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**WYCOMBE DISTRICT LOCAL PLAN
Terriers & Grange Farms,
High Wycombe, Buckinghamshire
Agricultural Land Classification
ALC Map and Report**

May 1997

(Revised October 1997 & January 1998)

**Resource Planning Team
Eastern Region
FRCA Reading**

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AGRICULTURAL LAND CLASSIFICATION REPORT

WYCOMBE DISTRICT LOCAL PLAN TERRIERS & GRANGE FARMS, HIGH WYCOMBE, BUCKINGHAMSHIRE.

INTRODUCTION

1. This report presents the findings of a detailed Agricultural Land Classification (ALC) survey on approximately 144 hectares of land at Terriers and Grange Farms, to the north of High Wycombe in Buckinghamshire. The survey was carried out during May and October 1997 and January 1998.

2. The survey was undertaken by the Farming and Rural Conservation Agency (FRCA), on behalf of the Ministry of Agriculture, Fisheries and Food (MAFF), in connection with the Wycombe District Local Plan. This survey supersedes any previous ALC information for this land including a 1977 survey (ADAS Ref: 0305/001/77).

3. The work was conducted by members of the Resource Planning Team in the Eastern Region of FRCA. 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 the original survey, in May 1997, the majority of agricultural land was under either wheat, oilseed rape or permanent grassland. Those areas shown as 'Other Land' comprise agricultural and residential buildings, woodland, scrub and a number of recreation grounds. In May 1997, the land to the immediate east of Grange Farm comprised oilseed rape which could not be surveyed, due to its mature state. However, this land was subsequently revisited (October 1997) after the oilseed rape had been harvested. A third visit was made during January 1998, in order to survey land to the north east and to the west of the site. Permission to enter this land had not originally been gained due to insufficient ownership details. Two small areas to the west still remain unsurveyed for the same reason.

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 overleaf.

7. The fieldwork was conducted at an average density of 1 boring per hectare on the surveyed land. A total of 120 borings and 6 soil inspection pits were described.

Table 1: Area of grades and other land

Grade/Other land	Area (hectares)	% surveyed area	% site area
3a	50.6	45.8	35.2
3b	59.9	54.2	41.7
Agricultural Land not Surveyed	9.8	-	6.8
Other Land	23.4	-	16.3
Total surveyed area	110.5	100.0	76.9
Total site area	143.7	-	100.0

8. The majority of the agricultural land which was surveyed has been classified as Subgrade 3b (moderate quality). The main limitations include soil wetness and topsoil stone restrictions, either singly or in combination with each other. Where soil wetness is limiting, shallow clayey subsoils impede drainage through the profile causing prolonged waterlogging. As a result the timing and flexibility of mechanised operations and grazing is limited. The high topsoil stone content increases production costs due to tyre and machinery wear, and can also adversely affect crop growth, establishment and harvesting.

9. Areas of Subgrade 3a (good quality land) occur on slightly higher land in the north, on the mid slopes through the centre of the site and in a small dry valley towards the south west corner. Soil wetness and soil droughtiness are the main limitations, though topsoil stoniness restrictions are occasionally equally limiting. As for the land classified as Subgrade 3b, soil wetness is caused by impeded drainage. However, the clayey subsoils occur slightly deeper within the profile thus reducing the degree of waterlogging. Across the droughty land, the high flint content in the soils reduces the amount of available water for crops thus restricting the level and consistency of crop yields.

FACTORS INFLUENCING ALC GRADE

CLIMATE

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

11. The key climatic variables used for grading this site are given in Table 2 overleaf and were obtained from the published 5km grid datasets using the standard interpolation procedures (Met. Office, 1989).

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

13. The main parameters used in the assessment of an overall climatic limitation are average annual rainfall (AAR), as a measure of overall wetness, and accumulated temperature (AT0, January to June), as a measure of the relative warmth of a locality. The figures below suggest that the site is comparatively cool and moist (in regional terms) as a result of being located at a relatively high altitude. This combination of rainfall and temperature mean that above 165 metres AOD, in this locality, there is an overall climatic limitation. Most of the site cannot, therefore, be classified any higher than Grade 2 due to the climate.

Table 2: Climatic and altitude data

Factors	Units	Values			
		SU 888 959	SU 886 963	SU 877 955	SU 881 951
Grid reference	N/A	SU 888 959	SU 886 963	SU 877 955	SU 881 951
Altitude	m, AOD	160	170	185	165
Accumulated Temperature	day°C	1327	1315	1298	1321
Average Annual Rainfall	mm	765	772	782	771
Field Capacity Days	days	164	165	167	165
Moisture Deficit, Wheat	mm	91	90	88	91
Moisture Deficit, Potatoes	mm	79	77	74	78
Overall Climatic Grade	N/A	Grade 1	Grade 2	Grade 2	Grade 2

14. The altitude and aspect of a site may also influence local climatic factors such as frost risk and exposure. This site has been shown to be rather exposed, towards the eastern edge of the site (Met Office, 1971), reflecting the elevated altitude. However, the surrounding urban development helps to protect this land. On this site, frost risk and exposure are therefore considered to have a less significant affect on land quality than the overall climatic limitation.

15. Climatic factors can also interact with soil properties to influence soil wetness and droughtiness. At this locality, moisture deficit figures are slightly lower than the national average, again due to the elevated altitude. The likelihood of restrictions associated with soil droughtiness may therefore be reduced.

Site

16. The land on site is gently undulating, lying at an altitude of 160–185m AOD. The highest land is found near Cockshoot Wood, in the west of the site, while the lowest land lies to the east of Grange Farm, in the bottom of a small, dry valley. Gradient does not adversely affect agricultural land quality on this site. Flooding is also unlikely to limit the land at this locality.

Geology and soils

17. The published geological information for the site (BGS, 1948) shows all of the site to be underlain by Upper Chalk with a superficial drift deposit, Clay-with-flints, overlying the solid geology.

18. The most recently published soil information for the site (SSEW, 1983) maps the Batcombe soil association over the entire site. These soils are generally derived from the clay-with-flints and are described as 'Fine silty over clayey and fine loamy over clayey soils with slowly permeable subsoils and slight seasonal waterlogging. Some well drained clayey soils over chalk. Variably flinty.' (SSEW, 1983 and 1984).

19. Detailed field examination revealed soils of a similar nature to those described above.

AGRICULTURAL LAND CLASSIFICATION

20. 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.

21. 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 II.

Subgrade 3a

22. Good quality agricultural land is mapped on the higher land, towards the north and west of the site. Land of this quality also occurs across the midslopes, through the centre of the site, and in a small valley, in the extreme south. There are two main variants within the Subgrade 3a land. The first is principally limited by soil wetness and the second by soil droughtiness. In both cases, topsoil stoniness can be an equal or overriding limitation.

23. The majority of the Subgrade 3a land is affected by soil wetness. These soil profiles are typified by soil inspection Pits 5 and 6 which comprise non-calcareous, medium clay loam or silty clay topsoils with 0-15% total flint (including 0-12% > 2cm in diameter). These generally overlie variably stony (2-42% total flint), medium or heavy clay loam and silty clay loam upper subsoils, before the slightly gleyed, reddish brown clay subsoil is reached at about 40-50cm depth. The upper subsoils are moderately well structured and porous while the clay subsoils are poorly structured and slowly permeable. The stone content in the lower subsoil ranges from 2-20% flints, but the individual stones are completely enveloped by the clay. Drainage through the profile is therefore impeded, causing waterlogging during the wetter months. In this local climatic regime, this land has therefore been assigned to Wetness Class III which, given the medium textured topsoils, gives rise to Subgrade 3a quality land. This is because soil wetness may adversely affect plant growth or impose restrictions on timing or flexibility of cultivations or grazing by livestock.

24. The Subgrade 3a land which is limited by soil droughtiness occurs near the recreation ground, in the south-east corner of the site and to the west of Grange Farm. The soil profiles here comprise medium silty clay loam topsoils and upper subsoils, with 18-30% total flint (8-13% of which is >2cm in diameter). They often become impenetrable to the soil auger at shallow depths (approximately 30-40cm) due to an increased stone content (35-45% flints) in the subsoil. As above, soil inspection Pit 4 shows that these profiles generally comprise moderately well structured upper subsoils over poorly structured clays. Most profiles are slightly gleyed from the upper subsoil. However, none of the subsoils are slowly permeable. This is because the flints are interconnected, forming drainage channels through profile. This land is therefore moderately well to well drained (Wetness Class I or II). However, the

interaction between soil texture, structure and stone content acts to reduce the amount of profile available water for crops, thus reducing the level and consistency of crop yields.

25. In addition to the soil wetness or soil droughtiness limitations described above, the amount (11-13%) of topsoil stone, larger than 2cm in diameter, is equally restricting in some profiles. This is because large flints can impede cultivation, harvesting and crop growth, and increase the cost of cropping in terms of machinery wear and tear, and yield reduction. This land has therefore been classified as Subgrade 3a due to topsoil stoniness.

Subgrade 3b

26. Just over half of the agricultural land on this site has been classified as Subgrade 3b (moderate quality). This is due to soil wetness and/or topsoil stoniness restrictions. The soil profiles here are very similar to those described as Subgrade 3a above. However, these soil profiles, typified by soil inspection Pits 1 and 2, are gleyed within 40cm depth. The slowly permeable clay subsoils also occur at shallower depths (28-45cm depth) thus causing a more significant drainage impedence and increasing the duration of waterlogging. In this local climatic regime the land has therefore been assigned to Wetness Class IV which, with a medium or heavy textured topsoil, gives rise to Subgrade 3b quality land.

27. In some profiles, particularly towards the east of the site, the amount of large flints (>2cm in diameter) in the topsoil ranges from 16-22%. The costs of crop production and the overall quality and quantity of yields are therefore significantly reduced. As a result, this land has been classified as Subgrade 3b due to topsoil stoniness. This may either be in combination with soil wetness or droughtiness, or on its own.

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SOURCES OF REFERENCE

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SSEW: Harpenden.

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SSEW: Harpenden.

APPENDIX I

DESCRIPTION OF THE GRADES AND SUBGRADES

Grade 1: Excellent Quality Agricultural Land

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

Grade 2: Very Good Quality Agricultural Land

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

Grade 3: Good to Moderate Quality Land

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

Subgrade 3a: Good Quality Agricultural Land

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

Subgrade 3b: Moderate Quality Agricultural Land

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

Grade 4: Poor Quality Agricultural Land

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

Grade 5: Very Poor Quality Agricultural Land

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

APPENDIX II

SOIL DATA

Contents:

Sample location map

Soil abbreviations - explanatory note

Soil pit descriptions

Soil boring descriptions (boring and horizon levels)

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	OTH: Other
DCW: Deciduous woodland	BOG: Bog or marsh	SAS: Set-Aside
HTH: Heathland	HRT: Horticultural crops	PLO: Ploughed
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	ST: Topsoil Stoniness
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
EX: Exposure		

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	
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 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	FSST:	soft, fine grained sandstone
ZR:	soft, argillaceous, or silty rocks	CH:	chalk
MSST:	soft, medium grained sandstone	GS:	gravel with porous (soft) stones
SI:	soft weathered igneous/metamorphic rock	GH:	gravel with non-porous (hard) stones

Stone contents (>2cm, >6cm and total) are given in percentages (by volume).

SOIL PIT DESCRIPTION

Site Name : WYCOMBE TERRIER/GRANGE Pit Number : 1P

Grid Reference: SU87809490 Average Annual Rainfall : 782 mm
 Accumulated Temperature : 1298 degree days
 Field Capacity Level : 167 days
 Land Use : Wheat
 Slope and Aspect : degrees

HORIZON	TEXTURE	COLOUR	STONES >2	TOT.STONE	LITH	MOTTLES	STRUCTURE	CONSIST	SUBSTRUCTURE	CALC
0- 22	MZCL	10YR42 43	12	15	HR					Y
22- 32	MZCL	10YR54 00	0	15	HR		MDCSAB	FR	M	
32- 43	HZCL	10YR64 63	0	12	HR	C	MDVCSB	FR	M	
43- 80	C	25Y 64 00	0	20	HR	M	MDVCAB	FM	P	

Wetness Grade : 3B Wetness Class : IV
 Gleying : 032 cm
 SPL : 043 cm

Drought Grade : 3A APW : 92 mm MBW : 4 mm
 APP : 96 mm MBP : 22 mm

FINAL ALC GRADE : 3B
 MAIN LIMITATION : Wetness

SOIL PIT DESCRIPTION

Site Name : WYCOMBE TERRIER/GRANGE Pit Number : 2P

Grid Reference: SU88009580 Average Annual Rainfall : 782 mm
 Accumulated Temperature : 1298 degree days
 Field Capacity Level : 167 days
 Land Use : Wheat
 Slope and Aspect : degrees

HORIZON	TEXTURE	COLOUR	STONES >2	TOT.STONE	LITH	MOTTLES	STRUCTURE	CONSIST	SUBSTRUCTURE	CALC
0- 28	HCL	10YR44 00	16	18	HR					
28- 43	C	25Y 53 00	0	25	HR	C	MDMAB	FM	M	
43- 80	C	10YR64 00	0	10	HR	M	WKCPR	FM	P	
80-100	C	25 Y72 00	0	3	HR	M	MDVCAB	FM	P	

Wetness Grade : 3B Wetness Class : IV
 Gleying : 028 cm
 SPL : 043 cm

Drought Grade : 2 APW : 101mm MBW : 13 mm
 APP : 92 mm MBP : 18 mm

FINAL ALC GRADE : 3B
 MAIN LIMITATION : Wetness

SOIL PIT DESCRIPTION

Site Name : WYCOMBE TERRIER/GRANGE Pit Number : 3P

Grid Reference: SUB8109560 Average Annual Rainfall : 782 mm
 Accumulated Temperature : 1298 degree days
 Field Capacity Level : 167 days
 Land Use : Wheat
 Slope and Aspect : 01 degrees N

HORIZON	TEXTURE	COLOUR	STONES >2	TOT.STONE	LITH	MOTTLES	STRUCTURE	CONSIST	SUBSTRUCTURE	CALC
0- 28	MZCL	10YR44 00	8	12	HR					
28- 38	HCL	10YR54 00	0	18	HR	F	MDMSAB	FM	G	
38- 57	C	10YR63 00	0	18	HR	C	MDMAB	FM	M	
57- 80	C	10YR64 00	0	0		M	STVCAB	FM	P	

Wetness Grade : 3A Wetness Class : III
 Gleying : 038 cm
 SPL : 057 cm

Drought Grade : 2 APW : 101mm MBW : 13 mm
 APP : 107mm MBP : 33 mm

FINAL ALC GRADE : 3A
 MAIN LIMITATION : Wetness

SOIL PIT DESCRIPTION

Site Name : WYCOMBE TERRIER/GRANGE Pit Number : 4P

Grid Reference: SU88009590 Average Annual Rainfall : 782 mm
 Accumulated Temperature : 1298 degree days
 Field Capacity Level : 167 days
 Land Use : Wheat
 Slope and Aspect : 2 degrees S

HORIZON	TEXTURE	COLOUR	STONES >2	TOT.STONE	LITH	MOTTLES	STRUCTURE	CONSIST	SUBSTRUCTURE	CALC
0- 26	MZCL	10YR43 00	13	25	HR					
26- 38	MZCL	10YR44 00	0	20	HR			FR	M	
38- 54	MCL	10YR44 54	0	35	HR			FR	M	
54- 64	HCL	10YR66 00	0	35	HR	M		FM	M	
64- 80	C	25Y 64 00	0	45	HR	M		FM	P	

Wetness Grade : 1 Wetness Class : I
 Gleying : 054 cm
 SPL : 064 cm

Drought Grade : 3A APW : 83 mm MBW : -5 mm
 APP : 87 mm MBP : 13 mm

FINAL ALC GRADE : 3A
 MAIN LIMITATION : Droughtiness

SOIL PIT DESCRIPTION

Site Name : WYCOMBE TERRIER/GRANGE Pit Number : 5P

Grid Reference: SU88409580 Average Annual Rainfall : 782 mm
 Accumulated Temperature : 1298 degree days
 Field Capacity Level : 167 days
 Land Use : Arable
 Slope and Aspect : . degrees

HORIZON	TEXTURE	COLOUR	STONES >2	TOT.STONE	LITH	MOTTLES	STRUCTURE	CONSIST	SUBSTRUCTURE	CALC
0- 28	MCL	10YR34 00	12	15	HR					
28- 44	MCL	10YR34 44	0	42	HR		MDCSAB	FR	M	
44- 51	C	10YR54 56	0	20	HR	C	WKCAB	VM	P	
51-100	C	10YR54 56	0	5	HR	C	MDCAB	VM	P	

Wetness Grade : 3A Wetness Class : III
 Gleying : 044 cm
 SPL : 044 cm

Drought Grade : 2 APW : 098mm MBW : 10 mm
 APP : 090mm MBP : 16 mm

FINAL ALC GRADE : 3A
 MAIN LIMITATION : Wetness

SOIL PIT DESCRIPTION

Site Name : WYCOMBE TERRIER/GRANGE Pit Number : 6P

Grid Reference: SU88409638 Average Annual Rainfall : 782 mm
 Accumulated Temperature : 1298 degree days
 Field Capacity Level : 167 days
 Land Use : Arable
 Slope and Aspect : degrees

HORIZON	TEXTURE	COLOUR	STONES >2	TOT.STONE	LITH	MOTTLES	STRUCTURE	CONSIST	SUBSTRUCTURE	CALC
0- 30	MCL	10YR53 00	2	4	HR					
30- 48	HZCL	10YR64 00	0	10	HR	C	MCSAB	FR	M	
48-100	C	10YR53 00	0	15	HR	C	WKCSAB	FM	P	

Wetness Grade : 3A Wetness Class : III
 Gleying : 030 cm
 SPL : 048 cm

Drought Grade : 2 APW : 112mm MBW : 24 mm
 APP : 104mm MBP : 30 mm

FINAL ALC GRADE : 3A
 MAIN LIMITATION : Wetness

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					
1	SU88409638	ARA		038 048	3	3A		0	0				WE	3A	See 6P
1P	SU87809490	WHT		032 043	4	3B	92	4 96	22	3A			WE	3B	At AB 93
2	SU88509640	ARA		0 055	3	3A		0	0				WE	3A	
2P	SU88009580	WHT		028 043	4	3B	101	13 92	18	2			WE	3B	+TS, at AB 63
3	SU88009620	PGR N	1	035 035	4	3B		0	0				WE	3B	
3P	SU88109560	WHT N	01	038 057	3	3A	101	13 107	33	2			WE	3A	At AB 56
4	SU88109620	PGR N	1	025 040	4	3B		0	0				WE	3B	I90 Flints
4P	SU88009590	WHT S	2	054 064	1	1	83	-5 87	13	3A			DR	3A	+TS, at AB 29
5	SU88219620	ARA		038 053	3	3A		0	0				WE	3A	
5P	SU88409580	ARA		044 044	3	3A	098	10 090	16	2			WE	3A	At AB 22
6	SU88309620	ARA		035 035	4	3B		0	0				WE	3B	
6P	SU88409638	ARA		030 048	3	3A	112	24 104	30	2			WE	3A	At AB 1
7	SU88409620	ARA		043 043	3	3A		0	0				WE	3A	
8	SU88509620	ARA		032 050	3	3A		0	0				WE	3A	
9	SU87909610	PGR N	1	28 028	4	3B		0	0				WE	3B	I80 Flints
10	SU88009610	WHT		20 035	4	3B		0	0				WE	3B	I70 Flints
11	SU88109610	WHT		35 035	4	3B		0	0				WE	3B	I50 Flints
12	SU88219610	ARA		035	2	2	092	4 102	28	3A			WD	2	I68 Q like 3P
13	SU88309610	ARA		035 035	4	3B		0	0				WE	3B	
14	SU88409610	ARA		030 030	4	3B		0	0				WE	3B	
15	SU88509610	ARA		030 040		4		0	0				TS	3B	3B WE also
16	SU88589610	ARA		030	3	4S	060	-28 060	-14	3B			TS	3B	I45 Q SPL 40
17	SU87859600	WHT SE	1	25 025	4	3B		0	0				WE	3B	I60 Flints
18	SU87909600	WHT S	1	28 028	4	3B		0	0				WE	3B	I40 See 2P
19	SU88009600	WHT S	1		1	1	52	-36 52	-22	3B			DR	3A	I35 See 4P
20	SU88109600	WHT N	1	35 035	4	3B		0	0				WE	3B	I70 Flints
21	SU88219600	CER S	01	s30 030	4	3B		0	0				WE	3A	
22	SU88309600	CER S	01	s30	2	2	057	-31 057	-17	3B			WE	3A	I40 See 5P
23	SU88409600	CER S	01	s45	1	1	073	-15 073	-1	3A			WE	3A	I50 See 5P
24	SU88509600	CER S	01	s28 028	4	3B		0	0				WE	3A	
25	SU88639599	WHT S	3		1	1	053	-35 053	-21	3B			TS	3B	
26	SU88709600	WHT S	3		1	1	051	-37 051	-23	3B			TS	3B	
27	SU88809600	WHT S	2	020	2	2	050	-38 050	-24	3B			TS	3B	
28	SU87909590	WHT SE	2	028 028	4	3B		0	0				WE	3B	I55 Flints
29	SU88009590	WHT S	2		1	1	055	-33 055	-19	3B			DR	3A	I40 See 4P
30	SU88109590	WHT S	2		1	1	040	-48 040	-34	3B			TS	3B	I30 See 4P
31	SU88309590	PGR S	1	035 035	4	3B		0	0				WE	3B	
32	SU88409590	CER S	03	s35 035	4	3B		0	0				WE	3A	
33	SU88509590	CER S	03	s52	1	1	089	1 100	26	3A			WE	3A	I65 See 6P
34	SU88639590	WHT S	3		1	1	058	-30 058	-16	3B			TS	3B	
35	SU88709590	WHT S	6	020	2	2	055	-33 055	-19	3B			TS	3B	
36	SU88809590	WHT S	6		1	1	058	-30 058	-16	3B			TS	3B	

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				
37	SU88009582	WHT			1	1	071	-17	074	0	3A		TS	3A
38	SU88109580	WHT S	01	060 060	2	2	125	37	104	30	1		WE	2 2 TS also
39	SU88209580	CER S	01	042	1	1	142	54	108	34	1		TS	2 Border 3A TS
40	SU88309580	CER		050	1	1	099	11	109	35	2		DR	2 2 TS also
41	SU88409580	CER N	02		1	1		0		0			TS	3B I45 flints
42	SU88539580	CER N	04	s50	1	1	073	-15	075	1	3A		TS	3B
43	SU88629580	WHT N	05	027 027	4	3B		0		0			WE	3B
44	SU88709580	WHT N	06	050 050	3	3A		0		0			TS	3B
45	SU88809580	WHT N	05	050 050	3	3A		0		0			TS	3B
46	SU88009570	WHT N	03	027 055	3	3A		0		0			WE	3A
47	SU88109570	WHT N	03	030 055	3	3A		0		0			WE	3A
48	SU88209570	CER N	02	030 065	3	3A		0		0			WE	3A
49	SU88309570	ARA N	05	030 030	4	3B		0		0			TS	3B
50	SU88409570	ARA N	05	043 043	3	3A		0		0			TS	3B
51	SU88509568	WHT		020 020	4	3B		0		0			WE	3B
52	SU88629570	WHT N	2	050 050	3	3B		0		0			WK	3B 3B TS also
53	SU88709570	WHT N	02	030 050	3	3B		0		0			WK	3B 3B TS also
54	SU88809570	WHT N	02	055 055	3	3B		0		0			WK	3B
55	SU88009560	WHT		055 070	2	2	130	42	107	33	1		WE	2 2 TS also
56	SU88109560	WHT N	01	035 057	3	3A		0		0			WE	3A See 3P
57	SU88209560	ARA N	03	050 050	3	3A		0		0			WE	3A
58	SU88309560	ARA N	03	035 035	4	3B		0		0			WE	3B
59	SU88409560	ARA N	01	045 045	3	3A		0		0			TS	3A S1 gley 35
60	SU88509560	WHT		035 035	4	3B		0		0			WE	3B
61	SU88609560	WHT		030 048	3	3A	92	4	102	28	3A		WE	3A I68 Flints
62	SU88709560	WHT		0 035	4	3B		0		0			WE	3B
63	SU88009550	WHT S	01	028 028	4	3B		0		0			WE	3B 3B TS also
64	SU88109550	WHT S	01	035 035	4	3B		0		0			WE	3B
65	SU88209550	ARA		038 048	3	3A		0		0			WE	3A Q-like 3P
66	SU88309550	ARA		s38	2	2	069	-19	069	-5	3A		WE	3B I45 See 5P
67	SU88409550	ARA		035 035	4	3B		0		0			WE	3B
68	SU88529550	WHT			1	1	78	-10	78	4	3A		DR	3A I50 See 4P
69	SU88639550	WHT			1	1	66	-22	66	-8	3B		DR	3B I40 See 4P
70	SU88129538	PGR S	1	035 035	4	3B		0		0			WE	3B I80 Flints
71	SU88209540	PGR S	1		1	1	48	-40	48	-26	3B		DR	3A 3A TS, See 4P
72	SU88309540	PGR S	2	022	2	2	43	-45	43	-31	3B		DR	3A I30 See 4P
73	SU88389530	PGR		025	2	2	51	-37	51	-23	3B		DR	3A I35 See 4P
74	SU88009530	PGR S	1		1	1	55	-33	55	-19	3B		TS	3B
75	SU88109530	PGR S	1		1	1	39	-49	39	-35	3B		TS	3B
76	SU88209530	PGR SW	1	020	2	2	55	-33	55	-19	3B		TS	3B
77	SU88309530	PGR S	2		1	1	54	-34	54	-20	3B		TS	3B
78	SU88409530	PGR S	2		1	1	86	-2	94	20	3A		DR	3A 3A TS, See 4P

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	DRT					
79	SU88709530	PGR S	2			1	1	40	-48	40	-34	3B		TS	3B		
80	SU88009520	PGR S	2			1	1	49	-39	49	-25	3B		TS	3B		
81	SU88109520	PGR S	2			1	1	39	-49	39	-35	3B		TS	3B		
82	SU88209520	PGR SE	2	0		2	2	39	-49	39	-35	3B		DR	3B	3B TS, I25	
83	SU88309520	PGR S	1			1	1	46	-42	46	-28	3B		DR	3A	3A TS, See 4P	
84	SU88409520	PGR E	1	055	055	3	3A		0		0			WE	3A	3A TS also	
85	SU87809512	PGR				1	1	44	-44	44	-30	3B		TS	3B		
86	SU87909510	PGR S	1	0		2	2	92	4	98	24	3A		TS	3B		
87	SU88009510	PGR S	3	0		2	2	33	-55	33	-41	4		TS	3B		
88	SU88109510	PGR SE	1	0		2	2	43	-45	43	-31	3B		DR	3A	3A TS, See 4P	
89	SU88209510	PGR SW	2			1	1	65	-23	65	-9	3B		DR	3A	3A TS, See 4P	
90	SU87809500	PGR N	2	0		2	2	71	-17	71	-3	3A		DR	3A	3A TS, See 4P	
91	SU87909500	PGR NE	1	0	030	4	3B		0		0			WE	3B		
92	SU87709490	PGR		035		2	2	90	2	93	19	3A		DR	3A	3A TS also	
93	SU87809490	PGR		020		4	3B		0		0			WE	3B	I58 See 1P	
94	SU87909490	PGR E	1	020	020	4	3B		0		0			WE	3B		
95	SU88409650	PGR		050	050	3	3A	132	44	107	33	1		WE	3A	S1. Gley 25	
96	SU88509650	PGR		025	048	3	3A	132	44	109	35	1		WE	3A		
97	SU88609650	PGR		0		1	1	079	-9	079	5	3A		DR	3A	I50 Flints	
98	SU88709650	PGR		050	050	3	3A	133	45	110	36	1		WE	3A		
99	SU88409640	PGR		045	045	3	3A	130	42	111	37	1		WE	3A		
100	SU88509640	PGR		025	055	3	3A	141	53	118	44	1		WE	3A		
101	SU88609640	PGR		030	030	4	3B	127	39	104	30	1		WE	3B		
102	SU88709640	PGR		050	050	3	3A	131	43	108	34	1		WE	3A		
103	SU88309630	PGR		058	058	3	3A	124	36	105	31	1		WE	3A		
104	SU88609630	PGR		050	050	3	3A	132	44	109	35	1		WE	3A		
105	SU88709630	PGR		045	045	3	3A	132	44	109	35	1		WE	3A		
106	SU88809630	RGR NE	03	025	048	3	3A	095	7	107	33	2		WE	3A		
107	SU88609620	RGR		025		2	2	089	1	097	23	3A		DR	3A	I65 QDR2	
108	SU88709620	RGR		025	025	4	3B	091	3	096	22	3A		TS	3B	B WE Also	
109	SU88809620	RGR		045		1	1	084	-4	090	16	3A		TS	3B		
110	SU88709610	RGR		020	035	4	3B	095	7	100	26	2		WE	3B		
111	SU88809610	RGR		0	042	4	3B	094	6	099	25	2		WE	3B		
112	SU87709560	PGR		025	058	3	3A	116	28	115	41	2		WE	3A		
113	SU87709561	PGR		050	050	3	3A	102	14	107	33	2		WE	3A		
114	SU87809550	PGR		052	052	3	3A	088	0	099	25	3A		WD	3A		
115	SU87909550	PGR		035	035	4	3B	088	0	096	22	3A		WE	3B		
116	SU87709540	PGR		060	060	3	3A	128	40	105	31	1		TS	3B		
117	SU87809540	PGR		060	060	3	3A	133	45	111	37	1		WE	3A		
118	SU87909540	PGR		045		1	1	077	-11	077	3	3A		DR	3A	I60 Q DR2	
119	SU88009540	RGR		025	025	4	3B	070	-18	073	-1	3A		WE	3B		
120	SU87919534	RGR S	01	020	044	4	3B	080	-8	087	13	3A		WE	3B		

SAMPLE	DEPTH	TEXTURE	COLOUR	---MOTTLES---			PED		---STONES---			STRUCT/	SUBS	SPL	CALC
				COL	ABUN	CONT	COL.	GLE	>2	>6	LITH				
1	0-38	mc1	10YR53 00						4	2	HR	8			
	38-48	hc1	25Y 64 00	10YR58 00 C			00MN00 00 Y	0	0	HR	5	M			
	48-70	c	10YR64 72	75YR58 00 M				Y	0	0	HR	25	P	Y	+ Red mottles
	70-100	c	25Y 72 00	75YR58 00 M				Y	0	0	HR	2	P	Y	+ Red mottles
1P	0-22	mzc1	10YR42 43						12	3	HR	15			Y + 2% Chalk
	22-32	mzc1	10YR54 00						0	0	HR	15	MDCSAB FR M		
	32-43	hzc1	10YR64 63	10YR58 00 C			10YR54 00 Y	0	0	HR	12	MDVCSB FR M			
	43-80	c	25Y 64 00	75YR68 00 M			10YR64 00 Y	0	0	HR	20	MDVCAB FM P	Y	Y	St enveloped
2	0-32	mzc1	25Y 53 00	10YR56 00 C			00MN00 00 Y	6	3	HR	10				
	32-55	hzc1	25Y 63 00	10YR58 00 C			00MN00 00 Y	0	0	HR	5	M			
	55-85	c	25Y 71 00	75YR58 00 M				Y	0	0	HR	2	P	Y	+ Red mottles
2P	0-28	hc1	10YR44 00						16	3	HR	18			
	28-43	c	25Y 53 00	75YR46 00 C				Y	0	0	HR	25	MDMAB FM M		
	43-80	c	10YR64 00	75YR58 00 M			25Y 63 00 Y	0	0	HR	10	WKCPFR FM P	Y	Y	Plastic
	80-100	c	25 Y72 00	25YR58 00 M			25Y 72 00 Y	0	0	HR	3	MDVCAB FM P	Y	Y	V. Plastic
3	0-20	mzc1	10YR42 43						5	2	HR	15			
	20-35	mzc1	10YR44 54	10YR68 00 F					0	0	HR	10	M		
	35-65	c	25Y 62 00	75YR68 00 M				Y	0	0	HR	5	P	Y	
	65-120	zc	25Y 63 00	75YR68 00 M				Y	0	0	HR	5	P	Y	
3P	0-28	mzc1	10YR44 00						8	0	HR	12			
	28-38	hc1	10YR54 00	10YR56 00 F					0	0	HR	18	MDMSAB FM G		
	38-57	c	10YR63 00	75YR56 58 C			25Y 63 00 Y	0	0	HR	18	MDMAB FM M			Sts interconnect
	57-80	c	10YR64 00	75YR58 00 M			25Y 72 00 Y	0	0		0	STVCAB FM P	Y	Y	V. Plastic
4	0-25	mzc1	10YR43 00						8	3	HR	20			
	25-40	mzc1	10YR53 54	10YR68 00 C			00MN00 00 Y	0	0	HR	10	M			
	40-90	c	25Y 52 62	10YR68 00 M				Y	0	0	HR	5	P	Y	Imp Flints
4P	0-26	mzc1	10YR43 00						13	6	HR	25			
	26-38	mzc1	10YR44 00						0	0	HR	20	FR M		
	38-54	mc1	10YR44 54						0	0	HR	35	FR M		
	54-64	hc1	10YR66 00	75YR58 00 M				S	0	0	HR	35	FM M		
	64-80	c	25Y 64 00	05YR58 00 M			00MN00 00 Y	0	0	HR	45	FM P			Stony not SPL
5	0-25	mc1	10YR53 00						9	4	HR	10			
	25-38	mc1	10YR53 00						0	0	HR	15	M		
	38-53	hc1	10YR64 73	75YR58 00 C			00MN00 00 Y	0	0	HR	20	M			
	53-80	c	10YR64 63	10YR58 00 M				Y	0	0	HR	5	P	Y	+ Red mottles
5P	0-28	mc1	10YR34 00						12	0	HR	15			
	28-44	mc1	10YR34 44						0	0	HR	42	MDCSAB FR M		
	44-51	c	10YR54 56	75YR56 00 C			10YR56 00 S	0	0	HR	20	WKCBAB VM P	Y	Y	Sts enveloped
	51-100	c	10YR54 56	75YR56 00 C			10YR54 00 S	0	0	HR	5	MDCAB VM P		Y	

SAMPLE	DEPTH	TEXTURE	COLOUR	----MOTTLES-----			PED COL.	----STONES----			STRUCT/ CONSIST	SUBS			CALC		
				COL	ABUN	CONT		GLE	>2	>6		LITH	TOT	STR		POR	IMP
6	0-35	mc1	10YR53 00					6	3	HR	10						
	35-45	zc	10YR53 00 75YR58 00 M				Y	0	0	HR	2		P		Y		
	45-85	c	10YR64 73 75YR58 00 M				Y	0	0		0		P		Y	+ Red mottles	
6P	0-30	mc1	10YR53 00					2	0	HR	4						
	30-48	hzc1	10YR64 00 75YR58 00 C				Y	0	0	HR	10	MCSAB	FR	M			
	48-100	c	10YR53 00 05YR46 00 C				Y	0	0	HR	15	WKCSAB	FM	P	Y	Y	Sts enveloped
7	0-33	mzc1	10YR53 00					6	3	HR	10						
	33-43	hc1	10YR44 00				00MN00	00	0	0	HR	10		M			
	43-60	c	10YR64 73 75YR58 00 M				00MN00	00	Y	0	0	HR	2	P		Y	
	60-100	c	10YR63 71 75YR58 00 M					Y	0	0	HR	2		P		Y	+ Red mottles
8	0-32	mc1	25Y 53 00					6	3	HR	8						
	32-50	hzc1	25Y 64 73 75YR58 00 M				00MN00	00	Y	0	0	HR	5		M		
	50-75	c	25Y 71 00 75YR58 00 M					Y	0	0	HR	15		P		Y	+ Red mottles
9	0-28	mzc1	10YR43 00					6	2	HR	15						
	28-55	c	25Y 64 00 10YR68 00 M				00MN00	00	Y	0	0	HR	5		P		Y
	55-80	c	25Y 62 00 75YR68 00 M					Y	0	0	HR	5		P		Y	
10	0-20	mzc1	10YR43 00					5	1	HR	12						
	20-35	hzc1	10YR62 00 75YR68 00 C					Y	0	0	HR	10		M			
	35-75	c	25Y 61 62 75YR68 58 M					Y	0	0	HR	5		P		Y	Imp Flints
11	0-20	mzc1	10YR43 00					12	5	HR	18						
	20-35	hzc1	10YR44 00 10YR68 00 C					S	0	0	HR	20		M			
	35-50	c	10YR64 00 75YR68 00 M					Y	0	0	HR	15		P		Y	Imp Flints
12	0-35	mc1	10YR42 00					8	4	HR	12						
	35-55	hc1	10YR53 00 10YR68 00 C					Y	0	0	HR	2		M			
	55-68	c	10YR63 00 75YR58 00 M					Y	0	0	HR	15		M			Imp Flints
13	0-35	mc1	10YR42 00					8	4	HR	12						
	35-70	c	10YR64 73 75YR58 00 M					Y	0	0	HR	5		P		Y	+ Red mottles
14	0-30	mc1	10YR53 00					8	4	HR	12						
	30-60	c	10YR63 72 75YR58 00 M					Y	0	0		0		P		Y	
	60-80	c	25Y 62 00 05YR58 00 M					Y	0	0	HR	5		P		Y	
15	0-30	mc1	10YR53 00					22	10	HR	25						
	30-40	hc1	10YR53 00 10YR58 00 M					Y	0	0	HR	10		M			
	40-80	c	10YR72 00 75YR68 00 M					Y	0	0	HR	2		P		Y	
16	0-30	mzc1	10YR53 00					21	15	HR	30						
	30-40	hc1	10YR63 00 10YR58 00 M					Y	0	0	HR	15		M			
	40-45	c	10YR63 71 75YR58 00 M					Y	0	0	HR	15		P			Imp Flints

SAMPLE	DEPTH	TEXTURE	COLOUR	----MOTTLES----			PED COL.	----STONES----			STRUCT/ CONSIST	SUBS			CALC	
				COL	ABUN	CONT		GLE	>2	>6		LITH	TOT	STR		POR
17	0-25	mzc1	10YR43 00						9	5	HR	15				
	25-60	c	10YR64 66 75YR68 00 M					Y	0	0	HR	5	P		Y	Imp Flints
18	0-28	mzc1	10YR42 43						11	5	HR	20				
	28-40	c	10YR64 00 75YR58 68 M					Y	0	0	HR	20	P		Y	Imp Flints
19	0-25	mzc1	10YR42 43						9	4	HR	18				
	25-35	mzc1	10YR44 00						0	0	HR	30	M			Imp Flints
20	0-25	mzc1	10YR42 43						13	6	HR	20				
	25-35	c	10YR44 00 10YR58 00 C					S	0	0	HR	25	M			
	35-70	c	25Y 64 62 75YR58 68 M					Y	0	0	HR	15	P		Y	Imp Flints
21	0-30	mc1	10YR43 00						11	0	HR	15				
	30-60	c	10YR54 00 75YR56 00 C				25 Y62 00	S	0	0	HR	15	P		Y	
	60-80	c	10YR54 00 75YR58 00 M					S	0	0		0	P		Y	
22	0-30	mc1	10YR43 00						12	0	HR	15				
	30-40	c	10YR54 00 75YR56 00 C					S	0	0	HR	20	P			Imp Flints
23	0-30	mc1	10YR43 00						10	0	HR	12				
	30-45	hc1	10YR44 54						0	0	HR	20	M			
	45-50	c	10YR54 00 75YR68 00 C					S	0	0	HR	20	P			Imp Flints
24	0-28	mc1	10YR43 00						9	0	HR	12				
	28-70	c	10YR54 00 75YR68 00 C					S	0	0	HR	2	P		Y	
25	0-35	mzc1	10YR52 00 10YR58 00 F						16	4	HR	22				Imp Flints
26	0-30	mzc1	10YR52 00						18	7	HR	22				
	30-35	mzc1	10YR54 00						0	0	HR	30	M			Imp Flints
27	0-20	mc1	10YR52 00						16	4	HR	20				
	20-35	hc1	10YR53 00 75YR68 00 C					Y	0	0	HR	15	M			Imp Flints
28	0-28	mzc1	10YR42 43						11	4	HR	18				
	28-55	c	25Y 63 64 75YR58 68 M					Y	0	0	HR	10	P		Y	Imp Flints
29	0-25	mzc1	10YR43 00						13	6	HR	25				3A T/S Stones
	25-40	mzc1	10YR54 64 10YR68 00 F				00MN00 00		0	0	HR	30	M			Imp Flints
30	0-25	mzc1	10YR42 43						18	8	HR	30				3B T/S Stones
	25-30	mzc1	10YR54 00						0	0	HR	35	M			Imp Flints
31	0-25	mzc1	10YR52 00 10YR58 00 C					Y	2	0	HR	5				
	25-35	mzc1	10YR54 00 10YR58 68 C					S	0	0	HR	30	M			
	35-55	c	10YR64 00 75YR68 00 C				00MN00 00	Y	0	0	HR	10	P		Y	Imp Flints

SAMPLE	DEPTH	TEXTURE	COLOUR	----MOTTLES-----			PED COL.	----STONES----				STRUCT/ CONSIST	SUBS				
				COL	ABUN	CONT		GLE	>2	>6	LITH		TOT	STR	POR	IMP	SPL
32	0-35	hc1	10YR43 00						8	0	HR	12					
	35-80	c	75YR56 00	05YR46 00	C		25	Y71	00	S	0	0	HR	2	P		Y
33	0-30	mc1	10YR43 00						6	0	HR	10					
	30-52	hc1	10YR44 54						0	0	HR	10	M				
	52-60	c	10YR54 00	75YR58 00	C				S	0	0	HR	5	P			Dry
	60-65	c	10YR54 00	75YR58 00	C				S	0	0	HR	20	M			Imp Flints
34	0-30	mzc1	10YR52 00						18	8	HR	22					
	30-40	mc1	10YR54 00						0	0	HR	20	M				Imp Flints
35	0-20	mc1	10YR52 00						16	8	HR	20					
	20-40	hc1	10YR54 00	10YR58 00	C			Y	0	0	HR	20	M				Imp Flints
36	0-35	mc1	10YR52 00						17	4	HR	20					
	35-40	mc1	10YR54 00						0	0	HR	20	M				Imp Flints
37	0-28	mzc1	10YR42 00						11	4	HR	25					
	28-55	mzc1	10YR54 00	10YR66 00	F				0	0	HR	30	M				Imp Flints
38	0-30	mzc1	10YR44 00						9	0	HR	12					
	30-60	hc1	10YR54 00	75YR56 00	F				0	0	HR	15	M				
	60-120	c	10YR64 00	75YR58 00	M			Y	0	0	HR	10	P				Y
39	0-30	mc1	10YR42 00						10	0	HR	12					
	30-42	hc1	10YR43 54	75YR58 00	F				0	0	HR	10	M				
	42-50	c	10YR52 00	75YR54 56	C			Y	0	0	HR	5	P				
	50-80	mzc1	25 Y62 00	75YR56 00	C			Y	0	0	HR	5	M				
	80-120	hzc1	25 Y62 00	75YR56 00	C			Y	0	0	HR	5	M				
40	0-32	mzc1	10YR42 00						7	0	HR	8					
	32-50	mzc1	10YR54 00						0	0	HR	7	M				
	50-65	mzc1	10YR52 53	75YR46 00	C		00MN00	00	Y	0	0	HR	5	M			Imp Flints
41	0-30	mc1	10YR43 00						16	8	HR	20					
	30-45	hzc1	10YR54 00						0	0	HR	20	M				Imp Flints
42	0-30	mc1	10YR43 00						16	0	HR	20					
	30-50	hc1	10YR54 00						0	0	HR	20	M				
	50-55	c	75YR56 00	05YR46 00	C			S	0	0	HR	15	P				Imp Flints
43	0-27	hzc1	10YR44 00						12	5	HR	15					
	27-60	c	10YR64 00	75YR56 00	C			Y	0	0	HR	5	P				Y
	60-120	c	10YR64 73	25YR58 00	M			Y	0	0	HR	5	P				Y
44	0-30	mzc1	10YR44 00						16	5	HR	20					
	30-50	hc1	10YR54 55	75YR56 00	F		00MN00	00	0	0	HR	10	M				
	50-80	c	10YR64 00	75YR56 00	C			Y	0	0	HR	5	P				Y

SAMPLE	DEPTH	TEXTURE	COLOUR	----MOTTLES-----			PED COL.	----STONES----			STRUCT/ CONSIST	SUBS			CALC	
				COL	ABUN	CONT		GLE	>2	>6		LITH	TOT	STR		POR
45	0-30	mzc1	10YR44 00					16	5	HR	20					
	30-50	hc1	75YR55 00	75YR56 00	C			S	0	0	HR	15	M			
	50-70	c	10YR64 00	05YR58 00	C			Y	0	0	HR	10	P	Y		Imp Flints
46	0-27	mc1	10YR44 00						8	0	HR	5				
	27-55	c	10YR64 00	75YR68 00	C			Y	0	0	HR	5	M			
	55-85	sc	25Y 64 00	05YR68 00	C			Y	0	0	HR	3	P	Y		
	85-100	sc1	10YR66 68					Y	0	0	HR	3	M	Y		Imp Flints
47	0-30	mc1	10YR44 00						5	0	HR	8				
	30-55	c	10YR54 00	75YR56 00	C	00MN00 00	S	0	0	HR	10	M				
	55-90	c	10YR64 00	75YR56 00	M			Y	0	0	HR	2	P	Y		
	90-100	hzc1	75YR65 00	05YR68 00	C			Y	0	0	HR	15	M	Y		
48	0-30	mzc1	10YR42 00						3	0	HR	4				
	30-50	mzc1	10YR53 00	75YR56 00	C			Y	0	0	HR	5	M			
	50-65	hzc1	10YR53 00	75YR56 00	C			Y	0	0	HR	5	M			
	65-90	c	10YR71 72	75YR58 00	M	00MN00 00	Y	0	0	HR	2	P	Y			
49	0-30	mzc1	10YR53 00						16	6	HR	20				
	30-70	c	10YR64 00	75YR58 00	M			Y	0	0	HR	5	P	Y		Imp Flints
50	0-30	mzc1	10YR53 00						18	10	HR	20				
	30-43	hc1	10YR54 00						0	0	HR	5	M			
	43-80	c	10YR64 00	75YR58 00	M			Y	0	0	HR	5	P	Y		
51	0-20	mzc1	10YR53 00						8	0	HR	12				
	20-50	c	10YR53 00	05YR58 00	M	00MN00 00	Y	0	0	HR	15	P	Y			
52	0-27	hzc1	10YR44 00						15	5	HR	18				
	27-50	c	10YR66 00	75YR66 00	F				0	0	HR	10	M			
	50-70	c	10YR64 00	75YR58 00	C	00MN00 00	Y	0	0	HR	10	P	Y		Imp Flints	
53	0-30	hzc1	10YR44 00						16	0	HR	18				
	30-50	c	10YR54 00	10YR66 00	C			S	0	0	HR	5	M			
	50-120	c	10YR64 00	75YR56 00	M			Y	0	0	HR	5	P	Y		
54	0-26	hzc1	10YR44 00						6	0	HR	12				
	26-55	hzc1	75YR55 00						0	0	HR	15	M			
	55-80	c	75YR54 00	05YR58 00	M			S	0	0	HR	10	P	Y		Imp Flints
55	0-28	mc1	10YR44 00						5	2	HR	8				
	28-55	hc1	10YR55 00						0	0	HR	10	M			
	55-70	hc1	10YR64 73	75YR56 00	C	00MN00 00	Y	0	0	HR	10	M				
	70-120	c	10YR64 73	75YR68 00	M			Y	0	0	HR	5	P	Y		
56	0-30	mc1	10YR44 00						7	0	HR	10				
	30-45	hc1	10YR54 00	75YR56 00	C			S	0	0	HR	10	M			
	45-57	c	10YR63 00	10YR56 00	C	00MN00 00	Y	0	0	HR	18	M				Stony not SPL
	57-120	c	10YR63 00	75YR58 00	M			Y	0	0		0	P	Y		

SAMPLE	DEPTH	TEXTURE	COLOUR	----MOTTLES-----			PED		----STONES-----			STRUCT/ CONSIST	SUBS			SPL	CALC
				COL	ABUN	CONT	COL.	GLE	>2	>6	LITH		TOT	STR	POR		
57	0-33	mzc1	25Y 43 00						4	1	HR	8					
	33-50	hzc1	10YR44 00						0	0	HR	2	M				
	50-68	c	10YR64 62 75YR68 00 C				00MN00	00 Y	0	0	HR	2	P			Y	
58	0-35	mc1	00YR53 00						9	0	HR	11					
	35-55	c	10YR63 71 75YR58 00 M					Y	0	0	HR	5	P			Y	
	55-80	c	10YR63 73 10YR68 00 M					Y	0	0	HR	10	P			Y	
59	0-35	mc1	10YR53 00						13	5	HR	15					
	35-45	hc1	10YR54 00 75YR58 00 M					S	0	0	HR	5	M				
	45-80	c	10YR63 00 75YR58 00 M				00MN00	00 Y	0	0	HR	5	P			Y	
60	0-35	mzc1	10YR53 00						8	0	HR	12					
	35-60	c	10YR53 00 05YR58 00 M				00MN00	00 Y	0	0	HR	15	P			Y	
61	0-30	mzc1	10YR53 00						8	0	HR	12					
	30-48	hzc1	10YR64 00 10YR58 00 C					Y	0	0	HR	10	M				
	48-68	c	10YR64 00 75YR68 00 M				00MN00	00 Y	0	0	HR	10	P			Y	Imp Flints
62	0-35	mzc1	10YR52 00 10YR58 00 C					Y	8	0	HR	12					
	35-65	c	10YR64 00 75YR68 00 M					Y	0	0	HR	2	P			Y	Imp Flints
63	0-28	hc1	10YR44 00						16	3	HR	18					
	28-50	c	10YR64 00 75YR68 00 C					Y	0	0	HR	5	P			Y	
	50-120	c	10YR64 66 25YR58 00 C					Y	0	0	HR	5	P			Y	
64	0-28	hc1	10YR44 00						12	2	HR	15					
	28-35	hc1	10YR54 00						0	0	HR	15	M				
	35-90	c	10YR64 00 75YR58 00 C					Y	0	0	HR	5	P			Y	
	90-120	c	10YR64 00 05YR58 00 M					Y	0	0	HR	5	P			Y	
65	0-38	mzc1	10YR53 00						6	3	HR	8					
	38-48	c	10YR63 00 75YR58 00 C				00MN00	00 Y	0	0	HR	15	M				Too Stony
	48-75	c	10YR64 00 05YR58 00 M					Y	0	0	HR	15	P			Y	Imp Flints
66	0-38	mzc1	10YR42 00						11	3	HR	15					
	38-45	c	10YR54 00 05YR58 00 M					S	0	0	HR	20	P				Imp Flints
67	0-35	mc1	10YR42 00						13	5	HR	15					
	35-80	c	10YR63 00 75YR58 00 M				00MN00	00 Y	0	0	HR	2	P			Y	
68	0-35	mzc1	10YR53 00						8	0	HR	12					
	35-50	c	10YR54 00 75YR68 00 C					S	0	0	HR	20	M				Imp Flints
69	0-35	mzc1	10YR53 00						8	0	HR	12					
	35-40	mzc1	10YR54 00 10YR56 00 C				00MN00	00 S	0	0	HR	15	M				Imp Flints
70	0-25	mzc1	10YR43 00						12	4	HR	25					
	25-35	hzc1	10YR54 00 10YR58 00 C						0	0	HR	20	M				
	35-80	c	25Y 53 52 75YR58 68 M					Y	0	0	HR	10	P			Y	Imp Flints

SAMPLE	DEPTH	TEXTURE	COLOUR	----MOTTLES----			PED		----STONES----				STRUCT/ CONSIST	SUBS				
				COL	ABUN	CONT	COL.	GLE	>2	>6	LITH	TOT		STR	POR	IMP	SPL	CALC
71	0-25	mzc1	10YR43 00						11	5	HR	25						
	25-35	mzc1	10YR54 00	10YR58	00	C			S	0	0	HR	30	M				Imp Flints
72	0-22	mzc1	10YR42 00						8	1	HR	20						Y
	22-30	mzc1	10YR53 00	10YR58	00	C			Y	0	0	HR	35	M				Y Imp Flints
73	0-25	mzc1	10YR42 00						8	2	HR	20						Y
	25-35	hzc1	10YR52 53	10YR58	00	C			Y	0	0	HR	30	M				Y Imp Flints
74	0-20	mzc1	10YR43 00						18	8	HR	25						
	20-35	mzc1	10YR44 54	10YR58	00	C	00MN00	00	S	0	0	HR	25	M				
	35-40	hzc1	10YR54 00	10YR58	00	C	00MN00	00	S	0	0	HR	25	M				Imp Flints
75	0-20	mzc1	10YR43 00						17	7	HR	30						
	20-30	mzc1	10YR44 54	10YR58	00	F			0	0	HR	30	M					Imp Flints
76	0-20	mc1	10YR52 00						16	0	HR	25						
	20-30	hc1	10YR54 00	10YR58	00	C			S	0	0	HR	10	M				
	30-40	c	10YR64 00	75YR68	00	C			Y	0	0	HR	2	P				Imp Flints
77	0-23	mzc1	10YR42 00						16	8	HR	25						
	23-40	mzc1	10YR54 00	00MN00	00	C			S	0	0	HR	30	M				Y Imp Flints
78	0-20	z1	10YR42 00						12	5	HR	25						Y
	20-55	mzc1	10YR44 00	10YR56	00	F	00MN00	00	0	0	HR	25	M					Y
	55-65	hzc1	10YR54 64	10YR68	00	M	00MN00	00	S	0	0	HR	20	M				Imp Flints
79	0-25	mzc1	10YR42 43						18	8	HR	30						
	25-30	mzc1	10YR44 54						0	0	HR	35	M					Imp Flints
80	0-25	mzc1	10YR43 00						20	10	HR	35						
	25-40	mzc1	10YR54 00	10YR68	00	C			S	0	0	HR	35	M				Imp Flints
81	0-20	mzc1	10YR43 00						17	10	HR	30						
	20-30	mzc1	10YR44 54						0	0	HR	35	M					Imp Flints
82	0-25	mzc1	10YR52 00	10YR58	00	C			Y	16	3	HR	20					Imp Flints
83	0-20	mzc1	10YR52 00						11	2	HR	15						
	20-30	mzc1	10YR54 00						0	0	HR	25	M					Imp Flints
84	0-35	mzc1	10YR52 00						11	0	HR	15						Y
	35-55	mc1	10YR54 00	10YR58	00	C	00MN00	00	S	0	0	HR	10	M				
	55-80	c	10YR64 72	75YR68	00	M			Y	0	0	0	P					Y
85	0-20	mzc1	10YR42 00						16	8	HR	30						
	20-35	mzc1	10YR44 54	10YR58	00	C	00MN00	00	S	0	0	HR	35	M				Imp Flints

SAMPLE	DEPTH	TEXTURE	COLOUR	-----MOTTLES-----			PED		-----STONES-----				STRUCT/ CONSIST	SUBS				
				COL	ABUN	CONT	COL.	GLE	>2	>6	LITH	TOT		STR	POR	IMP	SPL	CALC
86	0-20	z1	10YR52 00	10YR58 00	C			Y	16	6	HR	18						
	20-40	mzc1	10YR53 00	10YR58 00	C		00MN00	00	Y	0	0	HR	15	M				
	40-60	mzc1	10YR64 00	10YR68 00	C		00MN00	00	Y	0	0	HR	10	M				Imp Flints
87	0-20	mc1	10YR52 00	10YR58 00	C			Y	19	6	HR	25						
	20-25	hc1	10YR64 00	10YR58 00	C			Y	0	0	HR	30	M					Imp Flints
88	0-20	mzc1	10YR52 00	10YR58 00	C			Y	14	3	HR	18						
	20-30	mc1	10YR64 00	10YR58 00	C		00MN00	00	Y	0	0	HR	30	M				Imp Flints
89	0-20	z1	10YR42 00						11	2	HR	15						
	20-40	mzc1	10YR54 00						0	0	HR	25	M					Imp Flints
90	0-20	z1	10YR52 00	10YR58 00	C			Y	11	3	HR	15						
	20-42	mc1	10YR64 00	10YR58 00	C		00MN00	00	Y	0	0	HR	10	M				Imp Flints
91	0-20	mc1	10YR52 00	10YR58 00	C			Y	11	3	HR	15						
	20-30	mzc1	10YR64 00	10YR68 00	C			Y	0	0	HR	10	M					
	30-75	c	10YR64 00	10YR68 00	M			Y	0	0		0	P				Y	
	75-80	c	10YR72 00	05YR58 00	M			Y	0	0	HR	5	P				Y	
92	0-20	z1	10YR42 00						11	3	HR	15						Y
	20-35	mzc1	10YR54 00						0	0	HR	8	M				Y	+ 5% Chalk
	35-45	mzc1	10YR64 00	75YR58 00	C		00MN00	00	Y	0	0	HR	10	M				
	45-55	hzc1	10YR64 00	75YR58 00	C		00MN00	00	Y	0	0	HR	15	M				Imp Flints
93	0-20	z1	10YR42 00						12	3	HR	15						Y
	20-35	mzc1	10YR54 00	10YR58 00	C		00MN00	00	S	0	0	HR	8	M				+ 2 % Chalk
	35-48	hzc1	10YR53 64	75YR58 00	C		00MN00	00	Y	0	0	HR	10	M				
	48-58	c	10YR64 00	10YR68 58	C		00MN00	00	Y	0	0	HR	15	P				Imp Flints
94	0-20	mc1	10YR42 00						14	6	HR	18						
	20-35	c	10YR63 72	75YR68 00	C		00MN00	00	Y	0	0	HR	5	P				Y
	35-78	zc	10YR71 00	10YR66 00	C			Y	0	0		0	P				Y	
	78-100	c	10YR72 00	05Y 58 00	M		00MN00	00	Y	0	0	HR	5	P				Y
95	0-25	mzc1	10YR53 00						0	0	HR	6						
	25-50	hzc1	10YR54 00	10YR68 00	C			S	0	0	HR	10	M					
	50-120	c	10YR64 00	10YR68 00	C			Y	0	0		0	P				Y	
96	0-25	mzc1	10YR42 00						2	0	HR	5						
	25-48	hzc1	10YR53 00	10YR56 00	C			Y	0	0	HR	10	M					
	48-120	c	10YR64 00	10YR68 00	C			Y	0	0		0	P				Y	
97	0-30	mzc1	10YR53 00						0	0	HR	5						
	30-50	hzc1	10YR54 00	10YR68 00	C			S	0	0	HR	30	M					Imp Flints
98	0-25	mzc1	10YR53 00						0	0	HR	5						
	25-50	hzc1	10YR54 00	10YR68 00	C			S	0	0	HR	10	M					
	50-120	c	10YR64 00	10YR68 00	C			Y	0	0	HR	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
99	0-25	mzc1	10YR53 00					8	1	HR	9						
	25-45	mzc1	10YR54 53					0	0	HR	7		M				
	45-80	c	10YR53 00	10YR56 58 C				Y	0	0	HR	12		P		Y	
	80-120	c	10YR53 64	10YR58 00 M				Y	0	0	HR	5		P		Y	
100	0-25	mzc1	10YR32 00					0	0		0						
	25-35	mzc1	10YR53 00	10YR46 00 C			00MN00	Y	0	0	0		M				
	35-55	hzc1	10YR53 00	10YR58 00 M			00MN00	Y	0	0	0		M				
	55-120	c	10YR53 00	75YR58 00 M				Y	0	0	0		P		Y		
101	0-30	mzc1	10YR32 00					6	0	HR	9						
	30-120	c	10YR64 00	10YR68 00 C				Y	0	0	0		P		Y		
102	0-30	mzc1	10YR53 00					0	5	HR	10						
	30-50	hzc1	10YR54 00	10YR66 00 C				S	0	0	HR	10		M			
	50-120	c	10YR64 00	10YR66 00 C				Y	0	0	HR	0		P		Y	
103	0-25	mzc1	10YR43 00					0	0	HR	10						
	25-58	hzc1	10YR53 00					0	0	HR	15		M				
	58-120	c	10YR53 00	75YR58 00 M				Y	0	0	HR	15		P		Y	
104	0-35	mzc1	10YR43 00					6	0	HR	10						
	35-50	mzc1	10YR53 00					0	0	HR	10		M				
	50-120	c	10YR64 00	10YR68 00 C				Y	0	0	0		P		Y		
105	0-25	mzc1	10YR53 00					0	0	HR	5						
	25-45	hzc1	10YR54 00	10YR68 00 C				S	0	0	HR	10		M			
	45-120	c	10YR64 00	10YR68 00 C				Y	0	0	0		P		Y		
106	0-25	mzc1	10YR53 00					8	0	HR	15						
	25-48	mzc1	25Y 64 00	75YR58 00 C				Y	0	0	HR	2		M			
	48-70	c	10YR53 00	05YR58 00 M				Y	0	0	HR	2		P		Y	
107	0-25	mzc1	10YR53 00					6	1	HR	10						
	25-35	mzc1	10YR53 00	10YR58 00 C			00MN00 00	Y	0	0	HR	15		M			
	35-65	hc1	10YR53 00	75YR56 00 C			00MN00 00	Y	0	0	HR	20		M			Imp Flints
108	0-25	mzc1	25Y 53 00					16	6	HR	20						
	25-80	c	10YR53 00	05YR58 00 C				Y	0	0	HR	2		P		Y	
109	0-35	mzc1	10YR53 00					16	6	HR	20						
	35-45	mzc1	10YR63 00					0	0	HR	15		M				
	45-60	hzc1	10YR63 00	75YR58 00 C				Y	0	0	HR	15		M			Imp Flints
110	0-20	mzc1	25Y 52 00					11	3	HR	15						
	20-35	hc1	10YR64 00	75YR58 00 C				Y	0	0	HR	5		M			
	35-80	c	10YR53 00	05YR58 00 M				Y	0	0	HR	2		P		Y	

SAMPLE	DEPTH	TEXTURE	COLOUR	-----MOTTLES-----			PED		-----STONES-----			STRUCT/ CONSIST	SUBS			CALC	
				COL	ABUN	CONT	COL.	GLE	>2	>6	LITH		TOT	STR	POR		IMP
111	0-30	mzc1	25Y 52 00 75YR66 00 C						12	5	HR	18					
	30-42	hc1	10YR63 00 75YR56 00 C				DOMN00	00	Y	0	0	HR	15	M			
	42-80	c	10YR53 00 75YR58 00 M						Y	0	0	HR	5	P		Y	
112	0-25	mzc1	10YR43 00							2	0	HR	5				
	25-58	mc1	10YR53 00 10YR58 00 C						Y	0	0	HR	2	M			
	58-90	c	10YR52 00 75YR58 00 C						Y	0	0	HR	5	P		Y	Imp Flints
113	0-30	mzc1	10YR43 00							0	0	HR	10				
	30-50	hzc1	10YR54 00							0	0	HR	10	M			
	50-80	c	10YR53 00 75YR58 00 C						Y	0	0	HR	5	P		Y	
114	0-35	mzc1	10YR43 00							0	0	HR	10				
	35-52	mzc1	10YR53 00							0	0	HR	10	M			
	52-70	c	10YR53 00 75YR58 00 C						S	0	0	HR	15	P		Y	Imp Flints
115	0-35	mzc1	10YR43 00							0	0	HR	7				
	35-65	c	10YR43 00 75YR58 00 C						Y	0	0	HR	15	P		Y	Imp Flints
116	0-30	mzc1	10YR53 00							17	5	HR	20				
	30-60	hzc1	10YR54 00							0	0	HR	10	M			
	60-120	c	10YR64 00 10YR68 00 C						Y	0	0		0	P		Y	
117	0-30	mzc1	10YR53 00							6	0	HR	10				
	30-60	hzc1	10YR54 00 10YR68 00 C						S	0	0	HR	10	M			
	60-120	c	10YR64 00 10YR68 00 C						Y	0	0		0	P		Y	
118	0-30	mzc1	10YR53 00							0	0	HR	5				
	30-45	hzc1	10YR54 00							0	0	HR	10	M			
	45-60	hc1	10YR64 00 10YR58 00 C						Y	0	0	HR	30	M			Imp Flints
119	0-25	mzc1	10YR43 00							6	0	HR	15				
	25-55	c	10YR53 64 05YR58 00 C						Y	0	0	HR	20	P		Y	Imp Flints
120	0-20	mzc1	10YR43 00							13	5	HR	18				
	20-44	hzc1	10YR53 00 75YR58 00 C						Y	0	0	HR	20	M			
	44-65	c	10YR53 64 05YR58 00 C						Y	0	0	HR	20	P		Y	Imp Flints