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Isle of Thanet Local Plan
Site 1 Laundry Road/
Hazeldene Farm, Minster
ALC Map and Report
December 1994

AGRICULTURAL LAND CLASSIFICATION REPORT

ISLE OF THANET LOCAL PLAN

SITE 1 LAUNDRY ROAD/HAZELDENE FARM, MINSTER

1 Summary

- 1.1 ADAS was commissioned by MAFF's Land Use Planning Unit to provide information on land quality for a number of sites in the Thanet district of Kent. The work forms part of MAFF's statutory input to the preparation of the Isle of Thanet Local Plan.
- 1.2 Site 1 comprises 26.6 hectares of land to the west of Laundry Road and to the south of the A253 in Minster, Kent. This site was the subject of a previous survey carried out in April 1988 (ADAS Ref 2012/004B/88) to assess agricultural land quality. This survey was however carried out prior to the revision of MAFF's guidelines and criteria for grading the quality of agricultural land (MAFF 1988) which came into effect on 1 January 1989. Consequently the land was re-evaluated during December 1994 when 17 borings and two soil inspection pits were described in accordance with the revised guidelines. These guidelines provide a framework for classifying land according to the extent to which its physical or chemical characteristics impose a long term limitation on its use for agriculture.
- 1.3 The work was carried out by members of the Resource Planning Team in the Guildford Statutory Group of ADAS.
- 1.4 At the time of the survey the land use was a mixture of ploughed land and lettuce beds. An area in the north of the site was not surveyed because permission to enter onto the land was not sought.
- 1.5 The distribution of grades and subgrades is shown on the attached ALC map and the areas are given in the table below. These results supersede the earlier 1988 survey. The map has been drawn at a scale of 1:10,000. It is accurate at this scale but any enlargement would be misleading.

Table 1 Distribution of Grades and Subgrades

Grade	Area (ha)	% of Site	% of Agricultural Land
2	9.0	33.8	41.5
3a	12.7	47.7	<u>58.5</u>
Not surveyed	<u>4.9</u>	<u>18.5</u>	100.0 (21.7 ha)
Total area of site	26.6	100.0	

- 1.6 Appendix I gives a general description of the grades, subgrades and land use categories identified in the survey. The main classes are described in terms of the type of limitation that can occur, the typical cropping range and the expected level and consistency of yield.

1 7 The previous survey classified the site as predominantly Grade 2 land very good quality with an area of Grade 1 land excellent quality to the south of the Laundry. A smaller area of Subgrade 3a land good quality was found to the south west of the Laundry. At that time land classified as Grade 2 typically comprised silt loam or medium silty clay loam topsoils over similarly textured subsoils which passed into chalk or chalky rubble at approximately 55-70 cm depth. Such land was assigned to Grade 2 on the basis of a slight soil droughtiness limitation. Where the chalk or chalky rubble occurred at shallower depths typically 40-45 cm depth this land was assigned to Subgrade 3a. Where no chalk was observed this land was classified as Grade 1.

1 8 The recent (December 1994) survey confirmed very similar soils to those described above. However applying the revised ALC criteria which have more refined droughtiness (and wetness) criteria compared with the earlier guidelines the site has been classified as Grade 2 and Subgrade 3a because of slight and moderate soil droughtiness limitations respectively. Land classified as Grade 2 found on the flatter lower lying land on the site comprises deep silty textured soils. However because the local climate at this site is particularly dry in a national context the interaction between the soils and climatic regime acts to cause a minor soil droughtiness limitation. This results in the soil available water being insufficient to fully meet crop needs. Land assigned to Subgrade 3a comprises silty and loamy textured soils over chalk at varying depth. In comparison to land classified as Grade 2 the underlying chalk means that these profiles have less moisture available for uptake by crop roots.

2 Climate

2 1 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.

2 2 The main parameters used in the assessment of an overall climatic limitation are average annual rainfall as a measure of overall wetness and accumulated temperature (degree days Jan-June) as a measure of the relative warmth of a locality.

2 3 A detailed assessment of the prevailing climate was made by interpolation from a 5km gridpoint dataset (Met Office 1989). The details are given in the table on the next page and these show that there is no overall climatic limitation affecting the site. However climatic factors do interact with soil properties to influence soil wetness and droughtiness. At this locality the climate is particularly dry in a regional and national context. Low field capacity days and corresponding high soil moisture deficits will act to reduce the likelihood of soil wetness problems whilst enhancing the possibility of soil droughtiness limitations.

2 4 No local climatic factors such as exposure or frost risk are believed to affect the site.

Table 2 Climatic Interpolations

Grid Reference	TR315650	TR314655
Altitude (m)	20	45
Accumulated Temperature (degree days Jan June)	1467	1439
Average Annual Rainfall (mm)	615	613
Field Capacity (days)	123	123
Moisture Deficit Wheat (mm)	125	123
Moisture Deficit Potatoes (mm)	123	120
Overall Climatic Grade	1	1

3 Relief

3 1 In the north of the site the land lies at an altitude of approximately 50 m AOD. The site falls gently in a southerly direction through gradients of 1:3° to flatten out north of Torrington Cottages to lie at about 20 to 25 m AOD. Nowhere on the site does gradient or relief impose any limitation to agricultural land quality.

4 Geology and Soil

4 1 British Geological Survey (1980) Sheet 274 shows most of the site to be underlain by Upper Chalk with a thin strip of Thanet Beds mapped adjacent to the southern site boundary. Drift deposits of head brickearth are mapped across the southern third of the site.

4 2 The published Soil Survey map (SSEW 1980) shows the northern half of the site to comprise argillic brown earths. These soils are described as silty soils in brickearth associated with loamy soils in Thanet and Woolwich Beds free drainage locally with slight impedance (SSEW 1980). Across the remaining area brown calcareous earths are shown. These soils are described as variably chalky and flinty soils in head associated with shallow chalky soils over chalk free drainage (SSEW 1980).

4 3 Detailed field examination found the soils on the site to comprise well drained calcareous silty clay loams and clay loams overlying chalky drift and chalk at varying depths.

5 Agricultural Land Classification

5 1 Table 1 provides the details of the area measurements for each grade and the distribution of each grade is shown on the attached ALC map.

5 2 The location of the soil observation points are shown on the attached sample point map.

Grade 2

- 5 3 Land classified as very good quality is restricted by a minor soil droughtiness limitation. This land occurs on the flatter lower lying part of the site which is covered by the drift deposits of head brickearth. Profiles typically comprise non-calcareous medium silty clay loam topsoils. These overlie similarly textured or occasionally heavy clay loam subsoils which sometimes pass into silt loam lower subsoils at about 80 to 105 cm depth. Profiles are well drained (Wetness Class I) and are stoneless to very slightly stony throughout containing approximately 0-2% total flints and/or chalk fragments by volume. Subsoils are only calcareous where chalk fragments are present within the horizon. Although these soil textures retain relatively high amounts of soil available water for uptake by crop roots the prevailing local climate is very dry in a national context. The interaction between these soil properties and the dry climatic regime (i.e. high soil moisture deficits) gives rise to land which is slightly droughty. Moisture balance figures indicate that there is likely to be a slight restriction in soil water available throughout the growing season. Consequently crops particularly those which are more shallow rooting such as potatoes may suffer slight drought stress. The level and consistency of crop yields may thus be affected.

Subgrade 3a

- 5 4 Land classified as good quality is restricted by moderate soil droughtiness limitations. Profiles typically comprise calcareous medium silty clay loam and medium clay loam topsoils containing 0-2% total flints by volume. These overlie well drained (Wetness Class I) similarly textured or heavy clay loam subsoils which contain 1-10% total flints by volume. At approximately 45 to 75 cm depth these profiles pass into chalky (i.e. 10-30% total chalk fragments by volume) horizons. These chalky horizons overlie chalk at about 65 to 85 cm depth. Pits 1 and 2 represent such profiles. Inspection of these pits found rooting by crops into the chalk substratum to be severely restricted due to the very hard and compact nature of the chalk. The interaction between this restricted rooting and the chalky lower subsoils with the very dry local climate gives rise to land which is moderately droughty. Moisture balance figures indicate that there is a moderate restriction in soil available water throughout the growing season such that crops may suffer from drought stress. The level and consistency of crop yields may be moderately affected as a result.

ADAS Ref 2012/168/94
MAFF Ref EL 20/248

Resource Planning Team
Guildford Statutory Group
ADAS Reading

SOURCES OF REFERENCE

British Geological Survey (1980) Sheet No 274 Ramsgate 1 50 000 Series (solid and drift edition)

MAFF (1988) Agricultural Land Classification of England and Wales Revised guidelines and criteria for grading the quality of agricultural land

Meteorological Office (1989) Climatological Data for Agricultural Land Classification

Soil Survey of England and Wales (1980) Bulletin No 9 Soils of Kent and accompanying maps at 1 250 000

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 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 (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 which restrict use to permanent pasture or rough grazing, except for occasional pioneer forage crops.

Urban

Built-up or 'hard' uses with relatively little potential for a return to agriculture including housing industry commerce education transport religious buildings cemeteries Also hard-surfaced sports facilities permanent caravan sites and vacant land all types of derelict land including mineral workings which are only likely to be reclaimed using derelict land grants

Non-agricultural

'Soft' uses where most of the land could be returned relatively easily to agriculture including private parkland public open spaces sports fields allotments and soft surfaced areas on airports Also active mineral workings and refuse tips where restoration conditions to 'soft after-uses may apply

Woodland

Includes commercial and non commercial woodland A distinction may be made as necessary between farm and non-farm woodland

Agricultural Buildings

Includes the normal range of agricultural buildings as well as other relatively permanent structures such as glasshouses Temporary structures (eg polythene tunnels erected for lambing) may be ignored

Open Water

Includes lakes ponds and rivers as map scale permits

Land Not Surveyed

Agricultural land which has not been surveyed

Where the land use includes more than one of the above eg buildings in large grounds and where map scale permits the cover types may be shown separately Otherwise the most extensive cover type will be shown

APPENDIX II

FIELD ASSESSMENT OF SOIL WETNESS CLASS

SOIL WETNESS CLASSIFICATION

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.

Definition of Soil Wetness Classes

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

Soils can be allocated to a wetness class on the basis of quantitative data recorded over a period of many years or by the interpretation of soil profile characteristics, site and climatic factors. Adequate quantitative data will rarely be available for ALC surveys and therefore the interpretative method of field assessment is used to identify soil wetness class in the field. The method adopted here is common to ADAS and the SSLRC.

¹The number of days specified is not necessarily a continuous period

²In most years is defined as more than 10 out of 20 years

APPENDIX III

SOIL PIT AND SOIL BORING DESCRIPTIONS

Contents

Soil Abbreviations - explanatory note

Database Printout - soil pit information

Database Printout - boring level information

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 ISLE OF THANET LP SITE 1 Pit Number 1P

Grid Reference TR31636555 Average Annual Rainfall 612 mm
 Accumulated Temperature 1456 degree days
 Field Capacity Level 123 days
 Land Use Ploughed
 Slope and Aspect 01 degrees S

HORIZON	TEXTURE	COLOUR	STONES >2	TOT STONE	LITH	MOTTLES	STRUCTURE	CONSIST	SUBSTRUCTURE	CALC
0- 35	MZCL	10YR42 00	0	2	HR					Y
35- 55	MCL	10YR54 00	0	3	HR		MDCSAB	FR	M	Y
55- 80	MCL	10YR64 00	0	30	CH		MDCSAB	FR	M	Y
80- 85	CH	10YR81 00	0	2	HR				P	Y

Wetness Grade 1 Wetness Class I
 Gleying cm
 SPL No SPL

Drought Grade 3A APW 120mm MBW -4 mm
 APP 118mm MBP -4 mm

FINAL ALC GRADE 3A
 MAIN LIMITATION Droughtiness

SOIL PIT DESCRIPTION

Site Name ISLE OF THANET LP SITE 1 Pit Number 2P

Grid Reference TR31606530 Average Annual Rainfall 612 mm
 Accumulated Temperature 1456 degree days
 Field Capacity Level 123 days
 Land Use Horticultural Crops
 Slope and Aspect 03 degrees S

HORIZON	TEXTURE	COLOUR	STONES >2	TOT STONE	LITH	MOTTLES	STRUCTURE	CONSIST	SUBSTRUCTURE	CALC
0- 35	MCL	10YR42 00	0	2	HR					Y
35- 72	HCL	10YR54 00	0	10	HR		MDCSAB	FR	M	Y
72- 92	MCL	10YR64 00	0	10	CH		WKCSAB	FR	M	Y
92- 95	CH	10YR81 00	0	3	HR				P	Y

Wetness Grade 1 Wetness Class I
 Gleying cm
 SPL No SPL

Drought Grade 3A APW 125mm MBW 1 mm
 APP 113mm MBP -9 mm

FINAL ALC GRADE 3A
 MAIN LIMITATION Droughtiness

SAMPLE NO	GRID REF	ASPECT USE	GRDNT	--WETNESS--		-WHEAT		-POTS-		M REL		EROSN	FROST	CHEM	ALC	COMMENTS
				GLEY	SPL	CLASS	GRADE	AP	MB	AP	MB	DRT	FLOOD	EXP	DIST	
1	TR31606560	PLO S	01	1	1	131	7	124	2	2				DR	2	S1 gley 50
1P	TR31636555	PLO S	01	1	1	120	4	118	-4	3A				DR	3A	Chalk 80
2	TR31706560	PLO S	01	1	1	123	-1	123	1	3A				DR	3A	Chalk 80
2P	TR31606530	HRT S	03	1	1	125	1	113	-9	3A				DR	3A	Chalk 92
3	TR31606550	PLO S	01	1	1	131	7	124	2	2				DR	2	Chalk 88
4	TR31706552	PLO S	01	1	1	120	4	125	3	3A				DR	3A	Imp 75 chalk
5	TR31306550	PLO S	02	1	1	106	18	115	-7	3A				DR	3A	Imp 65 chalk
6	TR31406550	PLO S	02	1	1	118	-6	123	1	3A				DR	3A	Imp 75 chalk
7	TR31356540	HRT S	03	1	1	142	18	112	-10	2				DR	2	Dr = 2/3a
8	TR31456540	HRT S	03	1	1	129	5	118	-4	2				DR	2	Imp 100 chalk
9	TR31306530	HRT S	03	1	1	107	-17	115	-7	3A				DR	3A	Imp 70 chalk
10	TR31406530	HRT S	03	1	1	101	-23	110	-12	3B				DR	3B	Imp 65 chalk
11	TR31506530	HRT S	03	1	1	128	4	117	-5	3A				DR	3A	Imp 90 chalk
12	TR31606530	HRT S	03	1	1	124	0	118	-4	3A				DR	3A	Imp 85 chalk
13	TR31406510	PLO		1	1	167	43	123	1	2				DR	2	No chalk
14	TR31606510	PLO S	01	1	1	178	54	126	4	2				DR	2	No chalk
15	TR31406500	PLO		1	1	163	39	127	5	2				DR	2	No chalk
16	TR31456492	PLO		1	1	160	36	125	3	2				DR	2	No chalk
17	TR31556495	PLO		1	1	162	38	126	4	2				DR	2	No chalk

SAMPLE	DEPTH	TEXTURE	COLOUR	---MOTTLES---			PED		----STONES--			-- STRUCT/		SUBS		SPL	CALC
				COL	ABUN	CONT	COL	GLEY	>2	>6	LITH	TOT	CONSIST	STR	POR		
1	0-33	mzc1	10YR42 00						0	0	HR	1					Y
	33-50	hzc1	10YR54 00						0	0	HR	1		M			Y
	50-65	hzc1	10YR54 00	75YR58 00 C				S	0	0	HR	1		M			Y
	65-75	c	10YR54 00	75YR58 00 C			00MN00	00 S	0	0	HR	1		M			Y
	75-90	hzc1	10YR74 00						0	0	CH	30		M			Y
	90-95	ch	10YR81 00						0	0		0		P			Y
1P	0-35	mzc1	10YR42 00						0	0	HR	2					Y
	35-55	mc1	10YR54 00						0	0	HR	3	MDCSAB	FR	M		Y
	55-80	mc1	10YR64 00						0	0	CH	30	MDCSAB	FR	M		Y
	80-85	ch	10YR81 00						0	0	HR	2		P			Y
2	0-33	mzc1	10YR42 00						0	0	HR	1					Y
	33-60	mzc1	10YR54 00						0	0	CH	2		M			Y
	60-80	mzc1	10YR74 00						0	0	CH	20		M			Y
	80-85	ch	10YR81 00						0	0		0		P			Y
2P	0-35	mc1	10YR42 00						0	0	HR	2					Y
	35-72	hc1	10YR54 00						0	0	HR	10	MDCSAB	FR	M		Y
	72-92	mc1	10YR64 00						0	0	CH	10	WKCSAB	FR	M		Y
	92-95	ch	10YR81 00						0	0	HR	3		P			Y
3	0-32	mzc1	10YR42 00						0	0	HR	1					Y
	32-50	mzc1	10YR54 00						0	0	HR	1		M			Y
	50-70	mzc1	10YR64 00						0	0	CH	5		M			Y
	70-88	mzc1	10YR74 00						0	0	CH	15		M			Y
	88-93	ch	10YR81 00						0	0		0		P			Y
4	0-35	mzc1	10YR42 00						0	0		0					Y
	35-55	mzc1	10YR54 00						0	0	CH	1		M			Y
	55-70	mzc1	10YR74 00						0	0	CH	5		M			Y
	70-75	mzc1	10YR74 00						0	0	CH	10		M			Y
	75-80	ch	10YR81 00						0	0	HR	3		P			Y
																	Imp 75 chalk
5	0-33	mzc1	10YR42 00						0	0	HR	2					Y
	33-45	mzc1	10YR54 64						0	0	CH	5		M			Y
	45-65	mc1	10YR74 00						0	0	CH	30		M			Y
	65-70	ch	10YR81 00						0	0	HR	3		P			Y
																	Imp 65 chalk
6	0-37	mzc1	10YR42 00						0	0	HR	2					Y
	37-75	mzc1	10YR74 00						0	0	CH	10		M			Y
	75-80	ch	10YR81 00						0	0	HR	3		P			Y
																	Imp 75 chalk
7	0-35	mc1	10YR43 00						0	0	HR	2					Y
	35-60	hc1	10YR54 00						0	0	HR	10		M			Y
	60-95	mc1	10YR64 00						0	0	CH	30		M			Y
	95-120	mc1	10YR64 00						0	0	CH	50		P			Y

SAMPLE	DEPTH	TEXTURE	COLOUR	----MOTTLES----			PED COL	-- -STONES----			STRUCT/ CONSIST	SUBS			SPL	CALC
				COL	ABUN	CONT		GLEYS	>2	6		LITH	TOT	STR		
8	0-35	mzc1	10YR43 00					0	0	HR	2					Y
	35-50	mc1	10YR44 00					0	0	HR	2		M			Y
	50-90	c	10YR54 00					0	0	HR	10		M			Y
	90-100	c	10YR54 64					0	0	CH	25		M			Y
	100-105	ch	10YR81 00					0	0	HR	3		P			Y Imp 100 chalk
9	0-35	mc1	10YR42 00					0	0	HR	2					Y
	35-55	hc1	10YR54 00					0	0	HR	3		M			Y
	55-70	mc1	10YR63 00					0	0	CH	25		M			Y
	70-75	ch	10YR81 00					0	0	HR	3		P			Y Imp 70 chalk
10	0-35	mc1	10YR42 00					0	0	HR	2	N				Y
	35-55	hc1	10YR54 00					0	0	HR	10		M			Y
	55-65	mc1	10YR63 00					0	0	CH	20		M			Y
	65-70	ch	10YR81 00					0	0	HR	3		P			Y Imp 65 chalk
11	0-38	mc1	10YR42 00					0	0	HR	2					Y
	38-80	hc1	10YR54 00					0	0	HR	2		M			Y
	80-90	hc1	10YR54 00					0	0	CH	25		M			Y
	90-95	ch	10YR81 00					0	0	HR	3		P			Y Imp 90 chalk
12	0-40	mc1	10YR42 00					0	0	HR	2					Y
	40-65	hc1	10YR54 00					0	0	HR	2		M			Y
	65-85	hc1	10YR54 00					0	0	CH	10		M			Y
	85-90	ch	10YR81 00					0	0	HR	3		P			Y Imp 85 chalk
13	0-37	mzc1	10YR42 00					0	0		0					
	37-80	hc1	10YR54 00					0	0		0		M			
	80-105	mzc1	10YR64 00					0	0		0		M			
	105-120	z1	10YR74 00					0	0	CH	2		M			Y
14	0-37	mzc1	10YR42 00					0	0	HR	1					Y
	37-80	mzc1	10YR54 00					0	0		0		M			
	80-120	z1	10YR64 00					0	0		0		M			
15	0-38	mzc1	10YR42 00					0	0		0					
	38-70	mzc1	10YR44 00					0	0		0		M			
	70-90	hc1	10YR54 00					0	0		0		M			
	90-120	mzc1	10YR64 00					0	0		0		M			
16	0-35	mzc1	10YR42 00					0	0		0					
	35-120	mzc1	10YR54 64					0	0	HR	2		M			
17	0-38	mzc1	10YR41 00					0	0		0					
	38-75	mzc1	10YR54 00					0	0	CH	2		M			Y
	75-90	hc1	10YR54 00					0	0	CH	2		M			Y
	90-120	mzc1	10YR64 00					0	0		0		M			