grown and also reduces crop yields.

Subgrade 3b

23 The Subgrade 3b mapping unit which covers the remaining part of the site is limited by soil wetness. Here heavy clay loam topsoils overlie clay subsoils with little or very few stones. Soils are non-calcareous. Soil inspection pit 1 revealed the upper subsoils to be moderately structured and the lower subsoils to be poorly structured. Inspection pit 2 showed both the upper and lower subsoils to be poorly structured. The subsoil was slowly permeable at shallow depths dominantly within 35cm of the surface. Drainage is thus significantly impeded causing prolonged seasonal waterlogging in the soil profile. As a result crop germination and growth may be adversely affected. The heavier topsoil textures can also restrict the timing of cultivations as trafficking by agricultural machinery or grazing by livestock may lead to structural damage. Wetness Class IV. Subgrade 3b is therefore considered appropriate for this land.

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SOURCES OF REFERENCE

British Geological Survey (1982) Sheet No 201 Banbury 1 63 360 scale (Solid & Drift Edition) BGS London

British Geological Survey (1982) Sheet No 218 Chipping Norton 1 63 360 scale (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*
SSEW Harpenden

Soil Survey of England and Wales (1984) *Soils and their Use in South East England*
SSEW Harpenden

APPENDIX I

DESCRIPTION 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 that 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 (eg 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 that restricts 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 dolimitic 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 OX ST PLAN LAND SW BAN Y Pit Number 1P

Grid Reference SP43903870
 Average Annual Rainfall 699 mm
 Accumulated Temperature 1346 degree days
 Field Capacity Level 158 days
 Land Use Cereals
 Slope and Aspect degrees

HORIZON	TEXTURE	COLOUR	STONES	TOT STONE	LITH	MOTTLES	STRUCTURE	CONSIST	SUBSTRUCTURE	CALC
0 20	HCL	10YR43 00	0	2	HR					
20 35	C	10YR53 00	0	1	HR	C	MDCSAB	FM	M	
35 65	C	10YR53 00	0	0		M	MDCAB	FM	P	

Wetness Grade 3B
 Wetness Class IV
 Gleying 020 cm
 SPL 035 cm

Drought Grade 3A
 APW 89 mm MBW 11 mm
 APP 98 mm MBP 9 mm

FINAL ALC GRADE 3B
 MAIN LIMITATION Wetness

SOIL PIT DESCRIPTION

Site Name OX ST PLAN LAND SW BAN Y Pit Number 2P

Grid Reference SP43803960
 Average Annual Rainfall 699 mm
 Accumulated Temperature 1346 degree days
 Field Capacity Level 158 days
 Land Use Cereals
 Slope and Aspect 01 degrees N

HORIZON	TEXTURE	COLOUR	STONES	2	TOT STONE	LITH	MOTTLES	STRUCTURE	CONSIST	SUBSTRUCTURE	CALC
0	23	HCL	10YR43-00	0	2	HR					
23	40	C	25Y 53 00	0	0		C	MDCAB	FM	P	
40	65	C	25Y 61 00	0	0		M	MDCAB	FM	P	

Wetness Grade 3B
 Wetness Class IV
 Gleying 023 cm
 SPL 023 cm

Drought Grade 3A
 APW 91 mm MBW 9 mm
 APP 103mm MBP 14 mm

FINAL ALC GRADE 3B
 MAIN LIMITATION Wetness

SOIL PIT DESCRIPTION

Site Name OXON SP EASINGTON Pit Number 1P

Grid Reference SP
 Average Annual Rainfall 693 mm
 Accumulated Temperature 1363 degree days
 Field Capacity Level 157 days
 Land Use
 Slope and Aspect 02 degrees E

HORIZON	TEXTURE	COLOUR	STONES	TOT STONE	LITH	MOTTLES	STRUCTURE	CONSIST	SUBSTRUCTURE	CALC
0 30	MCL	75YR34 00	0	10	HR					
30 60	HCL	75YR44 00	25	46	HR		WKCSAB	FR	M	
60 100	HCL	10YR44 00	0	30	HR		MDCOAB	FR	M	
100 120	C	10YR46 00	0	10	HR				M	

Wetness Grade 1
 Wetness Class I
 Gleying cm
 SPL cm

Drought Grade 2
 APW 116mm MBW 15 mm
 APP 88 mm MBP 3 mm

FINAL ALC GRADE 2
 MAIN LIMITATION Droughtiness

SOIL PIT DESCRIPTION

Site Name OXON SP EASINGTON P t N mbe 3P

Grid R f rence Ave ag A 1 R i f 11 693 mm
 Accumulated Tempe at re 1363 degree days
 Field Capacity Level 157 days
 Land Use Cereals
 Slope and Aspect 01 degrees SE

HORIZON	TEXTURE	COLOUR	STONES	TOT STONE	LITH	MOTTLES	STRUCTURE	CONSIST	SUBSTRUCTURE	CALC
0 23	MCL	10YR34 00	1	14	HR					
23 55	HCL	75YR46 00	10	27	HR		WKCSAB	FR	M	
55 120	HCL	75YR46 00	0	30	HR		WKCSAB	FR	M	

Wetness G ade 1 Wetness Class I
 Gleying 000 cm
 SPL No SPL

Drought G de 2 APW 118mm MBW 17 mm
 APP 91 mm MBP 0 mm

FINAL ALC GRADE 2
 MAIN LIMITATION Droughtiness

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	SP43803960	CER N	01	025	025	4	3B	91	9	103	14	3A			WE	3B	
1P	SP43903870	CER		020	035	4	3B	89	11	98	9	3A			WE	3B	
2	SP43903960	CER N	01	025	025	4	3B	87	13	97	8	3A			WE	3B	
2P	SP43803960	CER N	01	023	023	4	3B	91	9	103	14	3A			WE	3B	
3	SP43803950	CER N	02	027	027	4	3B	92	-8	104	15	3A			WE	3B	
4	SP43903950	CER N	05	025	050	3	3B	119	19	110	21	2			WE	3B	
5	SP43903900	CER S	01	020	020	4	3B	89	11	101	12	3A			WE	3B	
6	SP44103900	STB		030	030	4	3B	93	7	105	16	3A			WE	3B	
7	SP44303900	STB		042	055	3	3B	105	5	111	22	2			WE	3B	
8	SP43903870	CER S		028	028	4	3B	93	7	105	16	3A			WE	3B	
9	SP44103870	STB S	01	038	038	4	3B	95	5	103	14	3A			WE	3B	
10	SP43903870	CER S	01	045	045	3	3B	94	6	106	17	3A			WE	3B	
11	SP44103870	CER SE	02			1	2	100	0	108	19	3A			DR	2	Imp 73
12	SP43903860	CER S				1	2	82	18	85	-4	3A			DR	2	Imp 55

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 25	hc1	10YR43 00						0	0	HR	2					
	25-45	c	25Y 53 00	75YR58 00	C		05Y 52 00	Y	0	0		0			P		Y
	45-70	c	05Y 52 00	75YR68 00	M		05Y 52 00	Y	0	0		0			P		Y
1P	0 20	hc1	10YR43 00						0	0	HR	2					
	20 35	c	10YR53 00	10YR46 00	C			Y	0	0	HR	1	MDCSAB	FM	M		
	35 65	c	10YR53 00	10YR46 00	M			Y	0	0		0	MDCAB	FM	P	Y	Y
2	0 25	c	10YR43 00						0	0	HR	3					
	25-45	c	25Y 53 00	75YR58 00	C		05Y 52 00	Y	0	0		0			P		Y
	45-70	zc	05Y 52 00	75YR68 00	M			Y	0	0		0			P		Y
2P	0 23	hc1	10YR43-00						0	0	HR	2					
	23 40	c	25Y 53-00	75YR58	C			Y	0	0		0	MDCAB	FM	P		Y
	40 65	c	25Y 61 00	75YR68	M			Y	0	0		0	MDCAB	FM	P		Y
3	0 27	hc1	10YR43 00						0	0	HR	2					
	27 40	c	25Y 53 00	75YR58 00	C			Y	0	0		0			P		Y
	40 70	c	05Y 52 00	75YR68 00	M			Y	0	0		0			P		Y
4	0 25	hc1	10YR43 00						0	0	HR	2					
	25-35	hc1	10YR53 00	10YR56 00	C			Y	0	0		0			M		
	35 50	mc1	10YR53 00	10YR56 52	M			Y	0	0		0			M		
	50 100	c	25Y 61 00	75YR68 00	M			Y	0	0		0			P		Y
5	0 20	hc1	10YR43 00						0	0		0					
	20 70	c	25 Y52 00	75YR68 00	M			Y	0	0		0			P		Y
6	0 30	hc1	10YR43 00						0	0	HR	2					
	30 70	c	10YR53 00	75YR58 00	C		10YR61 00	Y	0	0		0			P		Y
7	0 28	hc1	10YR43 00						0	0	HR	2					
	28 42	hc1	10YR54 00						0	0	HR	5			M		Y
	42 55	c	10YR53 00	75YR58 00	C			Y	0	0		0			M		
	55 80	c	25 Y62 00	10YR58 00	C			Y	0	0		0			P		Y
8	0 28	hc1	10YR43 00						0	0		0					
	28 70	c	10YR53 00	75YR58 00	C		10YR61 00	Y	0	0		0			P		Y
9	0 25	hc1	10YR43 44						0	0	HR	5					
	25 38	c	10YR44 00						0	0	HR	10			M		
	38 75	c	25 Y53 00	10YR46 00	C			Y	0	0		0			P		Y
10	0 28	hc1	75YR46 00						0	0	HR	5					
	28 45	c	75YR44 00						0	0	HR	5			M		
	45-70	c	25 Y53 00	75YR58 00	C			Y	0	0		0			P		Y
11	0 35	hc1	75YR46 00						0	0	HR	10					
	35 73	hc1	75YR44 00						0	0	HR	10			M		

Imp 73 sst

SAMPLE	DEPTH	TEXTURE	COLOUR	-MOTTLES-			PED	GLEY	STONES		STRUCT/	SUBS						
				COL	ABUN	CONT	COL		2	6	LITH	TOY	CONSIST	STR	POR	IMP	SPL	CALC
12	0 30	hc1	10YR44 54						0	0	HR	5						
	30 50	c	75YR44 00						0	0	HR	15		M				
	50 55	c	75YR44 00						0	0	HR	20		M				Imp 55-sst