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TEST VALLEY LOCAL PLAN REVIEW

Land at Picket Twenty Farm
Andover Hampshire
Agricultural Land Classification
Semi Detailed Survey
ALC Map and Report
December 1996

Resource Planning Team
Guildford Statutory Group
ADAS Reading

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AGRICULTURAL LAND CLASSIFICATION REPORT

TEST VALLEY BOROUGH LOCAL PLAN REVIEW
LAND AT PICKET TWENTY FARM ANDOVER, HAMPSHIRE
SEMI DETAILED SURVEY

INTRODUCTION

1 This report presents the findings of a semi detailed Agricultural Land Classification (ALC) survey of 146 9 hectares of land located between the B3400 London Road and the A303 Trunk Road to the south east of Andover in Hampshire The survey was carried out during October 1996

2 The survey was commissioned by the Ministry of Agriculture Fisheries and Food (MAFF) from its Land Use Planning Unit in Reading in connection with the Test Valley Borough Local Plan Review The results of this survey supersede any previous ALC information for this land

3 The work was conducted by members of the Resource Planning Team in the Guildford Statutory Group of ADAS The land has been graded in accordance with the published MAFF ALC guidelines and criteria (MAFF 1988) A description of the ALC grades and subgrades is given in Appendix I

4 At the time of survey the agricultural land on this site was in a combination of permanent grass Set aside and arable land prepared for the 1997 season The areas shown as Other Land include roads and tracks dwellings and farm buildings and a plant nursery towards the south west of the site

SUMMARY

5 The findings of the survey are shown on the enclosed ALC map The map has been drawn at a scale of 1 10 000 It is accurate at this scale but any enlargement would be misleading

6 The area and proportions of the ALC grades and subgrades on the surveyed land are summarised in Table 1 below

Table 1 Area of grades and other land

Grade/Other land	Area (hectares)	/ site area	/ surveyed area
3a	65 2	44 4	51 7
3b	61 0	41 5	48 3
Other Land	20 7	14 1	
Total surveyed area	126 2		100 0
Total site area	146 9	100 0	

7 The fieldwork was conducted at an average density of slightly more than 1 boring per 2 hectares A total of 81 borings and six soil pits were described

8 The agricultural land on this site has been classified as Subgrade 3a (good quality) and Subgrade 3b (moderate quality) the key limitations are soil droughtiness and slope Good quality land extends over the majority of the site in two separate mapping units Soils in these areas commonly comprise well drained silty clay loams occasionally clays which are developed over Upper Chalk at moderate depths The combination of soil characteristics and the local climate leads to a restriction in water availability for plants such that Subgrade 3a is appropriate on the basis of soil droughtiness

9 Land of moderate quality is mapped in a total of four units across the site The soils in these areas are similar to those encountered above except that the chalk occurs at shallower depths and clay is rarely encountered in the profile In addition flinty chalky drift occasionally occurs at the base of the profile restricting the available water for plants In the local climate soils of this nature are assigned to Subgrade 3b on the basis of soil droughtiness as a result of a likely deficiency in plant water availability Subgrade 3b has also been mapped where gradients were measured in excess of 7° This causes a restriction in potential land utilisation as most farm machinery cannot be efficiently or safely operated on such gradients

FACTORS INFLUENCING ALC GRADE

Climate

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

12 The key climatic variables used for grading this site are given in Table 2 below and were obtained from the published 5km grid datasets using standard interpolation procedures (Met Office 1989) Data from three interpolations are given but many more interpolations were made to help assess the variation in moisture deficits (for both wheat and potatoes) across the site Given the shallow nature of many of the soils encountered and the chalk geology detailed local climatic information is essential for accurate grading of the land in this area, as soil droughtiness is one of the limiting factors

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

Table 2 Climatic and altitude data

Factor	Units	Values		
Grid reference	N/A	SU 394 446	SU 386 452	SU 393 459
Altitude	m, AOD	80	90	100
Accumulated Temperature	day°C	1451	1440	1428
Average Annual Rainfall	mm	747	756	757
Field Capacity Days	days	162	164	164
Moisture Deficit, Wheat	mm	109	106	105
Moisture Deficit, Potatoes	mm	101	98	97

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

15 The combination of rainfall and temperature at this site mean that there is no overall climatic limitation Local climatic factors such as exposure and frost risk, are not believed to significantly affect this area The site is climatically Grade 1

Site

16 The site lies at altitudes in the range 80 105m AOD The site forms part of a drainage system of six dry valley features which have a confluence in the south central area of the site to become a single channel that exits southwards Within the site some of the valley sides are of sufficient gradient to affect agricultural land quality

Geology and soils

17 The published geological information for the site (BGS 1974) shows the site to be underlain by Cretaceous Upper Chalk, with drift deposits of Clay with Flints located towards the east of the site

18 The most detailed published soils information for the site (SSEW 1983 and 1984) shows the site to comprise soils of the Andover 1 and Carstens associations Andover 1 soils are mapped to the north of the site and are described as Shallow well drained calcareous silty soils over chalk on slopes and crests Deep calcareous and non calcareous fine silty soils in valley bottoms Striped soil patterns locally (SSEW 1983) Carstens soils are mapped to the east of the site and are described as Well drained fine silty over clayey clayey and fine silty soils often very flinty (SSEW 1983) Soils of the Andover type were found across the majority of the site and of the Carstens type in a restricted area to the south east

Agricultural Land Classification

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

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

Subgrade 3a

21 Land of good quality extends across the majority of the agricultural land at this site in two separate map units The principal limitation is soil droughtiness

22 Soils in this area are of three distinct types The most common is characterised by the pit observations 5P and 6P They comprise a calcareous slightly flinty (up to 10% v/v flints) medium silty clay loam topsoil which commonly passes to a similar though more stony (up to 40% v/v chalk fragments and 10% v/v total flints) upper subsoil horizon On occasions this horizon was absent from the profile These were observed to pass to weathered blocky pure chalk at moderate depths (approximately 30 60cm) The presence of solid chalk causes plant

rooting depth to be restricted In the pit observations (5P and 6P see Appendix III) roots were respectively observed to penetrate 22cm into the chalk where it occurred at 48cm and only 6cm where it occurred at 66cm In both cases the roots were observed to cease where the chalk became harder and less weathered In the local climate this restriction of rooting is sufficient for these soils to be placed in Subgrade 3a on the basis of soil droughtiness as water availability to plants will be restricted especially in drier years Even if roots could penetrate a little further into the harder chalk it would be insufficient to allow any upgrading

23 The second most common soil type in this Subgrade is characterised by the soil pit 1P (see Appendix III) which is actually of Subgrade 3b quality However the relevant auger boring observations in this mapping unit are of Subgrade 3a quality because the lower subsoil was assessed as containing fewer flints in this area to the north of the site Soils in these areas comprise a slightly stony (up to 10% v/v total flints) calcareous medium silty clay loam topsoil that passes to a similarly textured upper subsoil containing up to 15% v/v flints and/or 25% v/v chalk fragments This passes at moderate depth to chalky drift a weathered chalk and soil mix containing up to 65% pure chalk and approximately 5% v/v flints These observations were commonly impenetrable to the soil auger in the chalky drift horizon In the pit observation roots were observed to penetrate 33cm into the chalky drift material In the local climate this restriction of rooting is sufficient for these soils to be placed in Subgrade 3a on the basis of soil droughtiness as water availability to plants will be restricted especially in drier years

24 The least common soil type that occurs in the Subgrade 3a mapping units occurs on the highest ground and is characterised by the soil pit 4P This commonly comprises a slightly stony (up to 8% v/v total flints) heavy silty clay or heavy clay loam topsoil which passes to a slightly more stony (up to 15% v/v total flints) heavy silty clay loam silty clay or clay upper subsoil horizons which were commonly slightly gleyed moderately structured and not slowly permeable The lower subsoil horizon commonly comprises a silty clay or clay containing up to 30% v/v chalk fragments and passes to pure chalk at a moderate depth (approximately 50 60cm) In the pit observation roots were observed to penetrate 20cm into the solid chalk substrate As with the other soil types in this unit this restriction of rooting is sufficient for these soils to be placed in Subgrade 3a in the local climate on the basis of soil droughtiness as water availability to plants will be restricted

Subgrade 3b

25 Land of moderate quality has been mapped in total of our units across the site The principal limitations are soil droughtiness and slope

26 In the areas principally limited by soil droughtiness that comprise the majority of the Subgrade 3b land two soil types were encountered These are essentially similar to those described above in paras 22 and 23 The most common soil type is characterised by the pit observations 2P and 3P (see Appendix III) and comprises a slightly to moderately stony (up to 15% v/v total flints) calcareous medium silty clay loam topsoil overlying a thin upper subsoil horizon of similar texture containing up to 15% v/v total flints and up to 20% v/v total chalk This overlies solid chalk from less than 30cm depth Rooting in the pits was observed to extend approximately 40cm into the chalk at which point the substrate became less weathered and harder As above the rooting restriction caused by the chalk affects water

availability but in this area the restriction, in the local climate is sufficient to place this area in Subgrade 3b on the basis of soil droughtiness

27 The second and less common soil type that occurs in this mapping unit is characterised by the soil pit 1P and is essentially similar to that previously described in para 23 The difference here is that the soils contain a higher proportion of flints and chalk by volume this further restricts the water availability to plants such that Subgrade 3b is more appropriate

28 Towards the east and south of the site there are some areas where slope is the principal limitation to land quality In these areas gradients were measured to be in excess of 7° This causes a restriction in potential land utilisation as most farm machinery cannot be efficiently or safely operated on such gradients

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SOURCES OF REFERENCE

British Geological Survey (1974) *Sheet 283 Andover Drift Edition 1 50 000 Scale*
BGS London

Ministry of Agriculture Fisheries and Food (1988) *Agricultural Land Classification of England and Wales Revised guidelines and criteria for grading the quality of agricultural land*
MAFF London

Meteorological Office (1989) *Climatological Data for Agricultural Land Classification*
Met Office Bracknell

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

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

APPENDIX I

DESCRIPTIONS OF THE GRADES AND SUBGRADES

Grade 1 Excellent Quality Agricultural Land

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

Grade 2 Very Good Quality Agricultural Land

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

Grade 3 Good to Moderate Quality Land

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

Subgrade 3a Good Quality Agricultural Land

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

Subgrade 3b Moderate Quality Agricultural Land

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

Grade 4 Poor Quality Agricultural Land

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

Grade 5 Very Poor Quality Agricultural Land

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

APPENDIX II

SOIL WETNESS CLASSIFICATION

Definitions of Soil Wetness Classes

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

Wetness Class	Duration of waterlogging[1]
I	The soil profile is not wet within 70 cm depth for more than 30 days in most years [2]
II	The soil profile is wet within 70 cm depth for 31 90 days in most years **or** if there is no slowly permeable layer within 80 cm depth it is wet within 70 cm for more than 90 days but only wet within 40 cm depth for 30 days in most years
III	The soil profile is wet within 70 cm depth for 91 180 days in most years **or** if there is no slowly permeable layer present within 80 cm depth it is wet within 70 cm for more than 180 days but only wet within 40 cm depth for between 31 90 days in most years
IV	The soil profile is wet within 70 cm depth for more than 180 days but not wet within 40 cm depth for more than 210 days in most years **or** if there is no slowly permeable layer present within 80 cm depth it is wet within 40 cm depth for 91 210 days in most years
V	The soil profile is wet within 40 cm depth for 211 335 days in most years
VI	The soil profile is wet within 40 cm depth for more than 335 days in most years

Assessment of Wetness Class

Soils have been allocated to wetness classes by the interpretation of soil profile characteristics and climatic factors using the methodology described in *Agricultural Land Classification of England and Wales Revised guidelines and criteria for grading the quality of agricultural land* (MAFF 1988)

[1] The number of days is not necessarily a continuous period

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

APPENDIX III

SOIL DATA

Contents

SOIL PROFILE DESCRIPTIONS EXPLANATORY NOTE

Soil pit and auger boring information collected during ALC fieldwork is held on a computer database This uses notations and abbreviations as set out below

Boring Header Information

1 **GRID REF** national 100 km grid square and 8 figure grid reference

2 **USE** Land use at the time of survey The following abbreviations are used

ARA	Arable	**WHT**	Wheat	**BAR**	Barley
CER	Cereals	**OAT**	Oats	**MZE**	Maize
OSR	Oilseed rape	**BEN**	Field Beans	**BRA**	Brassicae
POT	Potatoes	**SBT**	Sugar Beet	**FCD**	Fodder Crops
LIN	Linseed	**FRT**	Soft and Top Fruit	**FLW**	Fallow
PGR	Permanent Pasture	**LEY**	Ley Grass	**RGR**	Rough Grazing
SCR	Scrub	**CFW**	Coniferous Woodland	**DCW**	Deciduous Wood
HTH	Heathland	**BOG**	Bog or Marsh	**FLW**	Fallow
PLO	Ploughed	**SAS**	Set aside	**OTH**	Other
HRT	Horticultural Crops				

3 **GRDNT** Gradient as estimated or measured by a hand held optical clinometer

4 **GLEY/SPL** Depth in centimetres (cm) to gleying and/or slowly permeable layers

5 **AP (WHEAT/POTS)** Crop adjusted available water capacity

6 **MB (WHEAT/POTS)** Moisture Balance (Crop adjusted AP crop adjusted MD)

7 **DRT** Best grade according to soil droughtiness

8 If any of the following factors are considered significant Y will be entered in the relevant column

MREL	Microrelief limitation	**FLOOD**	Flood risk	**EROSN**	Soil erosion risk
EXP	Exposure limitation	**FROST**	Frost prone	**DIST**	Disturbed land
CHEM	Chemical limitation				

9 **LIMIT** The main limitation to land quality The following abbreviations are used

OC	Overall Climate	**AE**	Aspect	**EX**	Exposure
FR	Frost Risk	**GR**	Gradient	**MR**	Microrelief
FL	Flood Risk	**TX**	Topsoil Texture	**DP**	Soil Depth
CH	Chemical	**WE**	Wetness	**WK**	Workability
DR	Drought	**ER**	Erosion Risk	**WD**	Soil Wetness/Droughtiness
ST	Topsoil Stoniness				

Soil Pits and Auger Borings

1 **TEXTURE** soil texture classes are denoted by the following abbreviations

S	Sand	**LS**	Loamy Sand	**SL**	Sandy Loam
SZL	Sandy Silt Loam	**CL**	Clay Loam	**ZCL**	Silty Clay Loam
ZL	Silt Loam	**SCL**	Sandy Clay Loam	**C**	Clay
SC	Sandy Clay	**ZC**	Silty Clay	**OL**	Organic Loam
P	Peat	**SP**	Sandy Peat	**LP**	Loamy Peat
PL	Peaty Loam	**PS**	Peaty Sand	**MZ**	Marine Light Silts

For the sand loamy sand sandy loam and sandy silt loam classes the predominant size of sand fraction will be indicated by the use of the following prefixes

F Fine (more than 66 / of the sand less than 0 2mm)
M Medium (less than 66 / fine sand and less than 33 / coarse sand)
C Coarse (more than 33 / of the sand larger than 0 6mm)

The clay loam and silty clay loam classes will be sub-divided according to the clay content
M Medium (<27 / clay) **H** Heavy (27 35 / clay)

2 **MOTTLE COL** Mottle colour using Munsell notation

3 **MOTTLE ABUN** Mottle abundance expressed as a percentage of the matrix or surface described
F few <2/ **C** common 2 20/ **M** many 20-40/ **VM** very many 40/ +

4 **MOTTLE CONT** Mottle contrast
F faint indistinct mottles evident only on close inspection
D distinct mottles are readily seen
P prominent mottling is conspicuous and one of the outstanding features of the horizon

5 **PED COL** Ped face colour using Munsell notation

6 **GLEY** If the soil horizon is gleyed a Y will appear in this column If slightly gleyed, an S will appear

7 **STONE LITH** Stone Lithology One of the following is used

HR	all hard rocks and stones	**SLST**	soft oolitic or dolimitic limestone
CH	chalk	**FSST**	soft, fine grained sandstone
ZR	soft, argillaceous or silty rocks	**GH**	gravel with non porous (hard) stones
MSST	soft, medium grained sandstone	**GS**	gravel with porous (soft) stones
SI	soft weathered igneous/metamorphic rock		

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

8 **STRUCT** the degree of development size and shape of soil peds are described using the following notation

degree of development	**WK** weakly developed	**MD** moderately developed
	ST strongly developed	
ped size	**F** fine	**M** medium
	C coarse	**VC** very coarse
ped shape	**S** single grain	**M** massive
	GR granular	**AB** angular blocky
	SAB sub angular blocky	**PR** prismatic
	PL platy	

9 **CONSIST** Soil consistence is described using the following notation

L loose **VF** very friable **FR** friable **FM** firm **VM** very firm
EM extremely firm **EH** extremely hard

10 **SUBS STR** Subsoil structural condition recorded for the purpose of calculating profile droughtiness
G good **M** moderate **P** poor

11 **POR** Soil porosity If a soil horizon has less than 0 5/ biopores >0 5 mm a Y will appear in this column

12 **IMP** If the profile is impenetrable to rooting a Y will appear in this column at the appropriate horizon

13 **SPL** Slowly permeable layer If the soil horizon is slowly permeable a Y will appear in this column

14 **CALC** If the soil horizon is calcareous a Y will appear in this column

15 Other notations

APW	available water capacity (in mm) adjusted for wheat
APP	available water capacity (in mm) adjusted for potatoes
MBW	moisture balance wheat
MBP	moisture balance potatoes

SOIL PIT DESCRIPTION

Site Name TEST VALLEY LP PICKET 20 Pit Numbe 1P

Grid Reference SU39204490 Ave age Annual R i fall 748 mm
Accumulated Tempe ture 1451 degree days
Field Capacity Level 163 days
Land Us A able
Slope nd Aspect degrees

HORIZON	TEXTURE	COLOUR	STONES 2	TOT STONE	LITH	MOTTLES	STRUCTURE	CONSIST	SUBSTRUCTURE	CALC
0- 27	MZCL	10YR43 00	12	18	HR					Y
27 39	MZCL	10YR53 00	0	25	HR			FR	M	Y
39 72	MZCL	10YR74 81	0	60	CH				M	Y

Wetness Grade 1 Wetness Class I
Gleying cm
SPL cm

Drought G ade 3A APW 84 mm MBW 25 mm
APP 90 mm MBP 11 mm

FINAL ALC GRADE 3B
MAIN LIMITATION Droughtine

SOIL PIT DESCRIPTION

Site Name TEST VALLEY LP PICKET 20 P t N mbe 2P

G id Reference SU38804520 A g A l R fall 748 mm
Accumulated Tempe ture 1451 degree days
Fi ld Capacity Level 163 days
Land U e Permane t G a s
Slope nd A pect 2 degrees SE

HORIZON	TEXTURE	COLOUR	STONES 2	TOT STONE	LITH	MOTTLES	STRUCTURE	CONSIST	SUBSTRUCTURE	CALC
0 19	MZCL	10YR43 00	8	15	HR					Y
19 29	MZCL	10YR54 00	0	15	HR				M	Y
29 70	CH	10YR81 00	0	2	HR				P	Y

Wetne G de 1 Wetnes Cl I
Gley ng cm
SPL cm

Drought G de 3B APW 78 mm MBW 30 mm
APP 84 mm MBP 15 mm

FINAL ALC GRADE 3B
MAIN LIMITATION Drought ness

SOIL PIT DESCRIPTION

Site Name TEST VALLEY LP PICKET 20 P t Numbe 3P

Grid Reference SU39504570
Ave ge Annual Rainfall 748 mm
Accumulated Temperature 1451 degree d ys
Field Capacity Level 163 days
Land Use Permane t G ass
Slope nd Aspect 5 degrees NW

HORIZON	TEXTURE	COLOUR	STONES 2	TOT STONE	LITH	MOTTLES	STRUCTURE	CONSIST	SUBSTRUCTURE	CALC
0 12	MZCL	10YR42 00	0	0						Y
12 21	MZCL	10YR42 43	0	40	CH		MDMSAB	FR	G	Y
21 63	CH	10YR81 00	0	2	HR				P	Y

Wetnes G ade 1
Wetness Clas I
Gleying cm
SPL cm

Drought G ade 3B
APW 72 mm MBW 35 mm
APP 76 mm MBP 22 mm

FINAL ALC GRADE 3B
MAIN LIMITATION Droughtiness

SOIL PIT DESCRIPTION

S te Name TEST VALLEY LP PICKET 20 Pit Numbe 4P

G d R ference SU38554570
Aver ge A l R i f ll 748 mm
Accumul ted Tempe t re 1451 degree days
Field Capacity Level 163 days
Land Use Ploughed
Slope and A pect 2 degree E

HORIZON	TEXTURE	COLOUR	STONES 2	TOT STONE	LITH	MOTTLES	STRUCTURE	CONSIST	SUBSTRUCTURE	CALC
0 16	HZCL	10YR44 00	2	8	HR					Y
16 26	HZCL	75YR54 00	0	15	HR		MDCSAB	FM	M	Y
26 35	ZC	75YR56 00	0	10	HR	F	MDCSAB	FM	M	Y
35- 72	CH	10YR81 00	0	2	HR				P	Y

Wetness G ade 2
Wetne Class I
Gl y ng cm
SPL cm

Drought Gr d 3B
APW 84 mm MBW 21 mm
APP 89 mm MBP 7 mm

FINAL ALC GRADE 3B
MAIN LIMITATION Droughtines

SOIL PIT DESCRIPTION

Site Name TEST VALLEY LP PICKET 20 Pit Numbe SP

G id Reference SU38604540 Ave age An al Rai f ll 748 mm
Accumul ted Tempe ture 1451 degree days
Field Capacity Level 163 d ys
Land Use
Slope and Aspect 2 degrees SW

HORIZON	TEXTURE	COLOUR	STONES 2	TOT STONE	LITH	MOTTLES	STRUCTURE	CONSIST	SUBSTRUCTURE	CALC
0- 23	MZCL	10YR43 00	1	3	HR					Y
23- 34	MZCL	10YR43 44	0	5	HR		MDCSAB	FR	M	Y
34 45	MZCL	75YR54 00	0	15	CH		MDCSAB	FR	M	Y
45- 66	MZCL	10YR73 81	0	30	CH		WKCSAB	FR	M	Y
66- 72	CH	10YR81 00	0	2	HR				P	Y

Wetness Grade 1 Wetness Cl I
Gleying cm
SPL cm

Drought G de 3A APW 102mm MBW 14 mm
APP 110mm MBP 12 mm

FINAL ALC GRADE 3A
MAIN LIMITATION Drought ness

SOIL PIT DESCRIPTION

S te Name TEST VALLEY LP PICKET 20 Pit N mbe 6P

G d Ref rence SU39604580 Ave age A nu l R i fall 748 mm
Accumulated Tempe ature 1451 degree day
F eld Cap ity Level 163 days
L nd Use Set ide
Slope and Aspect 2 degrees S

HORIZON	TEXTURE	COLOUR	STONES 2	TOT STONE	LITH	MOTTLES	STRUCTURE	CONSIST	SUBSTRUCTURE	CALC
0 24	MZCL	10YR42 43	5	10	HR					Y
24 48	MZCL	10YR64 81	0	40	CH		MDCSAB	FR	M	
48- 70	CH	10YR81 00	0	2	HR				P	Y

Wetness G d 1 Wetne Cl ss I
Gley ng cm
SPL cm

Drought G d 3A APW 90 mm MBW 16 mm
APP 96 mm MBP 2 mm

FINAL ALC GRADE 3A
MAIN LIMITATION Drought ne

SAMPLE NO	GRID REF	USE	ASPECT	GRDNT	GLEY	SPL	WETNESS CLASS	WHEAT GRADE	AP	MB	POTS AP	MB	M REL DRT	FLOOD	EROSN EXP	FROST DIST	CHEM LIMIT	ALC	COMMENTS
1P	SU39204490	ARA					1	1	84	25	90	11	3A				DR	3B	PIT IMP 71
2	SU38904600	ARA	SW	2			1	1	99	6	110	13	3A				DR	3A	IMP CHDRIFT 70
2P	SU38804520	PGR	SE	2			1	1	78	30	84	15	3B				DR	3B	WORST OPTION
2Q	SU38804520	PGR	SE	2			1	1	87	27	93	6	3B				DR	3B	BEST OPTION
3	SU38974595	ARA	W	4			1	1	83	21	87	10	3B				DR	3B	PURE CHALK 30+
3P	SU39504570	PGR	NW	5			1	1	72	35	76	22	3B				DR	3B	PIT75 ROOTS63
4P	SU38554570	PLO	E	2			1	2	84	21	89	7	3B				DR	3B	MAJORITY PIT
4Q	SU38554570	PLO	E	2			1	2	90	15	95	1	3A				DR	3A	MINORITY PIT
5P	SU38604540	STB	SW	2			1	1	102	14	110	12	3A				DR	3A	PIT78 ROOTS72
6	SU39344593	PGR	SE	2			1	1	98	7	100	3	3A				DR	3A	IMP CHALK 50
6P	SU39604580	SAS	S	2			1	1	90	16	96	2	3A				DR	3A	PIT75 ROOTS70
9	SU38404590	PGR					1	1	74	31	77	20	3B				DR	3B	
11	SU38604590	ARA					1	1	67	39	67	30	3B				DR	3B	IMP 40 Q 3ADR
13	SU38804590	SAS					1	1	98	8	106	9	3A				DR	3A	
14	SU38904590	ARA	W	3			1	1	84	22	90	7	3B				DR	3B	PURE CHALK
18	SU39304590	ARA	SE	2			1	1	85	20	91	6	3A				DR	3A	
19	SU39404590	PGR	S	3			1	1	80	25	82	15	3B				DR	3B	IMP 55 Q 3ADR
20	SU39504590	SAS	SE	2			1	1	86	20	92	6	3A				DR	3A	IMP CHALK 40
22	SU38304580	PGR					1	1	77	28	80	11	3B				DR	3B	
24	SU38504580	ARA					1	1	71	34	71	26	3B				DR	3B	IMP 45 Q 3ADR
26	SU38704580	ARA					1	1	84	21	84	13	3B				DR	3B	IMP50 BDR 3ADR
28	SU38904580	SAS					1	1	53	53	53	45	4				DR	3B	IMP 30 Q 3ADR
29	SU39004580	ARA	SW	2			1	1	86	20	92	5	3A				DR	3A	PURE CHALK 35+
31	SU39204580	ARA	SE	2			1	1	88	17	94	3	3A				DR	3A	
33	SU39404580	PGR	SE	3			1	1	43	63	43	55	4				DR	3B	IMP 25 Q 3ADR
34	SU39414572	PGR	W	1			1	1	84	23	90	8	3B				DR	3B	IMP 40 Q 3ADR
35	SU39604580	SAS	NW	2			1	1	82	24	87	11	3B				DR	3B	IMP 40 Q 3ADR
38	SU38404570	PGR					1	2	80	25	85	11	3B				DR	3B	
39	SU38504570	PLO	NE	2			1	2	96	9	98	2	3A				DR	3A	PURE CHALK 40
41	SU38704570	STB	E	2			1	2	90	15	96	0	3A				DR	3A	PURE CHALK 35+
42	SU38704571	STB	E	2			1	2	96	9	98	2	3A				DR	3A	SL GLEYED 25
43	SU38904570	SAS	NE	4			1	1	53	53	53	48	4				DR	3B	IMP 32 Q 3ADR
45	SU39104570	ARA	S	1			1	1	87	19	92	6	3A				DR	3A	
47	SU39304570	ARA	SE	2			1	1	90	16	95	4	3A				DR	3A	
48	SU39364567	PGR	N	2			1	1	81	26	86	13	3B				DR	3B	PURE CHALK 30+
49	SU39504570	PGR	NW	6			1	1	80	27	86	12	3B				DR	3B	
51	SU39704570	SAS	E	1			1	2	82	24	87	13	3B				DR	3B	IMP 40
54	SU38504560	PGR					1	2	63	42	63	33	3B				DR	3B	
55	SU38604560	PLO	SE	3			1	1	77	28	80	17	3B				DR	3B	PURE CHALK 25+
57	SU38804560	STB	SE	2			1	1	81	24	86	11	3B				DR	3B	PURE CHALK 32
59	SU39004560	SAS	SE	1			1	1	119	9	108	9	3A				DR	2	CHDRIFT 48 95
61	SU39204560	PGR	SE	3			1	1	72	35	72	27	3B				DR	3B	IMP 45 Q 3ADR

SAMPLE NO	GRID REF	USE	ASPECT	GRDNT	GLEY	SPL	WETNESS CLASS	WHEAT GRADE	WHEAT AP	WHEAT MB	POTS AP	POTS MB	M REL DRT	EROSN FLOOD	FROST EXP	CHEM DIST	ALC LIMIT	COMMENTS
65	SU39584562	PGR	SE	1			1	2	78	26	81	17	3B				DR 3B	5% SOIL IN CH
68	SU38604550	ARA	SE	3			1	2	83	23	87	10	3B				DR 3B	
69	SU38704550	SAS	SE	2			1	1	84	22	90	7	3B				DR 3B	DR 3A BORDER
70	SU38804550	SAS	S	2			1	1	82	24	86	11	3B				DR 3B	IMP CHALK 40
71	SU38904550	SAS	E	1			1	1	67	39	67	31	3B				DR 3B	IMP 40 Q 3ADR
73	SU39104550	PGR	S	1			1	1	74	33	77	22	3B				DR 3B	
75	SU39304550	PGR	W	3			1	1	77	30	83	16	3B				DR 3B	
76	SU39464546	PGR			28		1	2	106	0	110	12	3A				DR 3A	
77	SU39504550	PGR			28		1	2	103	3	108	10	3A				DR 3A	
78	SU38504540	ARA	NE	5			1	1	92	14	96	1	3A				DR 3A	
79	SU38604540	ARA	SW	2			1	1	85	21	85	12	3B				DR 3B	IMP50 DR 3ABDR
80	SU38704540	PGR					1	1	96	11	98	0	3A				DR 3A	
81	SU38804540	SAS	NE	2			1	1	84	23	84	14	3B				DR 3B	IMP 50 Q 3ADR
82	SU38904540	SAS	E	2			1	1	110	3	105	6	3A				DR 3A	
83	SU39004540	PGR	SW	3			1	1	75	33	75	49	3B				DR 3B	IMP 45 Q 3ADR
84	SU39104540	PGR	E	3			1	1	76	32	79	21	3B				DR 3B	
85	SU39204540	PGR	W	3			1	1	59	49	59	41	3B				DR 3B	IMP 35 Q 3ADR
87	SU39444543	PGR	W	4			1	1	80	26	86	12	3B				DR 3B	
90	SU38704530	SAS	SW	2			1	1	94	13	100	2	3A				DR 3A	
92	SU38944530	PGR	E	2			1	1	42	66	42	58	4				DR 3B	IMP 25 Q 3ADR
94	SU39104530	PGR	SW	2			1	1	60	48	60	40	3B				DR 3B	IMP 35 Q 3ADR
98	SU39504530	PGR	S	5			1	1	85	21	91	7	3B				DR 3B	DR BDR 3A
99	SU38544521	ARA					1	1	83	23	87	10	3B				DR 3B	
101	SU38804520	PGR	SE	2			1	1	49	58	49	50	4				DR 3B	IMP 30 Q 3ADR
103	SU39004520	PGR	E	2			1	1	42	66	42	58	4				DR 3B	IMP 25 Q 3ADR
105	SU39204520	PGR	SW	2			1	1	81	27	86	14	3B				DR 3B	PURE CHALK 32+
106	SU39404515	PGR	SW	2			1	1	113	6	116	17	2				DR 2	IMP 80 DRBDR3A
107	SU39404520	PGR	S	6			1	1	79	28	84	15	3B				DR 3B	PURE CHALK 18+
110	SU38704510	PGR	E	2			1	1	86	21	86	13	3B				DR 3B	IMP50 DR BDR3A
112	SU38904510	PGR	NW	2			1	1	75	32	78	21	3B				DR 3B	
114	SU39064514	PGR	NE	2			1	1	87	21	93	7	3B				DR 3B	DR BORDER 3A
116	SU39304510	PGR	W	2			1	1	68	40	68	32	3B				DR 3B	IMP 40 Q 3ADR
117	SU38604500	ARA					1	1	91	15	96	2	3A				DR 3A	
119	SU38804500	PGR	NE	2			1	1	78	29	81	17	3B				DR 3B	
121	SU39004500	PGR	NE	2			1	1	74	33	77	22	3B				DR 3B	
123	SU39204500	ARA	E	3			1	1	80	29	85	16	3B				DR 3B	
128	SU38904490	PGR	N	2			1	1	82	25	88	10	3B				DR 3B	
130	SU39104490	ARA	SE	3			1	1	88	21	94	6	3B				DR 3B	DR BORDER 3A
131	SU39204490	ARA	SE	1			1	1	63	46	63	38	3B				DR 3B	IMP 40 Q 3ADR
134	SU38704480	ARA					1	2	89	17	89	9	3A				DR 3A	IMP 50
135	SU38844480	PGR					1	1	88	18	94	4	3A				DR 3A	
137	SU39004480	ARA	NW	2			1	1	94	13	96	3	3A				DR 3A	DEEP CHDRIFT

SAMPLE NO	GRID REF	USE	ASPECT	GRDNT	GLEY	SPL	WETNESS CLASS	WHEAT GRADE	POTS AP	POTS MB	M REL AP	M REL MB	DRT	FLOOD	EROSN EXP	FROST DIST	CHEM LIMIT	ALC	COMMENTS
140	SU39304480	ARA	SE	1			1	1	56	53	56	-45	4				DR	3B	IMP 35 Q 3ADR
141	SU39504475	ARA	SW	5			1	1	66	42	66	34	3B				DR	3B	IMP 40 Q 3ADR
143	SU39104470	ARA	NE	2			1	1	73	34	76	22	3B				DR	3B	TOP OF SLOPE
145	SU39344467	ARA	E	5			1	1	69	39	69	32	3B				DR	3B	IMP 40 Q 3ADR
147	SU39404460	ARA	NW	2			1	1	62	47	62	39	3B				DR	3B	IMP 40 Q 3ADR

SAMPLE	DEPTH	TEXTURE	COLOUR	MOTTLES COL	ABUN	CONT	PED COL	GLEY	STONES 2	6	LITH	TOT	STRUCT/ CONSIST	SUBS STR	POR	IMP	SPL	CALC	
1P	0 27	mzcl	10YR43 00						12	2	HR	18					Y		IMP FLINTS 72
	27 39	mzcl	10YR53 00						0	0	HR	25		FR	M		Y		3% CHALK
	39 72	mzcl	10YR74 81						0	0	CH	60			M		Y		15% FLINTS CHDRIFT
2	0 30	mzcl	10YR43 00						3	0	HR	10					Y		
	30 45	mzcl	10YR54 00						0	0	HR	10			M		Y		10% CHALK
	45-70	mzcl	10YR74 81						0	0	CH	30			M		Y		IMP CHALKY DRIFT 70
2P	0 19	mzcl	10YR43 00						8	2	HR	15					Y		3% CHALK
	19 29	mzcl	10YR54 00						0	0	HR	15			M		Y		20% CHALK
	29 70	ch	10YR81 00						0	0	HR	2			P		Y		
2Q	0 19	mzcl	10YR43 00						8	2	HR	15					Y		
	19 44	mzcl	10YR54 00						0	0	HR	15	MDMSAB	FR	M		Y		
	44 70	ch	10YR81 00						0	0	HR	2			P		Y		
3	0 30	mzcl	10YR43 53						2	0	HR	8					Y		10% CHALK
	30 65	ch	10YR81 00						0	0	HR	2			P		Y		
3P	0 12	mzcl	10YR42 00						0	0		0					Y		UNDER GRASS 25yrs
	12 21	mzcl	10YR42 43						0	0	CH	40	MDMSAB	FR	G		Y		5% FLINTS
	21 63	ch	10YR81 00						0	0	HR	2			P		Y		ROOTS OBS TO 63
4P	0 16	h cl	10YR44 00						2	0	HR	8					Y		3% CHALK
	16 26	h cl	75YR54 00						0	0	HR	15	MDCSAB	FM	M		Y		
	26 35	c	75YR56 00	75YR58 00	F		75YR54 00		0	0	HR	10	MDCSAB	FM	M		Y		
	35 72	ch	10YR81 00						0	0	HR	2			P		Y		CH HARD @ 75cm
4Q	0 16	h cl	10YR44 00						2	0	HR	8					Y		3% CHALK
	16 29	h l	75YR54 00						0	0	HR	15	MDCSAB	FR	M		Y		
	29 36	c	75YR56 00	75YR58 00	F		75YR54 00		0	0	HR	10	MDCSAB	FM	M		Y		TENDING WEAK
	36 52	c	75YR56 00	75YR58 00	F		75YR54 00		0	0	CH	30	MDCSAB	FM	M		Y		
	52 72	ch	10YR81 00						0	0	HR	2			P		Y		CH HARD @ 75cm
5P	0 23	mzcl	10YR43 00						1	0	HR	3					Y		
	23 34	mzcl	10YR43 44						0	0	HR	5	MDCSAB	FR	M		Y		
	34 45	mzcl	75YR54 00						0	0	CH	15	MDCSAB	FR	M		Y		5% FLINTS
	45 66	mzcl	10YR73 81						0	0	CH	30	WKCSAB	FR	M		Y		5% FLINTS
	66 72	ch	10YR81 00						0	0	HR	2			P		Y		PIT TO 78cm
6	0 20	mzcl	10YR41 42						0	0	HR	3							
	20 45	mzcl	10YR63 00						0	0	CH	20			M		Y		10% FLINTS
	45 75	ch	10YR81 00						0	0	HR	2			P		Y		
6P	0 24	mzcl	10YR42 43						5	0	HR	10					Y		5% CHALK
	24 48	mzcl	10YR64 81						0	0	CH	40	MDCSAB	FR	M				
	48 70	ch	10YR81 00						0	0	HR	2			P		Y		

SAMPLE	DEPTH	TEXTURE	COLOUR	-MOTTLES COL	ABUN	CONT	PED COL	GLEY	STONES 2	6	LITH	TOT	STRUCT/ CONSIST	SUBS STR	POR	IMP	SPL	CALC	
9	0 18	mzcl	10YR54 00						2	0	HR	5							
	18-24	mzcl	10YR54 00						0	0	CH	15		M					12% FLINTS
	24 59	ch	00ZZ00 00						0	0	HR	2		P					
11	0 20	mzcl	10YR43 00						1	0	HR	5							
	20 40	mzcl	10YR54 00						0	0	HR	10		M					IMP FLINTS 40
13	0 20	mzcl	10YR43 00						2	0	HR	5							
	20 35	hzcl	10YR54 00						0	0	HR	10		M					
	35-58	mz l	10YR54 00						0	0	CH	25		M					
	58-70	ch	00ZZ00 00						0	0	HR	2		P					ROOTS 70 AUG 93
14	0 30	mzcl	10YR43 53						2	0	HR	8					Y		10% CHALK
	30 35	mzcl	10YR64 81						0	0	CH	40		M			Y		5% FLINTS
	35-70	ch	10YR81 00						0	0	HR	5		P			Y		
18	0 25	mzcl	10YR43 00						0	0	CH	10					Y		+3% FLINTS
	25 70	ch	10YR81 00						0	0	HR	2		P			Y		
19	0 25	mzcl	10YR41 00						0	0	HR	3					Y		5% CHALK
	25 35	mzcl	10YR43 81						0	0	CH	30		M			Y		
	35 55	mz l	10YR74 81						0	0	CH	65		P			Y		IMP CHALKY DRIFT 55
20	0 25	mzcl	10YR43 00						1	0	HR	5					Y		
	25 35	mzcl	10YR64 81						0	0	CH	40		M			Y		10% FLINTS
	35 70	ch	10YR81 00						0	0	HR	2		P			Y		
22	0 20	mzcl	10YR43 00						1	0	HR	5							
	20 26	mzcl	10YR54 00						0	0	CH	25		M					
	26 60	ch	00ZZ00 00						0	0	HR	2		P					
24	0 20	mzcl	10YR43 00						1	0	HR	5							
	20 45	c	75YR44 00						0	0	HR	15		M					IMP FLINTS 45
26	0 30	mz l	10YR43 00						2	0	HR	5							
	30 45	c	75YR44 00						0	0	HR	10		M					
	45 50	hzcl	10YR54 00						0	0	CH	25		M					IMP FLINTS 50
28	0 25	mzcl	10YR43 00						2	0	HR	5							
	25 30	h cl	10YR43 00						0	0	HR	10		M					IMP FLINTS 30
29	0 30	mz l	10YR43 53						2	0	HR	8					Y		5% CHALK
	30 35	mzcl	10YR64 81						0	0	CH	40		M			Y		5% FLINTS
	35 70	ch	10YR81 00						0	0	HR	2		P			Y		
31	0 30	mzcl	10YR43 53						0	0	CH	10					Y		1% FLINTS
	30 70	ch	10YR81 00						0	0	HR	2		P					

SAMPLE	DEPTH	TEXTURE	COLOUR	MOTTLES COL	ABUN	CONT	PED COL	GLEY	STONES 2	6	LITH	TOT	STRUCT/ CONSIST	SUBS STR	POR	IMP	SPL	CALC	
33	0 25	mzcl	10YR43 00						6	0	HR	10						Y	5% CHALK IMP FL 2
34	0 26	mzcl	10YR43 00						0	0	HR	5						Y	2% CHALK
	26 30	mzcl	10YR44 81						0	0	CH	30		M				Y	
	30 65	mzcl	10YR74 81						0	0	CH	65		P				Y	CHALKY DRIFT IMP 6
35	0 25	mzcl	10YR43 00						2	0	HR	10						Y	10% CHALK SEE 6P
	25-40	mzcl	10YR64 81						0	0	CH	50		M				Y	10% FLINTS
	40 70	ch	10YR81 00						0	0	HR	5		P				Y	
38	0 20	hcl	10YR43 00						2	0	HR	5							
	20 30	c	10YR54 00						0	0	HR	5		M					
	30 65	ch	00ZZ00 00						0	0	HR	2		P					
39	0 28	hzcl	10YR44 00						1	0	HR	5						Y	5% CHALK SEE 4P
	28 40	c	75YR56 00						0	0	HR	5		M				Y	5% CHALK
	40 75	ch	10YR81 00						0	0	HR	2		P				Y	
41	0 25	h cl	10YR44 00						2	0	HR	10							
	25 35	c	75YR54 00	00MN00 00	F				0	0	HR	20		M					5% CHALK
	35 70	ch	10YR81 00						0	0	HR	2		P				Y	
42	0 25	h cl	10YR44 00						2	0	HR	10							
	25 60	c	75YR54 00	75YR58 00	C		00MN00 00	S	0	0	HR	20		M					
	60 80	ch	10YR81 00					S	0	0	HR	2		P				Y	
43	0 28	mz l	10YR43 00						2	0	HR	10							
	28 32	mzcl	10YR44 54						0	0	HR	25		M					IMP FLINTS 32
45	0 32	mzcl	10YR43 00						0	0	HR	3						Y	5% CHALK
	32 67	ch	10YR81 00						0	0	HR	2		P				Y	
47	0 25	mzcl	10YR53 00						1	0	CH	5						Y	
	25 33	mzcl	10YR43 00						0	0	CH	20		M				Y	
	33 70	ch	10YR81 00						0	0	HR	2		P				Y	
48	0 25	mzcl	10YR43 00						0	0	HR	5						Y	5% CHALK
	25 30	mzcl	10YR44 81						0	0	CH	30		M				Y	5% FLINTS
	30 65	ch	10YR81 00						0	0	HR	2		P				Y	
49	0 20	mzcl	10YR42 00						0	0	CH	5						Y	
	20 70	ch	10YR81 00						0	0	HR	2		P				Y	
51	0 23	h cl	75YR44 00						3	0	HR	10						Y	5% CHALK
	23 40	mzcl	10YR74 81						0	0	CH	50		M				Y	10% FLINTS
	40 70	ch	10YR81 00						0	0	HR	5		P				Y	
54	0 15	h cl	10YR54 00						0	0	CH	5							
	15 50	h	00ZZ00 00						0	0	HR	2		P					

SAMPLE	DEPTH	TEXTURE	COLOUR	MOTTLES COL	ABUN	CONT	PED COL	GLEY	STONES 2	6	LITH	TOT	STRUCT/ CONSIST	SUBS STR	POR	IMP	SPL	CALC	
55	0 25	mzcl	10YR53 00						0	0	CH	10					Y		5% FLINTS
	25-60	ch	10YR81 00						0	0	HR	2		P			Y		
57	0 28	mzcl	10YR43 00						2	0	HR	10					Y		5% CHALK
	28 32	mzcl	10YR53 81						0	0	CH	40		M			Y		+15% FLINTS
	32 67	ch	10YR81 00						0	0	HR	2		P			Y		
59	0 25	mzcl	10YR43 00						2	0	HR	10					Y		
	25-48	mzcl	40YR44 54						0	0	HR	15		M			Y		5% CHALK
	48-95	mzcl	10YR64 81						0	0	CH	40		M			Y		5% FLINTS IMP 95
61	0 20	mzcl	10YR43 00						0	0	HR	5					Y		
	20 45	mzcl	10YR64 81						0	0	CH	40		M			Y		2% FLINTS IMP 45
65	0 25	hzcl	75YR44 00						0	0	CH	5					Y		
	25 60	ch	10YR81 00						0	0	HR	2		P			Y		
68	0 22	hzcl	10YR43 00						1	0	HR	5							
	22 30	hzcl	10YR54 00						0	0	CH	25		M					
	30 65	ch	00ZZ00 00						0	0	HR	2		P					
69	0 15	mzcl	10YR53 00						0	0	CH	3					Y		
	15 27	mzcl	10YR63 00						0	0	CH	10		M			Y		
	27 70	ch	10YR81 00						0	0	HR	2		P			Y		
70	0 25	mzcl	10YR43 00						0	0	HR	3					Y		5% CHALK
	25 30	mz 1	10YR64 81						0	0	CH	50		M			Y		
	30 65	ch	10YR81 00						0	0	HR	2		P			Y		
71	0 24	mzcl	10YR44 00						0	0	HR	3					Y		2% CHALK
	24 40	mzcl	10YR64 00						0	0	CH	40		M			Y		5% HR IMPFLINTS40
73	0 25	mzcl	10YR43 00						0	0	CH	20					Y		5% FLINTS
	25-60	ch	10YR81 00						0	0	HR	2		P			Y		
75	0 20	mzcl	10YR43 00						8	1	HR	12					Y		
	20 25	ch	10YR81 00						0	0	HR	8		P			Y		
	25 70	ch	10YR81 00						0	0	HR	2		P			Y		
76	0 28	hcl	10YR44 00						0	0	HR	1					Y		
	28 35	c	10YR54 00	75YR58 00	M		00MN00 00	S	0	0	HR	5		M			Y		
	35 52	c	10YR54 00	75YR58 00	M		00MN00 00	S	0	0		0		M			Y		
	52 60	c	10YR54 00	75YR58 00	M		00MN00 00	S	0	0	CH	10		M			Y		
	60 80	ch	10YR81 00						0	0	HR	2		P			Y		
77	0 28	hcl	10YR44 00						0	0	CH	1					Y		
	28 35	c	10YR54 00	75YR58 00	M		00MN00 00	Y	0	0	HR	5		M			Y		
	35 55	c	10YR54 00	75YR58 00	M		00MN00 00	Y	0	0		0		M			Y		
	55 75	ch	10YR81 00					Y	0	0	HR	2		P			Y		

SAMPLE	DEPTH	TEXTURE	COLOUR	MOTTLES COL	MOTTLES ABUN	MOTTLES CONT	PED COL	GLEY	STONES 2	STONES 6	STONES LITH	STONES TOT	STRUCT/ CONSIST	SUBS STR	SUBS POR	SUBS IMP	SUBS SPL	SUBS CALC	
78	0 24	mzcl	10YR43 00						1	0	HR	5							
	24 37	mzcl	10YR54 00						0	0	CH	25		M					
	37 72	ch	00ZZ00 00						0	0	HR	2		P					
79	0 28	mzcl	10YR41 00						0	0	HR	2					Y		
	28 38	mzcl	10YR44 00						0	0	CH	25		M			Y		
	38 50	mzcl	10YR53 81						0	0	CH	40		M			Y		IMP50 QCH 2%HR
80	0 18	mzcl	10YR43 00						1	0	HR	5							
	18 40	mzcl	10YR54 00						0	0	HR	5		M					
	40 75	ch	00ZZ00 00						0	0	HR	2		P					
81	0 25	mzcl	10YR43 00						0	0	CH	5					Y		
	25 38	hzcl	75YR46 00						0	0	CH	15		M			Y		
	38 50	mzcl	10YR64 00						0	0	CH	40		M			Y		IMP CHDRIFT 50
82	0 25	mzcl	10YR43 00						1	0	HR	5							
	25 35	mzcl	10YR43 00						0	0	HR	10		M					
	35 52	c	75YR44 00						0	0	HR	5		M					
	52 87	ch	00ZZ00 00						0	0	HR	2		P					
83	0 22	mzcl	10YR44 00						3	0	HR	6					Y		1% CHALK
	22 45	mzcl	10YR64 73						0	0	CH	20		M			Y		2% HR IMPFLINTS45
84	0 25	mzcl	10YR54 00						0	0	CH	15					Y		2% FLINTS
	25 60	ch	10YR81 00						0	0	HR	2		P			Y		
85	0 25	mz 1	10YR54 00						3	0	HR	5					Y		
	25 35	mzcl	10YR64 54						0	0	CH	50		M			Y		3% HR IMPFLINTS35
87	0 15	mzcl	10YR42 00						0	0	HR	2					Y		
	15 22	mzcl	10YR54 00						0	0	CH	15		M			Y		
	22 70	ch	10YR81 00						0	0	HR	2		P			Y		
90	0 28	mzcl	10YR43 00						3	0	HR	8					Y		
	28 50	mzcl	10YR64 00						0	0	CH	40		M			Y		
	50 70	ch	10YR81 00						0	0	HR	2		P			Y		
92	0 20	mzcl	10YR43 00						5	0	HR	10					Y		3% CHALK
	20 25	mzcl	10YR56 44						0	0	HR	15		M			Y		IMP FLINTS 25
94	0 25	mzcl	10YR43 00						3	0	HR	8					Y		IMP 35 Q FLINTS/CH
	25 35	mzcl	10YR54 00						0	0	CH	20		M			Y		+8% FLINTS
98	0 15	mzcl	10YR43 00						0	0	CH	1					Y		
	15 28	mzcl	10YR54 00						0	0	CH	10		M			Y		
	28 70	ch	10YR81 00						0	0	HR	2		P			Y		

SAMPLE	DEPTH	TEXTURE	COLOUR	MOTTLES COL	MOTTLES ABUN	MOTTLES CONT	PED COL	GLEY	STONES 2	STONES 6	STONES LITH	STONES TOT	STRUCT/ CONSIST	SUBS STR	SUBS POR	SUBS IMP	SUBS SPL	SUBS CALC	
99	0 25	mzcl	10YR43 00						2	0	HR	5							
	25-30	mzcl	10YR54 00						0	0	CH	25		M					
	30 65	ch	00ZZ00 00						0	0	HR	2		P					
101	0 22	mzcl	10YR44 00						8	0	HR	10					Y		IMP 30 QCHALK
	22 30	mzcl	10YR44 64						0	0	CH	40		M			Y		5% FLINTS
103	0 25	mzcl	10YR43 00						8	0	HR	12					Y		IMP FLINTS 25
105	0 15	mzcl	10YR43 53						0	0	HR	3					Y		
	15-32	mzcl	10YR64 81						0	0	CH	40		M			Y		5% FLINTS
	32 67	ch	10YR81 00						0	0	HR	2		P			Y		
106	0 25	mz l	10YR43 00						0	0	HR	3					Y		
	25 35	mzcl	10YR44 54						0	0	HR	5		M			Y		
	35 65	mzcl	10YR54 81						0	0	CH	20		M			Y		
	65 80	mzcl	10YR64 81						0	0	CH	40		M			Y		IMP FLINTS/CHDR 80
107	0 18	mzcl	10YR53 00						0	0	CH	5					Y		
	18 70	ch	10YR81 00						0	0	HR	2		P			Y		
110	0 25	mzcl	10YR43 00						3	0	HR	5					Y		IMP 50 FLINTS/CHALK
	25 50	mzcl	10YR54 00						0	0	HR	2		M			Y		3% CHALK
112	0 25	mz l	10YR43 00						3	0	HR	8					Y		2% CHALK
	25 60	ch	10YR81 00						0	0	HR	2		P			Y		
114	0 28	mzcl	10YR43 53						0	0	CH	10					Y		5% FLINTS
	28-40	mzcl	10YR54 81						0	0	CH	50		M			Y		5% FLINTS
	40 70	h	10YR81 00						0	0	HR	2		M			Y		
116	0 23	mzcl	10YR43 00						0	0	CH	10					Y		5% FLINTS
	23 35	mzcl	10YR54 81						0	0	CH	25		M			Y		5% FLINTS
	35 40	mzcl	10YR44 54						0	0	HR	10		M			Y		5% CHALK IFLINTS40
117	0 28	mz l	10YR34 00						2	0	HR	7							
	28 36	h cl	75YR44 00						0	0	CH	25		M					
	36 71	ch	00ZZ00 00						0	0	HR	2		P					
119	0 25	mzcl	10YR43 00						0	0	HR	3					Y		
	25 60	ch	10YR81 00						0	0	HR	2		P			Y		
121	0 24	mzcl	10YR43 00						0	0	HR	5					Y		5% CHALK
	24 60	ch	10YR81 00						0	0	HR	2		P			Y		
123	0 25	mz l	10YR43 00						7	0	HR	15					Y		
	25-32	mzcl	10YR44 00						0	0	CH	10		M			Y		15% FLINTS
	32 67	ch	10YR81 00						0	0	HR	2		P			Y		

SAMPLE	DEPTH	TEXTURE	COLOUR	MOTTLES COL	MOTTLES ABUN	MOTTLES CONT	PED COL	PED GLEY	STONES 2	STONES 6	STONES LITH	STONES TOT	STRUCT/ CONSIST	SUBS STR	SUBS POR	SUBS IMP	SUBS SPL	SUBS CALC	
128	0 25	mzcl	10YR43 00						0	0	HR	5						Y	+5% CHALK
	25 35	mzcl	10YR74 81						0	0	CH	65		M				Y	+3% FLINTS
	35-70	ch	10YR81 00						0	0	HR	2		P				Y	
130	0 28	mzcl	10YR43 00						3	0	HR	8							
	28 35	mzcl	10YR44 54						0	0	HR	10		M				Y	
	35 70	ch	10YR81 00						0	0	HR	2		P				Y	10% SOIL
131	0 28	mzcl	10YR43 00						8	3	HR	15						Y	IMP FLINTS 40
	28 40	hzcl	10YR44 00						0	0	HR	15		M				Y	+3% CHALK
134	0 30	hzcl	10YR43 00						0	0	HR	2							
	30 50	hzcl	10YR54 00						0	0	HR	2		M					IMP 50
135	0 28	mzcl	10YR43 53						0	0	HR	3							+15% CHALK
	28 35	mzcl	10YR44 81						0	0	CH	50		M					
	35 70	ch	10YR81 54						0	0	HR	2		P					10% SOIL
137	0 28	mzcl	10YR43 53						2	0	HR	6							5% CHALK
	28 45	mzcl	10YR64 81						0	0	CH	50		M				Y	CHALKY DRIFT
	45 75	ch	10YR81 00						0	0	HR	2		P				Y	
140	0 28	mzcl	10YR43 00						8	3	HR	15						Y	
	28 35	mzcl	10YR43 44						0	0	HR	15		M				Y	IMP FLINTS 35
141	0 28	mzcl	10YR43 00						5	1	HR	10						Y	
	28 40	mzcl	10YR44 43						0	0	HR	15		M				Y	IMP FLINTS 40
143	0 28	mzcl	10YR54 00						3	5	HR	12						Y	20% CHALK
	28 63	ch	10YR81 00						0	0	HR	2		P				Y	
145	0 28	mzcl	10YR44 00						3	0	HR	8						Y	
	28 40	h cl	75YR56 43						0	0	HR	5		M				Y	IMP FLINTS 40
147	0 28	mzcl	10YR43 00						8	1	HR	15						Y	IMP FLINTS 40
	28 40	mzcl	10YR44 43						0	0	HR	20		M				Y	BDR h cl IMP 40