

A1
Aylesbury Vale District Local Plan
Option A (East) - Broughton / Stocklake
Agricultural Land Classification
Semi-detailed Survey
May 1996



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Resource Planning Team
Guildford Statutory Group
ADAS Reading

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AGRICULTURAL LAND CLASSIFICATION REPORT

AYLESBURY VALE DISTRICT LOCAL PLAN OPTION A (EAST) - BROUGHTON / STOCKLAKE

Introduction

1. This report presents the findings of a semi-detailed Agricultural Land Classification (ALC) survey of 155.9ha of land between Broughton and Bierton which lie to the east of Aylesbury. The survey was carried out in May 1996

2. The survey was commissioned by Ministry of Agriculture, Fisheries and Food (MAFF) Land Use Planning Unit (Reading) in connection with the Aylesbury Vale District Local Plan. This survey supersedes previous ALC surveys on this land including a reconnaissance survey (ADAS Ref: 0301/01/80) covering a wider area of land of which this site forms only a part. This reconnaissance survey was undertaken 1980 at a comparatively low sampling density. Since the 1980 survey, MAFF has updated the ALC system (MAFF, 1988) and consequently a new and more detailed survey was undertaken using the revised 1988 guidelines. This 1996 survey therefore supersedes the previous ALC survey on this land.

3. The work was conducted by members of the Resource Planning Team in the Guildford Statutory Group in 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 majority of the agricultural land was in permanent grassland with only a few fields in arable use. 'Other land' includes roads and other urban land, open water, the disused railway line and areas of scrub. An area of agricultural land was not surveyed since the ownership (and hence permission for access) could not be established within the timescale for the survey.

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)	% Total site area	% Surveyed Area
3a	6.4	4.1	4.7
3b	122.6	78.6	90.9
4	5.9	3.8	4.4
Agricultural land not surveyed	15.3	9.8	-
Other land	5.7	3.7	-
Total surveyed area	134.9	86.5	100
Total site area	155.9	100	-

7. The fieldwork was conducted at a semi-detailed level of survey with an average density of 1 boring per 1.7 hectares within the surveyed area. A total of 81 borings and 4 soil pits were described.

8. The majority of the survey area comprises land of moderate quality (Subgrade 3b) the key limitation being one of soil wetness broadly corresponding to the Gault Clay and Kimmeridge Clay geology. Soils typically comprise heavy clay loam topsoils over clay subsoils which are slowly permeable at shallow depths, although there is some local variation. Soils are both calcareous and non calcareous in the upper profile but many become more calcareous with depth. Subgrade 3a (good quality land) is mapped towards the north west of the survey area where soils are believed to be derived from the Portland Beds. These calcareous soils typically possess heavy clay loam topsoils with heavy clay loam and clay subsoils which frequently pass into dense but soft limestones at depth. Drainage is improved compared with other land within the survey area, however, this together with potential droughtiness limitations, depends upon the occurrence of limestone within the soil profile. Smaller areas of grade 4 (poor quality land) are found in areas which are believed to have been subject to soil disturbance in the past. These exhibit severe soil resource and wetness constraints which limit the agricultural potential.

Factors Influencing ALC Grade

Climate

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

10. 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 847145	SP 849149
Altitude	m. AOD	81	85
Accumulated Temperature	day°C (Jan-June)	1409	1405
Average Annual Rainfall	mm	641	644
Field Capacity Days	days	136	136
Moisture Deficit, Wheat	mm	109	109
Moisture Deficit, Potatoes	mm	103	102

11. 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.

12. The main parameters used in the assessment of an overall climatic limitation are average annual rainfall (AAR), as a measure of overall wetness, and accumulated temperature (AT0, January to June), as a measure of the relative warmth of a locality.

13. The combination of rainfall and temperature at this site mean that there is no overall climatic limitation in terms of agricultural land quality, and the site is climatically grade 1. No local climatic factors are believed to adversely affect the site.

Site

14. Land on this site is either flat or very gently sloping and nowhere does gradient adversely affect agricultural land quality. Altitudes typically lie within the range 80-85m AOD.

Geology and soils

15. The published 1:63360 scale geological map sheet covering the area of the site (Geol. Surv. GB., 1946) indicates that the majority of its area lies on Kimmeridge Clay. Towards the south east Upper Greensand and Gault is mapped. Small isolated exposures of Portland Beds are indicated in the vicinity of Burcott and west of the former Broughton Crossing. Alluvial deposits are also mapped in the extreme south west of the site associated with the Bear Brook.

16. With the exception of the Portland Beds, the geological deposits described above generally give rise to poorly drained clayey soils. The published 1:63360 scale soil map for the locality (Avery, 1964) maps the Denchworth series and Bierton complex over the majority of the area, typically associated with the Kimmeridge and Gault Clays, and the clayey facies of the Portland Beds. The Weston Turville series and Challow complex are mapped (Avery, 1964) where calcareous gravelly or clayey head deposits overlie the Gault Clay, to the south and southeast of the site. Soils of the Mead series are shown on clayey alluvium in the extreme south west of the site.

Agricultural Land Classification

17. 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.

18. 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.

Subgrade 3a

19. Subgrade 3a (good quality land) is mapped towards the north west of the survey area where soils are believed to be derived from the Portland Beds. The land is slightly higher than that surrounding and in contrast to the remainder of the site the soils comprise well drained to imperfectly drained calcareous soils (wetness class I to III - see Appendix II), having heavy clay loam topsoils with heavy clay loam and clay subsoils which may pass into soft, but dense limestone at depths below about 60-70cm. Many of the subsoils are not considered to be slowly permeable although gleying may be present. Pit 3 is representative of these soils which may be limited by minor wetness and/or drought limitations. Drought restrictions result where the dense soft limestone substratum occurs within the soil profile (from about 60 100cm) because it restricts root penetration and moisture holding capacity. Where soil horizons contain limestone stones the moisture holding capacity is also reduced. For land graded 3a, the increased risk of drought is likely to result in a lower and more variable yield potential. The minor to moderate wetness limitations can cause reduced flexibility of cropping and stocking.

Subgrade 3b

20. The majority of the survey area comprises land of moderate quality (Subgrade 3b) the key limitation being one of soil wetness. The majority of soils of this type comprise heavy clay loam topsoils overlying clay subsoils which are slowly permeable at shallow depths (i.e. within about 37cm of the soil surface). Evidence of gleying throughout the whole soil profile is common, and, being slowly permeable at shallow depths, such soils are appropriately placed in wetness class IV. Pits 1, 3 and 4 are typical of these soils within the survey area. There is, however, some local variation in terms of topsoil clay content and presence of calcareous material within the soil profile. Soil wetness limitations of the type encountered within this mapping unit can adversely affect plant growth and impose restrictions on the number of days when the soil is in a suitable condition for cultivations, trafficking by machinery or grazing by livestock.

Grade 4

21. Two areas of grade 4 (poor quality land) are mapped towards the south of the survey area where soils are believed to have been subject to disturbance at some time in the past. South of Stocklake Road and immediately north of Ivy Lane there is evidence of land raising, whilst to the north of the Grand Union Canal, the excavation of two fishing lakes has resulted in localised soil disturbance. In all these locations there appears to be a shortage (or absence in

some cases) of topsoil material, typically with compact clay subsoil materials occurring at the surface or beneath a shallow skim of topsoil. In view of the increased wetness and workability limitations which will result, such land has severe limitations in terms of its agricultural potential and is therefore appropriately placed in Grade 4.

Julie Holloway
Resource Planning Team
Guildford Statutory Group
ADAS Reading

SOURCES OF REFERENCE

Avery, B.W., (1964) (Map at 1:63360 scale and accompanying memoir of the Soil Survey of Great Britain). *Sheet No.238, The Soils and Land Use of the District around Aylesbury and Hemel Hempstead.* HMSO, London..

Geological Survey of Great Britain(1946) *Sheet No. 238, Aylesbury.*
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.

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:

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. **GLEYS:** 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 : AYLESBURY LP OPT A EAST Pit Number : 1P

Grid Reference: SP84001460 Average Annual Rainfall : 644 mm
 Accumulated Temperature : 1409 degree days
 Field Capacity Level : 136 days
 Land Use : Permanent Grass
 Slope and Aspect : degrees

HORIZON	TEXTURE	COLOUR	STONES >2	TOT.STONE	LITH	MOTTLES	STRUCTURE	CONSIST	SUBSTRUCTURE	CALC
0- 28	HCL	25Y 41 00	0	0		C				
28- 33	HCL	25Y 51 00	0	0		C	MDCAB	FR	M	
33- 50	C	25Y 52 62	0	0		M	MDCAB	FM	P	
50- 65	C	05Y 62 00	0	0		M	WKCAB	FM	P	Y
65- 80	C	05Y 61 00	0	10	SLST	M	WKCAB	FM	P	Y

Wetness Grade : 3B Wetness Class : IV
 Gleying : 000 cm
 SPL : 028 cm

Drought Grade : APW ; 000mm MBW : 0 mm
 APP ; 000mm MBP : 0 mm

FINAL ALC GRADE : 3B
 MAIN LIMITATION : Wetness

SOIL PIT DESCRIPTION

Site Name : AYLESBURY LP OPT A EAST Pit Number : 2P

Grid Reference: SP85001440 Average Annual Rainfall : 644 mm
 Accumulated Temperature : 1409 degree days
 Field Capacity Level : 136 days
 Land Use : Permanent Grass
 Slope and Aspect : degrees

HORIZON	TEXTURE	COLOUR	STONES >2	TOT.STONE	LITH	MOTTLES	STRUCTURE	CONSIST	SUBSTRUCTURE	CALC
0- 14	MZCL	10YR42 00	0	2	HR	M				
14- 55	C	25Y 62 00	0	1	HR	M	MDCAB	FM	P	

Wetness Grade : 3B Wetness Class : IV
 Gleying : 000 cm
 SPL : 014 cm

Drought Grade : 3B APW : 076mm MBW : -33 mm
 APP : 079mm MBP : -24 mm

FINAL ALC GRADE : 3B
 MAIN LIMITATION : Wetness

SOIL PIT DESCRIPTION

Site Name : AYLESBURY LP OPT A EAST Pit Number : 3P

Grid Reference: SP83701470 Average Annual Rainfall : 644 mm
 Accumulated Temperature : 1409 degree days
 Field Capacity Level : 136 days
 Land Use : Permanent Grass
 Slope and Aspect : degrees

HORIZON	TEXTURE	COLOUR	STONES >2	TOT.STONE	LITH	MOTTLES	STRUCTURE	CONSIST	SUBSTRUCTURE	CALC
0- 25	MCL	10YR31 00	0	0						Y
25- 58	HCL	25Y 63 72	0	10	SLST	C	MDCSAB	FR	M	Y
58- 72	SLST	25Y 62 63	0	0					P	Y

Wetness Grade : 2 Wetness Class : II
 Gleying : 025 cm
 SPL : No SPL

Drought Grade : 3A APW : 098mm MBW : -11 mm
 APP : 106mm MBP : 3 mm

FINAL ALC GRADE : 3A
 MAIN LIMITATION : Droughtiness

SOIL PIT DESCRIPTION

Site Name : AYLESBURY LP OPT A EAST Pit Number : 4P

Grid Reference: SP84401500 Average Annual Rainfall : 644 mm
 Accumulated Temperature : 1409 degree days
 Field Capacity Level : 136 days
 Land Use : Permanent Grass
 Slope and Aspect : degrees

HORIZON	TEXTURE	COLOUR	STONES >2	TOT.STONE	LITH	MOTTLES	STRUCTURE	CONSIST	SUBSTRUCTURE	CALC
0- 15	MCL	10YR31 00	0	0		C				
15- 28	C	05Y 52 00	0	1	HR	C	STCP	FM	P	
28- 60	C	05Y 52 00	0	1	HR	C	STCAB	VF	P	

Wetness Grade : 3B Wetness Class : IV
 Gleying : 000 cm
 SPL : 015 cm

Drought Grade : APW : 000mm MBW : 0 mm
 APP : 000mm MBP : 0 mm

FINAL ALC GRADE : 3B
 MAIN LIMITATION : Wetness

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	SP84401520	PGR N	01	000 022	4	3B	000	0 000	0				WE	3B	
1P	SP84001460	PGR		000 028	4	3B	000	0 000	0				WE	3B	PIT 80
2P	SP85001440	PGR		000 014	4	3B	076	-33 079	-24	3B			WE	3B	AT121
3	SP84601520	PGR N		000 030	4	3B	000	0 000	0				WE	3B	
3P	SP83701470	PGR		025	2	2	098	-11 106	3	3A			DR	3A	AT AB72
4P	SP84401500	PGR		000 015	4	3B	000	0 000	0				WE	3B	VSL CALC
5	SP84801520	GRA N		000 020	4	3B	000	0 000	0				WE	3B	CALC 50
7	SP85001520	PGR N	02	000 025	4	3B	000	0 000	0				WE	3B	
8	SP84301510	PGR		040 040	3	3B	000	0 000	0				WE	3B	
10	SP84501510	PGR		012 012	4	3B	000	0 000	0				WE	3B	
12	SP84701510	PGR N		000 022	4	3B	000	0 000	0				WE	3B	
14	SP84901510	GRA N		000 020	4	3B	000	0 000	0				WE	3B	
16	SP85101510	GRA N		000 020	4	3B	000	0 000	0				WE	3B	CALC55CM
17	SP84201500	PGR		020 035	4	3B	000	0 000	0				WE	3B	VSL CALC
19	SP84401500	PGR		000 022	4	3B	000	0 000	0				WE	3B	PIT
21	SP84601500	PGR		000 022	4	3B	000	0 000	0				WE	3B	
23	SP84801500	PGR		000 030	4	3B	000	0 000	0				WE	3B	
25	SP85001500	PGR		000 025	4	3B	000	0 000	0				WE	3B	
32	SP84301490	PGR		000 023	4	3B	000	0 000	0				WE	3B	
34	SP84501490	PGR		000 012	4	3B	000	0 000	0				WE	3B	
36	SP84701490	PGR		000	4	3B	000	0 000	0				WE	3B	
37	SP84701490	PGR		000			000	0 000	0						
38	SP84901490	PGR		025 025	4	3B	000	0 000	0				WE	3B	
39	SP85701490	PGR		000			000	0 000	0						
40	SP85101490	PGR		028 028	4	3B	000	0 000	0				WE	3B	
42	SP83801480	PGR		000 023	4	3B	000	0 000	0	Y			WE	3B	PLASTIC
48	SP84401480	PGR		000 020	4	3B	000	0 000	0				WE	3B	
49	SP84601480	PGR		000 028	4	3B	000	0 000	0				WE	3B	
51	SP84801480	PGR		000 028	4	3B	000	0 000	0				WE	3B	
53	SP85001480	PGR		028 028	4	3B	000	0 000	0				WE	3B	
55	SP83601470	PGR		060 060	2	2	113	4 114	11	3A			DR	3A	I100 3P
56	SP83701470	PGR		025	2	3A	091	-18 099	-4	3A			DR	3A	PIT
57	SP83801470	PGR		018 035	4	3B	000	0 000	0				WE	3B	
58	SP83861467	PGR		000 025	4	3B	000	0 000	0	Y			WE	3B	
60	SP84101465	PGR		000 020	4	3B	098	-11 102	-1	3A			WE	3B	
62	SP84301470	BAR		020 020	4	3B	102	-7 109	6	3A		Y	DB	3B	O1STURBD
64	SP84501470	PGR		000 020	4	3B	000	0 000	0				WE	3B	
66	SP84701470	PGR		000 030	4	3B	000	0 000	0				WE	3B	
68	SP84901470	PGR		000 030	4	3B	000	0 000	0				WE	3B	
70	SP85101470	PGR		000 028	4	3B	000	0 000	0				WE	3B	
73	SP83731462	PGR		000 050	3	3A	107	-2 109	6	3A			WD	3A	IMP 90
74	SP83801460	GRA		040 045	3	3A	000	0 000	0				WE	3A	Q SPL 45

SAMPLE NO.	GRID REF	ASPECT USE	--WETNESS--		-WHEAT-		-POTS-		M.REL		EROSN EXP	FROST DIST	CHEM LIMIT	ALC	COMMENTS
			GRDNT	GLEY SPL	CLASS	GRADE	AP	MB	AP	MB					
76	SP84001460	PGR		000 025	4	3B	000	0 000	0				WE	3B	PIT
78	SP84201460	PGR		000 020	4	3B	000	0 000	0				WE	3B	
80	SP84401460	BAR		025 025	4	3B	000	0 000	0				WE	3B	
82	SP84601460	PGR		000 022	4	3B	000	0 000	0				WE	3B	
84	SP84801460	PGR		000 022	4	3B	000	0 000	0				WE	3B	
86	SP85001460	PGR		000 030	4	3B	000	0 000	0				WE	3B	
88	SP85001460	PGR		000 025	4	3B	000	0 000	0				WE	3B	
90	SP83701450	CER	W	02 000	1	2	086	-23 094	-9	3B			DR	3A	Q AP
92	SP83901450	CER		027 027	4	3B	000	0 000	0				WE	3B	
94	SP84101450	PGR		000 020	4	3B	000	0 000	0				WE	3B	
96	SP84301450	BAR		000 028	4	3B	000	0 000	0				WE	3B	
98	SP84501450	PGR		000 024	4	3B	000	0 000	0				WE	3B	
100	SP84701450	PGR		000 026	4	3B	000	0 000	0				WE	3B	
102	SP84901450	PGR		000 022	4	3B	000	0 000	0				WE	3B	
104	SP85101450	PGR		000 020	4	3B	000	0 000	0				WE	3B	PLASTC55
107	SP83591442	PGR		000	1	1	099	-10 108	5	3A			DR	3A	IMP 65 SLST
108	SP83661438	PGR		020 020	4	3B	000	0 000	0				WE	3B	
109	SP83801440	CER		000 040	3	3A	000	0 000	0				WE	3A	Q SPL 40-55
111	SP84001440	PGR		000 026	4	3B	091	-18 103	0	3A			WE	3B	
113	SP84201440	PGR		000	2	2	083	-26 085	-18	3B			WE	3B	I55-QDRA
115	SP84401440	PGR		000 025	4	3B	000	0 000	0				WE	3B	
117	SP84601440	PGR		000 022	4	3B	000	0 000	0			Y	WE	4	
119	SP84801440	PGR		000 025	4	3B	000	0 000	0				WE	3B	
121	SP85001440	PGR		000 020	4	3B	000	0 000	0				WE	3B	PIT
123	SP85201440	PGR		000 020	4	3B	000	0 000	0				WE	3B	PLASTC20
124	SP83501430	PGR		000 020	4	3B	000	0 000	0				WE	3B	
125	SP83531416	RGR		022 000	4	3B	000	0 000	0			Y	WE	4	NO T/S
126	SP83701430	PGR		000 035	4	3B	000	0 000	0				WE	3B	
127	SP83871433	CER		000 028	4	3B	000	0 000	0				WE	3B	
128	SP83901428	PGR		000 025	4	3B	000	0 000	0				WE	3B	BORDER 4
130	SP84101430	PGR		000	3	3A	113	4 105	2	3A	Y		WE	3A	Q SPL 32
132	SP84301430	PGR		000 026	4	3B	000	0 000	0				WE	3B	
134	SP84481436	RGR		000 020	4	3B	000	0 000	0				WE	3B	
136	SP84701430	PGR		000 025	4	3B	000	0 000	0				WE	3B	
138	SP84901430	PGR		000 025	4	3B	000	0 000	0				WE	3B	
140	SP85101430	PGR		000 020	4	3B	000	0 000	0				WE	3B	RIDGFUR
141	SP83601420	RGR		010 045	3	3A	000	0 000	0			Y	WE	3A	DIST G4
142	SP83701420	RGR		000 020	4	3B	000	0 000	0			Y	WE	3B	DIST 4
143	SP83801420	PGR		000 022	4	3B	000	0 000	0				WE	3B	
145	SP84001420	PGR		000 010	4	3B	000	0 000	0				WE	3B	GDWATER
148	SP84401420	PGR	W	000 023	4	3B	000	0 000	0				WE	3B	
150	SP84601420	RGR	W	000 000	4	3B	000	0 000	0			Y	DI	4	NO TOPSOIL

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	
150	SP83601420	RGR	000	000	4	38	000	0	000	0			DI	4	NO TS
152	SP84801420	PGR	000	025	4	38	000	0	000	0			WE	3B	
155	SP84501410	RGR	015	015	4	38	084	-25	096	-7	3B		Y	DP	4 NO T/S
157	SP84701410	PGR	000	020	4	38	000	0	000	0			WE	3B	

SAMPLE	DEPTH	TEXTURE	COLOUR	----MOTTLES-----			PED		----STONES----			STRUCT/ CONSIST	SUBS			SPL	CALC	
				COL	ABUN	CONT	COL.	GLE	>2	>6	LITH		TOT	STR	POR			IMP
1	0-22	hc1	10YR41 42	10YR46 00	C				Y	0	0	HR	1					
	22-70	c	05Y 52 00	10YR46 00	M			25Y 52 00	Y	0	0	HR	2		P		Y	
1P	0-28	hc1	25Y 41 00	10YR46 00	C				Y	0	0		0					
	28-33	hc1	25Y 51 00	10YR56 00	C			25Y 52 00	Y	0	0		0	MDCAB	FR	M		Y
	33-50	c	25Y 52 62	10YR66 00	M			25Y 53 00	Y	0	0		0	MDCAB	FM	P		Y
	50-65	c	05Y 62 00	75YR68 00	M			05Y 61 00	Y	0	0		0	WK CAB	FM	P		Y Y
	65-80	c	05Y 61 00	10YR58 00	M				Y	0	0	SLST	10	WK CAB	FM	P		Y Y
2P	0-14	mzc1	10YR42 00	75YR58 00	M				Y	0	0	HR	2					
	14-55	c	25Y 62 00	10YR66 00	M			25Y 52 00	Y	0	0	HR	1	MDCAB	FM	P		Y
3	0-30	hc1	10YR42 00	10YR46 00	C				Y	0	0	HR	3					
	30-70	c	25Y 52 53	10YR46 00	M				Y	0	0	HR	2		P		Y	
3P	0-25	mc1	10YR31 00							0	0		0					Y
	25-58	hc1	25Y 63 72	10YR66 00	C			25Y 62 00	Y	0	0	SLST	10	MDCSAB	FR	M		Y
	58-72	slst	25Y 62 63						Y	0	0		0		P			Y ROOTS TO 70CM
4P	0-15	mc1	10YR31 00	10YR56 00	C				Y	0	0		0					
	15-28	c	05Y 52 00	10YR46 00	C			05Y 52 00	Y	0	0	HR	1	STCP	FM	P		Y
	28-60	c	05Y 52 00	10YR46 00	C			05Y 52 00	Y	0	0	HR	1	STCAB	VF	P		Y
5	0-20	hc1	10YR42 00	10YR46 00	C			10YR41 00	Y	0	0	HR	2					
	20-50	c	25Y 52 53	75YR58 00	M			10YR53 00	Y	0	0	HR	2		P			Y
	50-70	c	05Y 51 00	10YR46 00	M				Y	0	0	CH	2		P			Y Y
7	0-25	hc1	10YR41 42	10YR56 00	C				Y	0	0	HR	2					
	25-60	c	25Y 52 53	10YR46 00	M			00M00 00	Y	0	0		0		P			Y
8	0-25	hc1	10YR32 00							0	0		0					
	25-40	c	10YR53 00							0	0		0					Y
	40-50	c	25Y 53 00	10YR56 00	C				Y	0	0		0					Y Y
	50-85	c	05Y 52 53	10YR56 00	M				Y	0	0		0					Y Y
10	0-12	mc1	10YR43 00							0	0		0					
	12-60	c	10YR51 00	10YR56 00	M				Y	0	0		0					Y
	60-80	c	25Y 62 00	10YR58 00	M				Y	0	0		0					Y
12	0-22	hc1	10YR41 42	10YR46 00	C				Y	0	0	HR	2					
	22-57	c	25Y 52 53	75YR58 00	M				Y	0	0	HR	4		P			Y
	57-70	c	25Y 51 52	10YR58 00	M				Y	0	0	SLST	4		P			Y Y
14	0-20	hc1	10YR41 42	10YR46 00	C				Y	0	0	HR	1					
	20-80	c	25Y 52 53	10YR46 00	M				Y	0	0		0		P			Y
16	0-20	c	10YR51 52	75YR58 00	C				Y	0	0	HR	2					
	20-55	c	25Y 52 53	10YR58 00	M				Y	0	0		0		P			Y
	55-66	c	25Y 52 53	10YR46 00	M				Y	0	0	SLST	2		P			Y Y

SAMPLE	DEPTH	TEXTURE	COLOUR	---MOTTLES---			PED COL.	---STONES---			STRUCT/ CONSIST	SUBS			SPL	CALC
				COL	ABUN	CONT		GLE	>2	>6		LITH	TOT	STR		
17	0-20	mzc1	10YR31 00					0	0	0						
	20-35	hc1	10YR42 00 10YR56 00 C					Y	0	0						Y
	35-80	c	25Y 52 53 10YR56 00 M					Y	0	0					Y	
19	0-22	mzc1	10YR31 00 10YR56 00 M					Y	0	0						
	22-80	c	10YR41 51 10YR56 00 C					Y	0	0		P			Y	
21	0-22	mc1	10YR42 00 10YR56 00 C					Y	0	0						
	22-60	c	25Y 61 00 10YR56 00 M					Y	0	0					Y	
23	0-30	c	10YR41 00 10YR46 00 C					Y	0	0						
	30-60	c	10YR31 00 10YR66 00 C					Y	0	0					Y	
25	0-25	c	10YR41 00 10YR56 00 C					Y	0	0						
	25-60	c	25Y 54 00 10YR56 00 C					Y	0	0					Y	
32	0-23	mzc1	10YR31 00 10YR56 00 C					Y	0	0						
	23-70	c	25Y 52 00 10YR56 00 C					Y	0	0						Y
	70-80	c	05Y 62 00 10YR56 00 C					Y	0	0						Y
34	0-12	omc1	10YR41 00 10YR56 00 C					Y	0	0						
	12-70	c	25Y 63 00 25Y 61 00 C					Y	0	0					Y	
36	0-28	hc1	10YR42-00 75YR58- M					Y	0	0	HR	2				
	28-48	c	25Y 62-00 10YR56- M					Y	0	0		0		P		Y
	48-65	c	25Y 61-00 10YR58- M					Y	0	0	SLST	2		P		Y
38	0-25	c	25Y 41 00 10YR46 00 F						0	0		0				
	25-60	c	25Y 41 51 10YR58 00 M					Y	0	0		0		P		Y
	60-70	c	25Y 51 61 10YR58 00 M					Y	0	0		0		P		Y
40	0-28	hc1	10YR41 00 10YR46 00 F						0	0	HR	2				
	28-70	c	25Y 51 61 10YR58 68 M					Y	0	0		0		P		Y
42	0-23	hc1	10YR42 00 75YR58 00 C					Y	0	0		0				
	23-70	c	25Y 52 53 75YR58 00 M				10YR54 00	Y	0	0		0		P		Y
48	0-20	hc1	10YR42 00 75YR58 61 M					Y	0	0	HR	2				
	20-60	c	10YR52 00 75YR58 00 M					Y	0	0		0		P		Y
49	0-28	hc1	10YR42 41 75YR46 00 M					Y	0	0	HR	2				
	28-60	c	25Y 62 00 10YR66 00 M					Y	0	0		0		P		Y
51	0-28	hc1	10YR42 00 75YR58 00 M					Y	0	0	HR	2				
	28-48	c	25Y 52 00 10YR58 00 M					Y	0	0		0		P		Y
	48-65	c	25Y 61 00 75YR58 00 M					Y	0	0	SLST	2		P		Y Y
53	0-28	c	10YR41 00 10YR46 00 F						0	0		0				
	28-70	c	25Y 51 52 10YR58 00 M					Y	0	0		0		P		Y

SAMPLE	DEPTH	TEXTURE	COLOUR	----MOTTLES----		PED COL.	----STONES----		STRUCT/ CONSIST	SUBS			CALC	
				COL	ABUN		CONT	GLE		>2	>6	LITH		TOT
55	0-25	hc1	25Y 41 42					0	0	0				Y
	25-60	c	25Y 42 00					0	0	0	M			Y
	60-80	c	05Y 52 00 25Y 56 00 C				Y	0	0	0	P		Y	Y
	80-100	slst	25Y 81 00 25Y 78 00 C				Y	0	0	0	P		Y	Y
56	0-25	hc1	10YR32 00					0	0	0				Y
	25-35	hc1	05Y 72 62 25Y 56 00 C				Y	0	0	SLST 10	M			Y
	35-68	hc1	53Y 53 63 25Y 56 00 C				Y	0	0	SLST 35	M			Y
57	0-18	mc1	10YR32 00					0	0	0				
	18-35	hc1	10YR44 00 10YR56 00 C				Y	0	0	0	M			
	35-70	c	25Y 64 63 10YR58 00 M				Y	0	0	0	P		Y	
58	0-25	hc1	10YR42 00 75YR58 00 C					Y	0	0	0			
	25-70	c	25Y 52 53 75YR58 00 M			10YR54 00	Y	0	0	0	P		Y	
60	0-20	hc1	25Y 54 00 10YR58 00 C			00M00 00	Y	0	0	HR 2				Y
	20-38	hc1	25Y 64 00 10YR58 00 C			00M00 00	Y	0	0	HR 2	M		Y	Y
	38-58	hc1	25Y 64 63 10YR58 00 C			00M00 00	Y	0	0	HR 5	P		Y	Y
	58-80	c	05Y 62 00 75YR58 00 M				Y	0	0	SLST 5	P		Y	Y
62	0-20	hc1	10YR42 00					0	0	HR 2				Y
	20-60	c	10YR53 52 10YR58 00 C				Y	0	0	SLST 5	P		Y	Y
	60-80	c	10YR53 41 75YR58 00 M				Y	0	0	SLST 10	P		Y	Y
64	0-20	hc1	10YR42 00 75YR58 61 M				Y	0	0	HR 2				
	20-60	c	10YR52 00 75YR58 00 M				Y	0	0	0	P		Y	
66	0-30	hc1	10YR42 52 75YR58 00 M				Y	0	0	HR 2				
	30-60	c	25Y 52 00 10YR66 00 M				Y	0	0	0	P		Y	
68	0-30	hc1	25Y 41 00 10YR46 00 C				Y	0	0	0				
	30-70	c	25Y 51 61 10YR58 00 M				Y	0	0	0	P		Y	
70	0-28	hc1	25Y 41 00 10YR46 00 C				Y	0	0	0				
	28-70	c	25Y 51 61 10YR58 00 M				Y	0	0	0	P		Y	
73	0-25	hc1	25Y 41 42					0	0	SLST 2				Y
	25-50	hc1	25Y 41 42					0	0	SLST 2	M			Y
	50-80	c	25Y 54 56					0	0	SLST 5	P		Y	Y
	80-90	slst	00ZZ00 00					0	0	0	P		Y	Q SPL IMP 90CM
74	0-28	hc1	10YR32 00					0	0	0				Y
	28-40	c	25Y 42 00					0	0	0				Y
	40-45	c	25Y 42 00 75YR46 56 C				Y	0	0	0				Y
	45-90	c	10YR53 56 75YR56 00 C				Y	0	0	SLST 5	P		Y	Y
	90-100	c	05Y 61 62 75YR56 00 M				Y	0	0	SLST 5	P		Y	Y

SAMPLE	DEPTH	TEXTURE	COLOUR	---MOTTLES---			PED COL.	---STONES---			STRUCT/ CONSIST	SUBS						
				COL	ABUN	CONT		GLE	>2	>6		LITH	TOT	STR	POR	IMP	SPL	CALC
76	0-25	hc1	10YR42 00	10YR46	00	C	10YR41	00	Y	0	0	0						
	25-60	c	25Y 52 53	75YR58	00	M			Y	0	0	HR	1		P		Y	
	60-70	c	25Y 52 53	75YR58	00	M			Y	0	0	CH	6		P		Y	Y
78	0-20	hc1	10YR52 00	10YR58	00	C			Y	0	0	HR	2				Y	
	20-38	hc1	25Y 63 64	10YR58	00	C			Y	0	0	HR	2		M		Y	Y
	38-90	c	25Y 63 64	10YR58	00	M			Y	0	0	HR	5		P		Y	Y
80	0-25	hc1	10YR52 00							0	0	HR	2				Y	
	25-50	c	25Y 53 00	10YR66	00	C			Y	0	0	SLST	2		P		Y	Y
	50-70	c	05Y 62 00	75YR58	00	C			Y	0	0	SLST	5		P		Y	Y
82	0-22	c	25Y 41 00	10YR46	00	C			Y	0	0	HR	2					
	22-55	c	25Y 51 52	10YR58	00	M			Y	0	0	HR	2		P		Y	
	55-70	c	25Y 51 00	10YR58	00	M			Y	0	0		0		P		Y	Y
84	0-22	c	25Y 41 00	10YR46	00	C			Y	0	0		0					
	22-40	c	25Y 51 00	10YR66	00	M			Y	0	0		0		P		Y	
	40-70	c	25Y 53 63	10YR68	00	M			Y	0	0		0		P		Y	
86	0-30	hc1	25Y 31 41	10YR46	00	C			Y	0	0		0					
	30-60	c	25Y 51 52	10YR58	00	M			Y	0	0		0		P		Y	
88	0-20	mzc1	10YR41 00	10YR46	00	C			Y	0	0	HR	3					
	20-60	zc	25Y 61 62	10YR66	00	M			Y	0	0	SLST	2		P		Y	
90	0-25	hc1	10YR31 00							0	0	SLST	3				Y	
	25-60	c	25Y 41 42							0	0	SLST	20		M		Y	
	60-65	slst	22XX22 00							0	0		0		P		Y	
92	0-27	hc1	10YR32 00							0	0	HR	2					
	27-70	c	25Y 52 53	10YR58	00	M			Y	0	0		0		P		Y	
94	0-20	hc1	10YR42 00	10YR58	00	C			Y	0	0	HR	2					
	20-35	hc1	25Y 63 64	10YR58	00	C	00M00	00	Y	0	0	HR	1		M		Y	
	35-50	c	25Y 64 63	10YR58	00	C			Y	0	0		0		P		Y	
	50-70	c	05 Y62 00	75YR58	00	C			Y	0	0		0		P		Y	Y
96	0-28	hc1	10YR52 53	10YR58	00	C			Y	0	0	HR	2				Y	
	28-70	c	25Y 63 64	10YR68	00	C			Y	0	0	HR	2		P		Y	Y
98	0-24	c	25Y 31 41	10YR46	00	C			Y	0	0	HR	2					
	24-40	c	25Y 42 52	10YR58	00	M			Y	0	0		0		P		Y	
	40-70	c	25Y 53 00	10YR58	68	M			Y	0	0		0		P		Y	Y
100	0-26	c	25Y 41 00	10YR46	00	C			Y	0	0		0					
	26-60	c	25Y 51 00	10YR56	66	M	00M00	00	Y	0	0		0		P		Y	

SAMPLE	DEPTH	TEXTURE	COLOUR	----MOTTLES-----			PED COL.	----STONES----			STRUCT/ CONSIST	SUBS					
				COL	ABUN	CONT		GLE	>2	>6		LITH	TOT	STR	POR	IMP	SPL
102	0-22	c	25Y 41 00	10YR46	00	C		Y	0	0	HR	2					
	22-60	c	25Y 51 00	10YR56	66	M		Y	0	0		0	P				Y
104	0-20	mzc1	10YR52	00	10YR46	00	M		Y	0	0	HR	3				
	20-55	c	25Y 51 62	75YR56	46	M		Y	0	0	HR	2	P				Y
	55-70	c	25Y 61 00	75YR58	00	M		Y	0	0	HR	2	P				Y
107	0-30	mc1	10YR32	00					0	0		0					Y
	30-45	hc1	10YR42	00					0	0		0	M				Y
	45-65	hc1	25Y 52 53						0	0	SLST	10	M				Y
108	0-20	hc1	10YR31	00					0	0		0					Y
	20-40	c	05Y 53 00	10YR56	00	C		Y	0	0		0	P				Y Y
	40-70	c	05Y 52 00	05Y 54	00	C		Y	0	0	SLST	5	P				Y Y
109	0-25	hc1	10YR32	00	10YR46	00	C		Y	0	0	0					Y
	25-40	c	25Y 51 54	10YR46	00	M		Y	0	0		0					Y
	40-55	sc1	05Y 51 54	10YR46	00	M		Y	0	0		0					Y Y
	55-100	ms1	05Y 51 54	10YR46	00	M		Y	0	0		0					Y Y
111	0-26	hc1	10YR32	00	75YR58	00	M		Y	0	0	0					Y
	26-70	c	05Y 41 00	75YR58	00	M		Y	0	0	HR	2	P				Y
113	0-20	hc1	10YR42	52	10YR58	00	C		Y	0	0	HR	2				Y
	20-35	hc1	10YR63	62	10YR58	00	C		Y	0	0	HR	2	M			Y Y
	35-48	c	25Y 63 00	75YR58	00	M		Y	0	0	SLST	2	P				Y Y
	48-55	hc1	25Y 64 00	10YR68	00	M		Y	0	0	SLST	15	M				Y Y
115	0-25	c	25Y 31 41	10YR46	00	C		Y	0	0		0					
	25-70	c	25Y 51 61	10YR58	68	M		Y	0	0		0	P				Y
117	0-22	c	25Y 31 41	10YR46	00	C		Y	0	0		0					
	22-60	c	25Y 51 52	10YR58	68	M		Y	0	0		0	P				Y
119	0-25	c	25Y 41 00	10YR46	00	C		Y	0	0		0					
	25-60	c	25Y 51 00	10YR56	00	M		Y	0	0		0	P				Y
121	0-20	mzc1	10YR41	42	10YR46	00	M		Y	0	0	HR	2				
	20-60	zc	25Y 62 61	10YR66	00	M		Y	0	0	HR	2	P				Y
123	0-20	hzc1	10YR52	00	10YR58	00	M		Y	0	0	HR	2				
	20-60	c	25Y 61 00	75YR58	00	M		Y	0	0	HR	2	P				Y
124	0-20	ohc1	10YR31	32	10YR46	00	C		Y	0	0	0					
	20-70	c	25Y 53 00	10YR56	00	M		Y	0	0		0	P				Y Y
125	0-22	c	25Y 42	00					0	0	SLST	10	P				Y Y
	22-45	c	25Y 41 51	10YR56	00	F		Y	0	0	SLST	10	P				Y Y
	45-65	c	25Y 42 52	10YR58	00	C		Y	0	0	HR	10	P				Y Y

SAMPLE	DEPTH	TEXTURE	COLOUR	---MOTTLES---			PED COL.	---STONES---			STRUCT/ CONSIST	SUBS			CALC	
				COL	ABUN	CONT		GLY	>2	>6		LITH	TOT	STR		POR
126	0-18	mc1	10YR31 00 75YR56 00 C					Y	0	0	0					
	18-35	hc1	10YR41 42 10YR46 00 C					Y	0	0	0	M		Y	Y	
	35-55	c	25Y 62 52 10YR58 00 M				00M00 00	Y	0	0	HR 5	P		Y	Y	
	55-68	zc	10YR61 71 10YR58 00 M					Y	0	0	HR 10	P		Y	Y	
127	0-28	hc1	10YR31 00 10YR58 00 C					Y	0	0	HR 2					
	28-50	c	25Y 52 61 75YR58 00 M				00M00 00	Y	0	0	HR 1	P		Y		
	50-70	c	25Y 52 61 75YR58 00 M				00M00 00	Y	0	0	SLST 2	P		Y		
128	0-10	p1	10YR31 00 10YR46 00 C					Y	0	0	0					
	10-25	hc1	10YR41 51 75YR58 00 M					Y	0	0	0					
	25-70	zc	05Y 51 00 75YR56 00 C					Y	0	0	0			Y		
130	0-23	mc1	10YR42 00 10YR46 00 C					Y	0	0	0					
	23-32	hc1	10YR52 53 10YR46 00 M					Y	0	0	0	M		Y	Q SPL	
	32-55	c	25Y 52 53 10YR58 00 M					Y	0	0	0	P		Y		
	55-80	c	25Y 63 00 10YR53 00 M					Y	0	0	HR 3	P		Y		
	80-100	hc1	25Y 63 00 10YR53 00 M					Y	0	0	HR 3	P		Y		
132	0-26	c	25Y 42 52 10YR56 00 C					Y	0	0	0					
	26-33	c	25Y 31 41 10YR58 00 C					Y	0	0	0	P		Y		
	33-70	c	05Y 41 51 10YR56 66 M					Y	0	0	0	P		Y		
134	0-20	hc1	25Y 41 00 10YR46 00 C					Y	0	0	0					
	20-70	c	25Y 51 52 10YR56 00 M					Y	0	0	0	P		Y		
136	0-25	hc1	10YR41 42 75YR58 00 M					Y	0	0	HR 1					
	25-60	c	10YR61 00 75YR58 00 M					Y	0	0	0	P		Y		
138	0-25	hc1	10YR41 42 75YR58 00 M					Y	0	0	HR 1					
	25-45	c	10YR61 00 10YR58 00 M					Y	0	0	0	P		Y		
	45-60	c	25Y 52 00 75YR58 00 M				00M00 00	Y	0	0	0	P		Y		
140	0-20	hc1	10YR42 00 10YR58 00 C					Y	0	0	HR 1					
	20-60	c	25Y 52 51 75YR58 00 M					Y	0	0	0	P		Y		
141	0-10	o1	75YR21 00						0	0	HR 3					NO TOPSOIL
	10-45	hc1	25Y 61 00 10YR66 00 M					Y	0	0	HR 5	M				
	45-90	c	05Y 41 00 10YR58 68 M				00M00 00	Y	0	0	SLST 10	P		Y		POSS ANAEROBIC
142	0-20	hc1	25Y 52 00 10YR66 00 C					Y	0	0	SLST 5			Y	BRICK FRAGS	
	20-35	c	25Y 42 00 10YR66 00 C					Y	0	0	SLST 5	P		Y	Y	BRICK FRAGS
	35-75	hc1	25Y 53 00 10YR68 00 M					Y	0	0	SLST 10	P		Y	Y	BRICK FRAGS
	75-95	hc1	25Y 41 42 10YR56 00 C					Y	0	0	SLST 5	P		Y	Y	BRICK FRAGS
	95-120	c	25Y 61 00 10YR66 00 C					Y	0	0	SLST 10	P		Y	Y	
143	0-22	hc1	25Y 41 00 10YR46 00 C					Y	0	0	0					
	22-60	c	05Y 61 00 10YR66 00 M					Y	0	0	0	P		Y		

SAMPLE	DEPTH	TEXTURE	COLOUR	----MOTTLES-----			PED COL.	----STONES----			STRUCT/ CONSIST	SUBS			CALC		
				COL	ABUN	CONT		GLEYS	>2	>6		LITH	TOT	STR		POR	IMP
145	0-10	p1	10YR31 00	10YR46 00	C			Y	0	0	0					Y	
	10-25	hc1	10YR41 00	75YR46 00	M			Y	0	0	HR	2			Y	Y	
	25-40	c	10YR41 00	75YR46 00	M			Y	0	0	HR	5			Y	Y	
	40-55	c	10YR53 00	10YR46 00	M			Y	0	0	HR	20			Y	Y	
	55-70	hc1	25Y 62 72	10YR58 00	M			Y	0	0	HR	10		—	Y	Y	IMP 70CM
148	0-23	hzc1	10YR42 00	10YR46 00	C			Y	0	0	0						
	23-40	c	25Y 52 53	10YR56 00	C			Y	0	0	0		P		Y		
	40-70	c	25Y 53 54	10YR56 00	C			Y	0	0	0		P		Y		
150	0-60	c	25Y 71 72	25Y 76 00	C			Y	0	0	HR	5		P	Y	Y	NO TOPSOIL
	60-90	c	25Y 53 54	10YR56 00	M			Y	0	0	HR	5		P	Y	Y	
152	0-25	hc1	10YR42 00	10YR58 00	C			Y	0	0	HR	1					
	25-60	c	25Y 52 51	75YR56 00	M			Y	0	0	0		P		Y		
155	0-15	c	10YR32 00						0	0	CH	4				Y	NO TOPSOIL
	15-40	c	05Y 41 52	75YR58 00	M	10YR21 00	Y	0	0	CH	4		P		Y	Y	
	40-70	c	05Y 31 41	75YR46 00	M		Y	0	0	CH	4		P		Y	Y	
157	0-20	hc1	10YR42 00	75YR58 00	C			Y	0	0	HR	1					
	20-60	c	10YR51 00	75YR58 00	M			Y	0	0	0		P		Y		