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Vale of White Horse Local Plan
Land at Spring Hill, Kingston Bagpuize, Oxfordshire.
Agricultural Land Classification Survey
ALC Map and Report
October 1996.

Resource Planning Team
Guildford Statutory Group
ADAS Reading

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AGRICULTURAL LAND CLASSIFICATION REPORT

VALE OF WHITE HORSE LOCAL PLAN
LAND NORTH OF SPRING HILL, KINGSTON BAGPUIZE, OXFORDSHIRE.

INTRODUCTION

1. This report presents the findings of a detailed Agricultural Land Classification (ALC) survey on 12.1 hectares of land located between Spring Hill, Southmoor, and the A420 trunk road to the west of Kingston Bagpuize, in Oxfordshire. The survey was carried out during July 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 Vale of White Horse Local 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 a barley crop. The areas shown as 'Other Land' include a track crossing the centre of the site and an area in the west of the site which has been planted with trees following recent road building in the area.

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
2	3.4	28.1	29.6
3b	8.1	66.9	70.4
Other Land	0.6	5.0	-
Total surveyed area	11.5	-	100.0
Total site area	12.1	100.0	-

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

8. The agricultural land on this site has been classified as Grade 2 (very good quality) and Subgrade 3b (moderate quality), the key limitation being soil droughtiness in both cases. The area of very good quality is located on the lowest lying land to the east of the site. The soils commonly comprised light loamy topsoils and upper subsoils over a medium silty horizon reverting to light loams at depth. This combination of soils in the local climate leads to a slight restriction in plant water availability such that Grade 2 is appropriate.

9. The land of moderate quality is mapped over the majority of the western part of the site. The soils in this area are deep and sandy with very little stone. The topsoils are either loamy medium sand or medium sand, generally overlying medium sand subsoils. In the prevailing local climate, this combination of sandy soil textures acts to restrict plant available water. Crop growth and yields will therefore be adversely affected, to the extent that in this area Subgrade 3b is 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 below and were obtained from the published 5km grid datasets using standard interpolation procedures (Met. Office, 1989).

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

Table 2: Climatic and altitude data

Factor	Units	Values
Grid reference	N/A	SU 389 979
Altitude	m, AOD	80
Accumulated Temperature	day°C	1429
Average Annual Rainfall	mm	644
Field Capacity Days	days	135
Moisture Deficit, Wheat	mm	110
Moisture Deficit, Potatoes	mm	103

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. Local climatic factors, such as exposure and frost risk, are not believed to significantly affect the site. The site is climatically Grade 1.

Site

16. The site lies at altitudes in the range 80-85m AOD. The land rises from the north east to the south west of the site. None of the slopes on the site are sufficient to affect agricultural land quality.

Geology and soils

17. The published geological information for the area (BGS, 1971) shows the site to be underlain by the sandy development of the Corallian Beds to the west and the silt and sand development to the east

18. The most detailed published soils information for the area (SSEW 1973) shows the site to comprise soils of the Fyfield Series to the west of the site and the Kingston-Longworth complex to the east. The Fyfield profiles are described as being generally stoneless to slightly stony loamy sands or sandy loams over sandy loam or sand. They are well drained and permeable with available water being dependent on the sand content of the profile. The Kingston-Longworth complex soils are similar to the Fyfield soils except that there may be some wetness limitations where groundwater is high or slowly permeable clay horizons occur. The soils encountered at the site were found to be similar to those described.

Agricultural Land Classification

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

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

Grade 2

21. Land of very good quality extends across the eastern third of the site in a single unit. The principal limitation in this area is soil droughtiness.

22. Soils in this mapping unit comprise a stoneless, non-calcareous medium sandy loam topsoil and upper subsoil, the subsoil horizon is gleyed or slightly gleyed. These commonly pass to a moderately stony (20% v/v total soft limestone), calcareous, gleyed medium silty clay loam horizon which was found to be slowly permeable in the pit described in this unit, 2P. In the pit, this horizon passes to a similarly stony medium sandy loam at 88cm and a stoneless fine sandy silt loam from 115cm to depth. At other observations, the lower subsoil was variable. These moderately well drained profiles (Wetness Class II, Grade 1) are principally limited by soil droughtiness. The sandy textures and subsoil stone content of the majority of the profiles examined cause the water retaining capability of the soil to be reduced to a level where, given the local climatic factors, Grade 2 is appropriate due to a soil droughtiness

limitation which can affect plant growth and yield. One of the profiles examined in this area was of a slightly better quality, being relatively stone free to 120cm.

Subgrade 3b

23. Land of moderate quality has been mapped across the remainder of the site to the west. The principal limitation is soil droughtiness.

24. Soils in this area commonly comprise loamy medium sands and medium sands in the topsoil and subsoil to depth (120cm). At the majority of observations the soils were stoneless, non-calcareous and showed no evidence of wetness. These well drained profiles (Wetness Class I) are limited by soil droughtiness. The coarse textures in the profiles examined cause the water retaining capability of the soil to be reduced to a level where, given the local climatic factors, Subgrade 3b is appropriate due to a soil droughtiness limitation which can affect plant growth and yield. The pit description 1P, is indicative of this soil type at this site.

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SOURCES OF REFERENCE

British Geological Survey (1981) *Sheet 253, Abingdon. Solid and Drift Edition. 1:63 360. Scale.*
BGS: London.

Ministry of Agriculture, Fisheries and Food (1988) *Agricultural Land Classification of England and Wales: Revised guidelines and criteria for grading the quality of agricultural land.*
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Meteorological Office (1989) *Climatological Data for Agricultural Land Classification.*
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Soil Survey of England and Wales (1973) *Soils of the Wantage and Abingdon District. 1:63 360 Scale.*
SSEW: Harpenden.

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

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

APPENDIX I

DESCRIPTIONS OF THE GRADES AND SUBGRADES

Grade 1: Excellent Quality Agricultural Land

Land with no or very minor limitations to agricultural use. A very wide range of agricultural and horticultural crops can be grown and commonly includes top fruit, soft fruit, salad crops and winter harvested vegetables. Yields are high and less variable than on land of lower quality.

Grade 2: Very Good Quality Agricultural Land

Land with minor limitations which affect crop yield, cultivations or harvesting. A wide range of agricultural or horticultural crops can usually be grown but on some land of this grade there may be reduced flexibility due to difficulties with the production of the more demanding crops such as winter harvested vegetables and arable root crops. The level of yield is generally high but may be lower or more variable than Grade 1 land.

Grade 3: Good to Moderate Quality Land

Land with moderate limitations which affect the choice of crops, the timing and type of cultivation, harvesting or the level of yield. When more demanding crops are grown, yields are generally lower or more variable than on land in Grades 1 and 2.

Subgrade 3a: Good Quality Agricultural Land

Land capable of consistently producing moderate to high yields of a narrow range of arable crops, especially cereals, or moderate yields of a wide range of crops including cereals, grass, oilseed rape, potatoes, sugar beet and the less demanding horticultural crops.

Subgrade 3b: Moderate Quality Agricultural Land

Land capable of producing moderate yields of a narrow range of crops, principally cereals and grass, or lower yields of a wider range of crops or high yields of grass which can be grazed or harvested over most of the year.

Grade 4: Poor Quality Agricultural Land

Land with severe limitations which significantly restrict the range of crops and/or the level of yields. It is mainly suited to grass with occasional arable crops (e.g. cereals and forage crops) the yields of which are variable. In moist climates, yields of grass may be moderate to high but there may be difficulties in utilisation. The grade also includes very droughty arable land.

Grade 5: Very Poor Quality Agricultural Land

Land with severe limitations which restrict use to permanent pasture or rough grazing, except for occasional pioneer forage crops.

APPENDIX II

SOIL WETNESS CLASSIFICATION

Definitions of Soil Wetness Classes

Soil wetness is classified according to the depth and duration of waterlogging in the soil profile. Six soil wetness classes are identified and are defined in the table below.

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:

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. **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	**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 : VOWH LP KINGSTON BAGPUIZ Pit Number : 1P

Grid Reference: SU38809790 Average Annual Rainfall : 644 mm
Accumulated Temperature : 1429 degree days
Field Capacity Level : 135 days
Land Use : Barley
Slope and Aspect : degrees

HORIZON	TEXTURE	COLOUR	STONES >2	TOT.STONE	LITH	MOTTLES	STRUCTURE	CONSIST	SUBSTRUCTURE	CALC
0- 33	LMS	10YR42 00	0	1	HR					
33- 64	LMS	10YR54 56	0	0			MDCAB	VM	M	
64- 78	MS	10YR58 68	0	0			MDCSAB	FR	G	
78-120	MS	10YR66 58	0	0			WKCSAB	VF	M	

Wetness Grade : 1 Wetness Class : I
Gleying : cm
SPL : cm

Drought Grade : 3B APW : 75 mm MBW : -35 mm
APP : 60 mm MBP : -43 mm

FINAL ALC GRADE : 3B
MAIN LIMITATION : Droughtiness

SOIL PIT DESCRIPTION

Site Name : VOWH LP KINGSTON BAGPUIZ Pit Number : 2P

Grid Reference: SU39209810 Average Annual Rainfall : 644 mm
Accumulated Temperature : 1429 degree days
Field Capacity Level : 135 days
Land Use : Barley
Slope and Aspect : degrees

HORIZON	TEXTURE	COLOUR	STONES >2	TOT.STONE	LITH	MOTTLES	STRUCTURE	CONSIST	SUBSTRUCTURE	CALC
0- 33	MSL	10YR43 44	0	0						
33- 64	MSL	10YR54 00	0	0		C	MDCAB	FR	M	
64- 88	MZCL	05Y 61 00	0	20	SLST	C	MASSIV	FM	P	Y
88-115	MSL	10YR64 62	0	20	SLST	C	WKCSAB	FR	G	Y
115-120	FSZL	05Y 51 00	0	0		C			M	Y

Wetness Grade : 1 Wetness Class : II
Gleying : 64 cm
SPL : 64 cm

Drought Grade : 2 APW : 147mm MBW : 37 mm
APP : 109mm MBP : 6 mm

FINAL ALC GRADE : 2
MAIN LIMITATION : Droughtiness

SAMPLE NO.	GRID REF	USE	ASPECT	GRONT	--WETNESS-- GLEY	SPL	CLASS	GRADE	-WHEAT- AP	MB	-POTS- AP	MB	M.REL DRT	FLOOD	EROSN EXP	FROST DIST	CHEM LIMIT	ALC	COMMENTS
1	SU39209820	BAR			30	100	2	1	161	51	113	10	1					1	
1P	SU38809790	BAR					1	1	75	-35	60	-43	3B				DR	3B	PIT 85 AUG 120
2	SU39109810	BAR	NE	2	50		1	1	76	-34	57	-46	3B				DR	3B	
2P	SU39209810	BAR			64	64	2	1	147	37	109	6	2				DR	2	PIT95 SLGLEY33
3	SU39209810	BAR			60	60	2	1	157	47	108	5	2				DR	2	SL GLEY 28
4	SU38909800	BAR					1	1	73	-37	56	-47	3B				DR	3B	
5	SU39009800	BAR	E	1	70		1	1	74	-36	54	-49	3B				DR	3B	
6	SU39109800	BAR	E	1	55	95	1	1	152	42	111	8	2				DR	2	SL GLEY 30
7	SU38809790	BAR	E	1			1	1	71	-39	54	-49	3B				DR	3B	
8	SU38909790	BAR					1	1	49	-61	54	-49	4				DR	3B	IMP STONES 70
9	SU39009790	BAR					1	1	69	-41	53	-50	3B				DR	3B	
10	SU38709780	BAR					1	1	71	-39	54	-49	3B				DR	3B	
11	SU38809780	BAR	E	1			1	1	74	-36	59	-44	3B				DR	3B	

SAMPLE	DEPTH	TEXTURE	COLOUR	----MOTTLES----- COL	ABUN	CONT	PED COL.	GLEY	----STONES---- >2	>6	LITH	TOT	STRUCT/ CONSIST	SUBS STR	POR	IMP	SPL	CALC	
1	0-30	msl	10YR44 00						0	0		0							
	30-45	msl	10YR44 54	10YR58 00	C		00MN00 00	Y	0	0		0		M					
	45-100	msl	10YR64 00	10YR66 76	C		00MN00 00	Y	0	0	SLST	10		G				Y	
	100-120	mzcl	05Y 61 00	10YR56 66	C			Y	0	0	SLST	5		M				Y	
1P	0-33	lms	10YR42 00						0	0	HR	1							PIT 85 AUG 120
	33-64	lms	10YR54 56						0	0		0	MDCAB VM	M					
	64-78	ms	10YR58 68						0	0		0	MDCSAB FR	G					
	78-120	ms	10YR66 58						0	0		0	WKCSAB VF	M					
2	0-30	lms	10YR42 00						0	0		0							
	30-50	ms	10YR54 56						0	0		0		M					
	50-90	lms	10YR53 54	10YR56 00	C		00MN00 00	Y	0	0		0		M					
	90-120	lms	10YR53 54	75YR56 00	M		00MN00 00	Y	0	0		0		M					
2P	0-33	msl	10YR43 44						0	0		0							PIT 95 AUG 120
	33-64	msl	10YR54 00	10YR56 00	C		00MN00 00	S	0	0		0	MDCAB FR	M					SLIGHTLY GLEYED
	64-88	mzcl	05Y 61 00	10YR66 00	C		00MN00 00	Y	0	0	SLST	20	MASSIV FM	P	Y		Y	Y	
	88-115	msl	10YR64 62	10YR66 76	C			Y	0	0	SLST	20	WKCSAB FR	G				Y	
	115-120	fszl	05Y 51 00	10YR56 00	C			Y	0	0		0		M				Y	
3	0-28	msl	10YR44 00						0	0		0							
	28-60	msl	10YR44 54	10YR56 00	C		00MN00 00	S	0	0		0		M					SLIGHTLY GLEYED
	60-75	mzcl	05Y 61 00	10YR56 00	C		00MN00 00	Y	0	0		0		P			Y	Y	
	75-100	msl	10YR64 62	10YR66 68	M			Y	0	0	HR	5		M				Y	
	100-120	fszl	05Y 51 00	10YR56 00	C			Y	0	0		0		M				Y	
4	0-35	lms	10YR42 00						0	0		0							
	35-70	ms	10YR56 00						0	0		0		G					
	70-120	ms	10YR58 66						0	0		0		M					
5	0-30	lms	10YR42 00						0	0		0							
	30-70	ms	10YR46 56						0	0		0		G					
	70-120	lms	10YR63 00	10YR58 00	M		00MN00 00	Y	0	0		0		M					
6	0-30	msl	10YR44 00						0	0		0							
	30-55	msl	10YR44 54	10YR56 00	C		00MN00 00	S	0	0		0		M					SLIGHTLY GLEYED
	55-95	scl	10YR53 54	10YR56 00	M		00MN00 00	Y	0	0		0		M					
	95-120	hzcl	05Y 51 00	10YR66 00	C			Y	0	0		0		M			Y	Y	
7	0-25	lms	10YR42 00						0	0		0							
	25-45	lms	10YR44 00						0	0		0		M					
	45-70	ms	10YR56 00						0	0		0		G					
	70-120	ms	10YR66 58						0	0		0		M					
8	0-25	ms	10YR42 00						0	0		0							
	25-45	ms	10YR43 00						0	0	SLST	5		M				Y	
	45-65	lms	10YR56 00						0	0	SLST	5		M				Y	
	65-70	msl	10YR56 81	00MN00 00	M				0	0	SLST	40		M				Y	IMP 70 STONES

SAMPLE	DEPTH	TEXTURE	COLOUR	MOTTLES COL	MOTTLES ABUN	MOTTLES CONT	PED COL.	GLEY	STONES >2	STONES >6	STONES LITH	STONES TOT	STRUCT/ CONSIST	SUBS STR	SUBS POR	SUBS IMP	SUBS SPL	SUBS CALC
9	0-28	lms	10YR42 00						0	0		0						
	28-50	ms	10YR43 00						0	0		0		G				
	50-100	ms	10YR56 00						0	0		0		G				
	100-120	ms	10YR66 76						0	0		0		M				
10	0-30	ms	10YR42 00						0	0		0						
	30-50	lms	10YR56 00						0	0		0		M				
	50-80	ms	10YR58 00						0	0		0		G				
	80-120	ms	10YR66 68						0	0		0		M				
11	0-28	lms	10YR42 00						0	0		0						
	28-65	lms	10YR56 00						0	0		0		M				
	65-85	ms	10YR58 00						0	0		0		G				
	85-120	ms	10YR66 68						0	0		0		M				