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Worthing Borough Local Plan
Site 2 Garden Wood
West of Durrington, West Sussex
Agricultural Land Classification,
ALC Map and Report
February 1995

AGRICULTURAL LAND CLASSIFICATION REPORT

WORTHING BOROUGH LOCAL PLAN
SITE 2 LAND AT GARDEN WOOD WEST OF DURRINGTON WEST SUSSEX

1 Summary

1 1 ADAS was commissioned by MAFF s Land Use Planning Unit to provide information on land quality for a number of sites in the Worthing Borough of West Sussex The work forms part of MAFF s statutory input to the preparation of the Worthing Borough Local Plan

1 2 Site 2 comprises 124 3 hectares of land south of the A27 and east of Titnore Lane at Durrington near Worthing in West Sussex An Agricultural Land Classification (ALC) survey was carried out in February 1995 The survey was undertaken at a detailed level of approximately one boring per hectare of agricultural land surveyed A total of 83 borings and four soil inspection pits were described in accordance with MAFF s revised guidelines and criteria for grading the quality of agricultural land (MAFF 1988) These guidelines provide a framework for classifying land according to the extent to which its physical or chemical characteristics impose a long term limitation on its use for agriculture

1 4 At the time of the survey the majority of the agricultural land on the site comprised permanent grassland Winter wheat and Set aside land prevails towards the east of the site Areas marked as Non agricultural include scrubland areas of Woodland in the west of the site have also been mapped Areas marked as Urban comprise tarmac roads private dwellings and a caravan site A group of farm buildings has been mapped in the north east of the site

1 5 The distribution of grades and subgrades is shown on the attached ALC map and the areas and extent are given in the table below The map has been drawn at a scale of 1 10 000 It is accurate at this scale but any enlargement would be misleading This map supersedes any previous survey information for the site

Table 1 Distribution of Grades and Subgrades

Grade	Area (ha)	% of Site	/ of Agricultural Land
3a	28 1	22 6	36 4
3b	48 3	38 9	62 6
4	0 8	0 6	1 0
Non Agricultural	4 8	3 9	100 (77 2ha)
Woodland	25 5	20 5	
Urban	15 4	12 4	
Farm Buildings	0 1	0 1	
Open Water	1 3	1 0	
Total area of site	124 3ha	100 0	

1 6 Appendix I gives a general description of the grades subgrades and land use categories identified in the survey The main classes are described in terms of the type of limitation that can occur the typical cropping range and the expected level and consistency of yield

1 7 The majority of the agricultural land on the site has been classified as Subgrade 3b moderate quality land with soil wetness and droughtiness as the main limitations Towards the north east of the site soil profiles tend to comprise well drained medium silty clay loams which become stony at comparatively shallow depths overlying gravel These soil profiles show a significant restriction upon profile available water which will in turn effect the level and consistency of crop yields Towards the west of the site soils tend to be less stony and show signs of a drainage imperfection in the form of evidence of shallow wetness from the topsoil or upper subsoil Subsoils tend to comprise slowly permeable clays at relatively shallow depths which significantly impede drainage such that a classification of Subgrade 3b is appropriate Areas of land classified as Subgrade 3a show similar but less severe types of limitation to the Subgrade 3b land Where wetness is overriding slowly permeable clays occur at greater depths thereby causing less of a restriction upon soil drainage Furthermore where droughtiness is overriding the depth at which soils become restrictively stony is greater The amount of profile available water exhibited by these soils increases and there is a subsequent decrease in the severity of any droughtiness limitation Small areas of land on the site have been mapped as Grade 4 where there is a severe wetness limitation

2 Climate

2 1 The climatic criteria are considered first when classifying land as climate can be overriding in the sense that severe limitations will restrict land to low grades irrespective of favourable site or soil conditions

2 2 The main parameters used in the assessment of an overall climatic limitation are average annual rainfall as a measure of overall wetness and accumulated temperature as a measure of the relative warmth of a locality

2 3 A detailed assessment of the prevailing climate was made by interpolation from a 5km gridpoint dataset (Met Office 1989) The details are given in the table below and these show that there is no overall climatic limitation affecting the site

2 4 No local climatic factors such as exposure or frost risk are believed to affect the site However climatic and soil factors interact to influence soil wetness and droughtiness limitations At this location the climate is relatively warm and wet in a regional context Moisture deficits are also relatively high this can be attributed to the coastal location of this with correspondingly high rates of evapotranspiration Therefore the likelihood of any soil droughtiness problems may be increased

Table 2 Climatic Interpolations

Grid Reference	TQ105 048	TQ 097 055
Altitude (m AOD)	15	40
Accumulated Temperature (°days Jan June)	1527	1499
Average Annual Rainfall (mm)	766	779
Field Capacity Days	160	162
Moisture deficit wheat (mm)	119	116
Moisture deficit potatoes (mm)	116	111
Overall Climatic Grade	1	1

3 Relief

3 1 The site lies at an altitude of approximately 15-40m AOD being gently undulating in the north and west becoming relatively flat towards the south eastern edge Nowhere on the site do gradient or relief pose any limitation to agricultural use

4 Geology and Soils

4 1 The published geological information (BGS 1972 and 1984) shows the geology of the site to be relatively complex The majority of the site is mapped as London Clay in the west and Head in the east The central part of the site towards the north is shown to comprise Sand in London Clay and Woolwich and Reading Beds A small area of Brickearth over London Clay is mapped towards the south east of the site

4 2 The published soils information (SSGB 1967) maps the soils on the site as six distinct series These comprise the Swanmore Titchfield Curdridge Binsted (extremely flint phase) Charity and Hook series Swanmore soils are described as gleyed clayey soils with slowly permeable subsoils Titchfield soils are described as gleyed clayey soils with a relatively high flint content and slowly permeable subsoils Curdridge soils are described as relatively deep free draining sandy loams and sandy clay loams Binsted soils are described as relatively shallow and flinty clays Charity soils are described as shallow flinty clays derived from the head deposits Hook soils are described as deep well drained loamy soils (SSGB 1967)

4 3 Detailed field examination found the soils on the site to be loamy with flinty or very flinty subsoils towards the east Poorly drained loamy soils with slowly permeable subsoils tend to predominate in the west of the site

5 Agricultural Land Classification

5 1 The location of the soil observation points are shown on the attached sample point map

Subgrade 3a

5 2 Approximately 28 hectares of agricultural land on the site has been classified as Subgrade 3a good quality land with soil wetness and droughtiness as the main limitations

5 3 Within the Subgrade 3a area of land towards the centre of the site soil wetness tends to be the principal limitation Soil profiles within this mapping unit tend to comprise medium clay loam or silty clay loam topsoils overlying heavier textured upper subsoils which in turn rest upon clay lower subsoils commencing at depths of between 47 55cm Occasionally organic loams were noted in the topsoil Profiles tend to show signs of a wetness imperfection in the form of gleying from the topsoil A subsequent soil inspection pit (pit no 2) showed the clay lower subsoil to be poorly structured with low porosity and therefore may be classified as slowly permeable causing a moderate drainage imperfection The depth to the slowly permeable clay and the evidence of gleying in the profile means that these soils are assigned to Wetness Class III Therefore a classification of Subgrade 3a is appropriate given the prevailing local climatic conditions Poorly drained wet soils can inhibit plant and root development and may be more susceptible to structural damage through poaching by grazing livestock or trafficking by agricultural machinery

5 4 Subgrade 3a land mapped towards the eastern edge of the site shows signs of a droughtiness limitation Soil profiles tend to comprise medium silty clay loam textures which tend to become heavier and more stony with depth Profiles within this mapping unit commonly proved impenetrable to the auger at depths of between 60 70cm subsoils tending to be moderately stony (10 30% total flints v/v) above these depths A soil inspection pit (pit no 4) was dug to assess the nature of these soils particularly to assess the stoniness of the subsoils The described soil profile at the location of the pit comprises a very slightly stony (3% total flints v/v) medium silty clay loam topsoil which overlies a slightly stony (10% total flints v/v) similar textured upper subsoil extending to a depth of 65cm A moderately stony (30% total flints v/v) heavy silty clay loam lower subsoil extended to a depth of 80cm where the profile became appreciably more stony comprising gravel which was impenetrable to digging Evidence of plant rooting was notably scarce at this depth and given the underlying geology it is unlikely that the profile will become any less stony below this depth Consequently this is the lower depth used for the purposes of calculating the amount of profile available water for crop growth as there is minimal available water below this in the gravel A moderate restriction upon profile available water is evident arising as a result of the combination of soil textures structures stone contents and the local climatic regime Therefore a classification of Subgrade 3a is appropriate due

to this droughtiness limitation which may affect the level and consistency of crop yields Observations at the pit have been used for the purpose of assigning a grade to the impenetrable borings in this mapping unit Assumptions have been made regarding the nature of the soils below these impenetrable depth using information derived from the pit

Subgrade 3b

5 5 The majority of the agricultural land on the site has been classified as Subgrade 3b moderate quality land also due to soil wetness and droughtiness limitations These limitations are of a similar yet more severe nature to those exhibited by land within the Subgrade 3a mapping unit

5 6 Subgrade 3b land mapped towards the west of the site experiences soil drainage imperfections This reflects the presence of soils derived over London Clay Soil profiles in this area of the site typically comprise medium or heavy silty clay loam topsoils which tend to rest directly upon clay subsoils Profiles commonly show evidence of a wetness imperfection in the form of gleying from the topsoil A soil inspection pit (pit no 3) towards the west of this mapping unit found the clay subsoil to be poorly structured with low porosity and therefore classified as slowly permeable which significantly impedes drainage The presence of gleying and the relatively shallow depths to these slowly permeable layers means that these soils are assigned to Wetness Class IV with a resultant classification of Subgrade 3b given the prevailing climatic conditions Poorly drained wet soils can inhibit plant and root development and may be more susceptible to structural damage through trafficking by agricultural machinery or poaching by grazing livestock This can in turn affect the timing and frequency of such operations

5 7 The remainder of the Subgrade 3b land mapped around the central and north eastern parts of the site shows a significant droughtiness limitation Soil profiles exhibiting more severe droughtiness problems typically comprise slightly stony or moderately stony (10 30% total flints v/v) medium silty clay loam topsoils overlying a moderately stony (10 35% total flints v/v) medium or heavy silty clay loam upper subsoil Profiles of this type proved impenetrable to the soil auger at depths of between 30 50cm commonly being impenetrable below the topsoil Therefore a soil inspection pit (pit no 1) was dug to assess the stoniness of the soil profile and the cause of the impenetrability At the location of the pit a moderately stony (12% total flints v/v) medium silty clay loam topsoil was found to overlie a very stony (45% total flints) similar textured upper subsoil extending to a depth of 54cm The lower subsoil was found to consist of a very stony (65% total flints v/v) medium silty clay loam this stone content bordering on classification as pure gravel The pit became impenetrable to digging at 75cm where evidence of plant rooting was found to be scarce The underlying geology suggests that profiles are unlikely to become any less stony with depth A subsequent droughtiness calculation using 75cm as the lower depth found this described profile to exhibit a significant restriction upon the amount of profile available water for plant growth This in turn can affect the level and consistency of crop yields such that a classification of Subgrade 3b is appropriate Even if

roots could penetrate any deeper into the gravel there is insufficient available water to qualify for a higher grade Observations at the pit have been used in assigning a grade to those soil auger borings that proved impenetrable at relatively shallow depths in this mapping unit Assumptions have been made regarding the nature of the soils below these impenetrable depths using information derived from the pit

Grade 4

5 8 A small area of land on the site has been classified as Grade 4 poor quality land due to a severe wetness limitation The presence of hydrophilic plant species such as Juncus rushes suggests that this land is waterlogged for long periods which will have a detrimental affect upon its use for agriculture

ADAS Ref 4207/293/94
MAFF Ref EL42/472

Resource Planning Team
Guildford Statutory Group
ADAS Reading

SOURCES OF REFERENCE

British Geological Survey (1972) Sheet 317 Chichester 1 63 360 Drift Edition

British Geological Survey (1984) Sheet 318/333 Worthing / Brighton 1 50 000 Solid & Drift Edition

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

Meteorological Office (1989) Climatic datasets for Agricultural Land Classification

Soil Survey of Great Britain (1967) Bulletin No 3 Soils of the West Sussex Coastal Plain

APPENDIX I

DESCRIPTION OF THE GRADES AND SUBGRADES

Grade 1 Excellent Quality Agricultural Land

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

Grade 2 Very Good Quality Agricultural Land

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

Grade 3 Good to Moderate Quality Land

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

Subgrade 3a Good Quality Agricultural Land

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

Subgrade 3b Moderate Quality Agricultural Land

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

Grade 4 Poor Quality Agricultural Land

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

Grade 5 Very Poor Quality Agricultural Land

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

Urban

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

Non agricultural

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

Woodland

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

Agricultural Buildings

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

Open Water

Includes lakes ponds and rivers as map scale permits

Land Not Surveyed

Agricultural land which has not been surveyed

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

APPENDIX II

FIELD ASSESSMENT OF SOIL WETNESS CLASS

SOIL WETNESS CLASSIFICATION

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

Definition of Soil Wetness Classes

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

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

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

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

APPENDIX III

SOIL PIT AND SOIL BORING DESCRIPTIONS

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 appropiate 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

S te Name WORTHING LP SITE 2 P t N ber 1P

Grid Reference TQ10900540 A erage An al Ra nfall 766 mm
Acc m l t d Tempe t r 1527 d g ee d ys
Field Capac ty Le el 160 days
L nd Use Wh at
Slope and Aspect deg ees

HORIZON	TEXTURE	COLOUR	STONES 2	TOT STONE	LITH	MOTTLES	STRUCTURE	CONSIST	SUBSTRUCTURE	CALC
0 30	MZCL	10YR42 00	8	12	HR					
30 54	MZCL	10YR52 00	0	45	HR				M	
54 75	MZCL	10YR64 00	0	65	HR				P	

Wet s G de 1 W t e s Cl ss I
Gley ng cm
SPL No SPL

D o ght Grade 3B APW 078mm MBW 41 mm
APP 082mm MBP 34 mm

FINAL ALC GRADE 3B
MAIN LIMITATION D o ghtin

SOIL PIT DESCRIPTION

Sit Name WORTHING LP SITE 2 P t N ber 2P

Grid Reference TQ10600540 A erage Ann al Ra fall 766 mm
Acc m lated Temper t re 1527 degree days
F eld Capac ty L el 160 days
La d U e P rma ent G ss
Slope a d Aspect 02 degrees N

HORIZON	TEXTURE	COLOUR	STONES	2	TOT STONE	LITH	MOTTLES	STRUCTURE	CONSIST	SUBSTRUCTURE	CALC
0 29	MZCL	10YR42 00	0		3	HR					
29 50	HZCL	10YR63 00	0		3	CH	M	MDCSAB	FR	M	Y
50 62	C	10YR73 00	0		2	HR	M	WKCSAB	FM	P	
62 80	C	10YR71 00	0		2	HR	M	MASSVE	FM	P	

Wetn ss G ad 3A Wetness Class III
Gl y ng 029 cm
SPL 050 cm

D ought G ade APW mm MBW 0 mm
APP mm MBP 0 mm

FINAL ALC GRADE 3A
MAIN LIMITATION Wet ess

SOIL PIT DESCRIPTION

Site Name WORTHING LP SITE 2 Pit Number 3P

Grid Reference TQ10300500 Average Annual Rainfall 766 mm
Accumulated Temperature 1527 degree days
Field Capacity Level 160 days
Limiting Undesirable Permanent Grass
Slope and Aspect deg s

HORIZON		TEXTURE	COLOUR	STONES 2	TOT STONE	LITH	MOTTLES	STRUCTURE	CONSIST	SUBSTRUCTURE	CALC
0	28	HZCL	10YR42 00	1	5	HR	F				
28	39	C	10YR63 73	0	3	HR	M	MDCSAB	FM	M	
39	65	C	25Y 72 00	0	1	HR	M	WKCAB	FM	P	

Wetness Grade 3B Wetness Class IV
Gley g 028 cm
SPL 039 cm

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

FINAL ALC GRADE 3B
MAIN LIMITATION Wetness

SOIL PIT DESCRIPTION

S te Name WORTHING LP SITE 2 Pit N mber 4P

Grid Refere ce TQ10900493 A erage An al R nf ll 766 mm
Acc m l ted Tempe t 1527 deg ee days
F eld Cap c ty Le el 160 days
L d U e Wheat
Slope a d Aspect 01 deg ee S

HORIZON	TEXTURE	COLOUR	STONES 2	TOT STONE	LITH	MOTTLES	STRUCTURE	CONSIST	SUBSTRUCTURE	CALC
0 35	MZCL	75YR52 00	2	3	HR					
35 65	MZCL	75YR53 00	0	10	HR	F	MDCSAB	FR	M	
65 80	HZCL	75YR64 00	0	30	HR	F			M	

Wetness Grade 1 Wetness Cl ss I
Gley g cm
SPL N SPL

D o ght Grad 3A APW 114mm MBW 4 mm
APP 119mm MBP 6 mm

FINAL ALC GRADE 3A
MAIN LIMITATION D ght es

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
1P	TQ10900540	WHT						1	1	078	41	082	34	3B				DR	3B	PIT 75
2P	TQ10600540	PGR	N	02		029	050	3	3A		0		0					WE	3A	
3P	TQ10300500	PGR				028	039	4	3B		0		0					WE	3B	
4P	TQ10900493	WHT	S	01				1	1	114	4	119	6	3A				DR	3A	DR TO 80
5	TQ09560563	PGR				030		2	2	076	43	076	40	3B				DR	3B	I50 SEE1P
11	TQ10220557	PGR				0	038	4	3B		0		0					WE	3B	
12	TQ10300559	PGR				0	027	4	3B		0		0					WE	3B	
13	TQ10400560	PGR				0		2	2	070	48	070	43	3B				DR	3B	I40 SEE1P
15	TQ10620563	SAS	W	01				1	1	061	58	061	55	4				DR	3B	I40 SEE1P
16	TQ10800560	SAS	W	01				1	1	064	55	064	52	4				DR	3B	I40 SEE1P
17	TQ10900560	SAS						1	1	052	66	052	61	4				DR	3B	I30 SEE1P
18	TQ11010559	PGR	W	01				1	1	045	74	045	71	4				DR	3B	I35 SEE1P
19	TQ11120568	PGR						1	1	045	74	045	71	4				DR	3B	I30 SEE1P
20	TQ11100560	PGR						1	1	044	75	044	72	4				DR	3B	I30 SEE1P
22	TQ09730553	WHT	N	02		020	020	4	3B		0		0					WE	3B	
25	TQ10030549	PGR	SE	02		0	030	4	3B		0		0					WE	3B	
26	TQ10080554	PGR	S	04		0	015	4	3B		0		0					WE	3B	
27	TQ10200550	PGR				0	030	4	3B		0		0					WE	3B	
28	TQ10300550	PGR				0	024	4	3B		0		0					WE	3B	
29	TQ10400550	PGR				029	047	3	3A		0		0					WE	3A	
30	TQ10500550	PGR				0	060	3	3A		0		0					WE	3A	
31	TQ10600550	PGR				028	043	4	3B		0		0					WE	3B	
32	TQ10700550	SAS	W	01		S38		1	1	099	20	103	13	3A				DR	3A	I80 3A
33	TQ10700560	SAS	W	01		S85		1	1	105	14	101	15	3A				DR	3A	I90 3A
34	TQ10800550	SAS	W	01				1	1	082	37	087	29	3B				DR	3A	I60 3A
35	TQ10900550	SAS	W	01				1	1	075	44	075	41	3B				DR	3B	I50 SEE1P
36	TQ11000550	SAS	W	01				1	1	053	66	053	63	4				DR	3B	I38 SEE1P
37	TQ11100550	SAS	W	01				1	1	054	65	054	62	4				DR	3B	I40 SEE1P
38	TQ09700540	WHT	N	02		025	025	4	3B		0		0					WE	3B	
39	TQ09800537	PGR	S	03		015	020	4	3B		0		0					WE	3B	
40	TQ09900537	PGR	S	03		015	015	4	3B		0		0					WE	3B	
41	TQ10000540	PGR	SE	02		015	035	4	3B		0		0					WE	3B	
42	TQ10100540	PGR	SE	02		0	040	4	3B		0		0					WE	3B	
44	TQ10300540	PGR				0	038	4	3B		0		0					WE	3B	
45	TQ10400540	PGR				0	048	3	3A		0		0					WE	3A	
46	TQ10510540	PGR				030	045	3	3A		0		0					WE	3A	
47	TQ10600540	PGR				0	055	3	3A		0		0					WE	3A	
48	TQ10700540	PGR				0		2	2	084	35	084	32	3B				DR	3B	I50 SEE1P
49	TQ10800540	WHT	W	01				1	1	075	44	075	41	3B				DR	3B	I50 SEE1P
50	TQ10900540	WHT	W	01				1	1	062	57	062	54	4				DR	3B	I40 SEE1P
51	TQ11000540	WHT	W	01				1	1	067	52	067	49	4				DR	3B	142 SEE1P
52	TQ11100540	WHT	W	01				1	1	084	35	090	26	3B				DR	3A	I60 SEE4P

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
59	TQ10400530	PGR			0	037	4	3B		0		0					WE	3B	
60	TQ10460532	PGR					1	1	086	32	069	44	3B				DR	3B	SANDY
61	TQ10600530	PGR			0	052	3	3A		0		0					WE	3A	
63	TQ10800530	CER					1	1	072	47	072	44	3B				DR	3B	I50 SEE1P
64	TQ10900530	WHT					1	1	079	39	079	34	3B				DR	3B	I50 SEE1P
65	TQ11000530	WHT					1	1	121	3	116	3	3A				DR	3A	I85
66	TQ11100530	SAS	W	01			1	1	079	40	081	35	3B				DR	3A	I55 SEE1P
72	TQ10400520	PGR			0	045	3	3A		0		0					WE	3A	
73	TQ10500520	PGR			0	050	3	3A		0		0					WE	3A	
74	TQ10600520	PGR			0		2	1	139	20	099	17	3A				DR	3A	
75	TQ10700520	SAS			0	030	4	3B		0		0					WE	3B	
76	TQ10800520	CER					1	1	073	46	073	43	3B				DR	3B	I50 SEE1P
77	TQ10900520	CER					1	1	089	30	095	21	3B				DR	3A	I65 SEE4P
78	TQ11000520	CER			065		1	1	110	9	120	4	3A				DR	3A	I70 SEE4P
79	TQ11100520	CER					1	1	078	41	082	34	3B				DR	3A	I60 SEE4P
85	TQ10350513	PGR			0	033	4	3B		0		0					WE	3B	
86	TQ10500510	SAS			030	045	3	3A		0		0					WE	3A	
87	TQ10600510	SAS			030	055	3	3A		0		0					WE	3A	
88	TQ10700510	SAS			028	028	4	3B		0		0					WE	3B	
89	TQ10800510	WHT	S	01	030		2	2	079	40	079	37	3B				DR	3B	I50 SEE1P
90	TQ10900510	CER			050		1	1	106	13	118	2	3A				DR	3A	I70 SEE4P
91	TQ11000510	CER					1	1	095	24	102	14	3B				DR	3A	I60 SEE4P
92	TQ11100510	CER					1	1	078	41	084	32	3B				DR	3A	I70 SEE4P
94	TQ10200500	PGR			033	033	4	3B		0		0					WE	3B	
95	TQ10300500	PGR			033	033	4	3B		0		0					WE	3B	
96	TQ10400500	PGR			030	045	3	3B		0		0					WE	3B	
97	TQ10500500	SAS			030	080	2	2	147	28	123	7	2				WD	2	
98	TQ10600500	SAS			030		2	2	160	41	124	8	2				WD	2	
99	TQ10700500	STB	S	01	028		2	2	092	27	097	19	3B				DR	3A	I60 SEE4P
100	TQ10800500	WHT	S	01	030	030	4	3B		0		0					WE	3B	
101	TQ10900500	WHT	S	01	055		1	1	106	13	119	3	3A				DR	3A	I70 SEE4P
102	TQ11000500	WHT	S	01			1	1	116	3	116	0	3A				DR	3A	
103	TQ10200490	LEY			029	029	4	3B		0		0					WE	3B	
104	TQ10300490	LEY			029	029	4	3B		0		0					WE	3B	
105	TQ10400490	LEY			030	040	4	3B		0		0					WE	3B	
107	TQ10600490	STB	E	02	030	030	4	3B		0		0					WE	3B	
108	TQ10700490	STB	S	01			1	1	065	54	065	51	4				DR	3B	I40 SEE1P
109	TQ10800490	WHT	S	01			1	1	067	52	067	49	4				DR	3B	140 SEE1P
110	TQ10900490	WHT	S	01	048		1	1	101	18	111	5	3A				DR	3A	I65 SEE4P
111	TQ11000490	WHT	S	01	048		1	1	098	21	107	9	3B				DR	3A	I65 SEE4P
115	TQ10700480	RGR			0	025	4	3B		0		0					WE	3B	
116	TQ10900480	WHT	S	01	028		2	2	109	10	117	1	3A				DR	3A	I75 SEE4P

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	ALC	COMMENTS
117	TQ11000480	WHT	S	01	030		2	2	096	23	102	14	3B				DR	3B	I60 SEE4P
122	TQ10700470	RGR			0	035	4	3B		0		0					WE	3B	
127	TQ10960473	WHT	S	01	025	045	3	3A	091	28	097	19	3B				WD	3A	I60

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 30	mzcl	10YR42 00						8	0 HR	12							
	30 54	mzcl	10YR52 00						0	0 HR	45		M					} PIT DUG TO 75
	54 75	mzcl	10YR64 00						0	0 HR	65		P					
2P	0 29	mzcl	10YR42 00						0	0 HR	3							
	29 50	hzcl	10YR63 00	10YR58 00	M			Y	0	0 CH	3	MDCSAB	FR M				Y	PIT DUG TO 70
	50 62	c	10YR73 00	75YR58 46	M			Y	0	0 HR	2	WKCSAB	FM P	Y		Y		AUGER TO 80
	62 80	c	10YR71 00	75YR46 00	M			Y	0	0 HR	2	MASSVE	FM P	Y		Y		
3P	0 28	h cl	10YR42 00	10YR58 00	F				1	0 HR	5							
	28 39	c	10YR63 73	10YR58 00	M		00MN00 00	Y	0	0 HR	3	MDCSAB	FM M					
	39 65	c	25Y 72 00	75YR58 00	M		00MN00 00	Y	0	0 HR	1	WKCAB	FM P	Y		Y		
4P	0 35	mzcl	75YR52 00						2	0 HR	3							
	35 65	mzcl	75YR53 00	10YR56 00	F				0	0 HR	10	MDCSAB	FR M					
	65 80	hzcl	75YR64 00	10YR56 00	F				0	0 HR	30		M					
5	0 30	mzcl	10YR41 00						0	0 HR	10							
	30 50	mzcl	10YR63 00	10YR56 00	C			Y	0	0 HR	30		M					IMP FLINTS
11	0 19	m cl	10YR42 00	10YR56 51	C			Y	0	0	0							
	19 38	hzcl	10YR52 00	10YR58 61	C			Y	0	0	0		M					
	38 70	c	10YR62 00	10YR78 71	M			Y	0	0	0		P		Y			
12	0 27	mzcl	10YR42 00	10YR56 00	C			Y	0	0	0							
	27 60	c	10YR62 00	10YR68 71	C			Y	0	0	0		P		Y			
13	0 27	mzcl	10YR42 00						0	0 HR	2							
	27 40	h cl	10YR52 00	10YR56 00	C			Y	0	0 HR	10		M					IMP FLINTS
15	0 30	mzcl	10YR42 00						8	0 HR	12							
	30 40	mzcl	10YR44 00						0	0 HR	40		M					IMP FLINTS
16	0 28	mzcl	10YR43 00						6	0 HR	12							
	28 40	mzcl	10YR54 00						0	0 HR	20		M					IMP FLINTS
17	0 30	mzcl	10YR43 00						5	0 HR	10							IMP FLINTS
18	0 25	m l	10YR43 00						18	0 HR	30							
	25 35	mzcl	10YR54 00						0	0 HR	35		M					IMP FLINTS
19	0 25	mzcl	10YR43 00						14	0 HR	20							
	25 30	mz l	10YR54 00						0	0 HR	30		M					IMP FLINTS
20	0 30	m cl	10YR43 00						16	0 HR	25							IMP FLINTS
22	0 20	h l	25Y 42 00						0	0 HR	5							
	20 70	c	25Y 51 00	10YR68 00	M			Y	0	0	0		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
25	0 15	m cl	10YR52 00	10YR56 00	C			Y	0	0		0						
	15 30	c	05Y 51 00	10YR68 00	M			Y	0	0		0		M				
	30 70	c	05Y 61 00	75YR68 00	M			Y	0	0		0		P		Y		
26	0 15	mzcl	10YR52 00	10YR56 00	C		00MN00 00	Y	0	0	HR	2						
	15 70	c	05Y 61 00	75YR68 00	M			Y	0	0		0		P		Y		
27	0 22	mzcl	10YR52 00	10YR58 00	C			Y	0	0		0						
	22 30	hzcl	10YR52 00	10YR58 61	C			Y	0	0		0		M				
	30 45	c	10YR52 62	10YR68 61	C			Y	0	0		0		P		Y		
	45 70	c	10YR62 00	10YR68 71	M			Y	0	0		0		P		Y		
28	0 24	mzcl	10YR42 52	10YR58 00	C			Y	0	0	HR	2						
	24 70		10YR72 00	10YR78 81	M			Y	0	0		0		P		Y		
29	0 29	m cl	10YR42 00						0	0	HR	2						
	29 47	hzcl	10YR52 00	10YR56 00	C			Y	0	0		0		M				
	47 85	c	10YR62 73	10YR68 71	M			Y	0	0		0		P		Y		
30	0 22	mzcl	10YR42 00	10YR56 00	C			Y	0	0		0						
	22 38	mzcl	10YR63 00	10YR58 00	C			Y	0	0		0		M				
	38 60	hzcl	10YR62 00	10YR78 72	C			Y	0	0		0		M				
	60 90	c	10YR63 64	10YR78 00	C			Y	0	0		0		P		Y		
31	0 28	mzcl	10YR42 00						0	0	HR	2						
	28 43	mzcl	10YR52 00	10YR56 00	C			Y	0	0		0		M				
	43 120		10YR52 00	10YR58 61	C		00MN00 00	Y	0	0		0		P		Y		
32	0 28	mzcl	10YR42 00						8	0	HR	12						
	28 38	mzcl	10YR54 00						0	0	HR	20		M				
	38 80	h l	10YR54 00	10YR58 00	C		00MN00 00	S	0	0	HR	25		M				IMP FLINTS
33	0 30	mz l	10YR43 00						6	0	HR	10						
	30 60	mzcl	10YR44 00						0	0	HR	25		M				
	60 85	mzcl	10YR44 00						0	0	HR	40		M				
	85 90	h cl	10YR54 00	75YR58 00	C		00MN00 00	S	0	0	HR	20		M				IMP FLINTS
34	0 28	m l	10YR43 00						11	0	HR	15						
	28 60	mzcl	10YR54 00						0	0	HR	25		M				IMP FLINTS
35	0 30	mzcl	10YR43 00						11	0	HR	15						
	30 50	mzcl	10YR54 00						0	0	HR	25		M				IMP FLINTS
36	0 30	m l	10YR43 00						16	0	HR	25						
	30 38	mzcl	10YR44 00						0	0	HR	35		M				IMP FLINTS
37	0 28	m l	10YR43 00						15	0	HR	25						
	28 40	mzcl	10YR54 00						0	0	HR	35		M				IMP FLINTS

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	
38	0 25	hzcl	10YR42 00						0	0	HR	5							
	25 70	c	05Y 51 00 75YR68 00	M				Y	0	0		0		P			Y		
39	0 15	hzcl	10YR52 00 00MN00 00	C					0	0		0							
	15 20	c	10YR53 51 10YR56 00	C			00MN00 00	Y	0	0		0		M					
	20 70	c	05GY51 00 75YR68 00	M				Y	0	0		0		P			Y		
40	0 15	hzcl	10YR52 00						0	0		0							
	15 30	c	25Y 51 00 10YR68 00	M				Y	0	0		0		P			Y		
	30 70	c	25Y 62 00 75YR68 00	M			00MN00 00	Y	0	0		0		P			Y		
41	0 15	mzcl	10YR52 00						0	0		0							
	15 35	c	25Y 52 00 10YR68 00	M				Y	0	0		0		M					
	35 70	c	05Y 61 00 10YR68 00	M				Y	0	0		0		P			Y		
42	0 20	mzcl	10YR42 52 10YR56 00	C				Y	0	0		0							
	20 40	h cl	25Y 63 00 10YR68 00	M				Y	0	0	HR	10		M					
	40 60	c	25Y 62 00 75YR68 00	M			00MN00 00	Y	0	0	HR	20		P			Y		
44	0 22	mzcl	75YR52 00 10YR56 00	C				Y	0	0		0							
	22 38	hzcl	10YR52 00 10YR58 61	C				Y	0	0		0		M					
	38 70	c	10YR73 00 10YR78 71	C			00MN00 00	Y	0	0		0		P			Y		
45	0 26	mzcl	10YR42 00 10YR58 00	C				Y	0	0		0							
	26 48	h l	10YR52 00 10YR56 00	C				Y	0	0		0		M					
	48 70	c	10YR52 62 10YR68 61	M				Y	0	0	HR	5		P			Y		
46	0 30	mcl	10YR42 41 10YR46 56	F					0	0	HR	2							
	30 45	hcl	25Y 61 00 10YR68 00	M				Y	0	0		0		M					
	45 80	c	25Y 62 00 10YR68 00	M				Y	0	0		0		M			Y		
	80 120	msl	25Y 62 00 10YR68 00	M				Y	0	0		0		M			Y		
47	0 30	mzcl	10YR41 00 10YR46 00	C				Y	0	0	CH	2							
	30 45	mzcl	25Y 61 62 10YR66 00	M				Y	0	0	CH	2		M					
	45 55	hzcl	25Y 53 00 10YR58 00	M				Y	0	0		0		M					
	55 70	c	25Y 61 00 10YR58 00	M				Y	0	0		0		P			Y		
	70 90	c	05BG71 00 25YR48 00	M				Y	0	0		0		P			Y		
48	0 28	mzcl	10YR42 00 10YR46 00	C				Y	0	0	HR	5							
	28 40	h cl	25Y 61 62 10YR66 00	C				Y	0	0	HR	5		M					
	40 50	h cl	25Y 61 62 10YR66 00	C				Y	0	0	HR	20		M					IMP FLINTS
49	0 30	mz l	10YR43 00						9	0	HR	14							
	30 50	mz l	10YR44 00						0	0	HR	25		M					IMP FLINTS
50	0 30	m l	10YR43 00						9	0	HR	14							
	30 40	m l	10YR43 00						0	0	HR	25		M					IMP FLINTS

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	
51	0 35	mzcl	10YR43 00						9	0	HR	14							
	35 42	mzcl	10YR54 00						0	0	HR	25		M					IMP FLINTS
52	0 28	mzcl	10YR42 00						11	0	HR	15							
	28 60	mzcl	10YR54 00						0	0	HR	20		M					IMP FLINTS
59	0 23	mz l	10YR52 00	10YR58 61	C			Y	0	0	HR	2							
	23 37	hzcl	10YR52 00	10YR78 72	C			Y	0	0		0		M					
	37 65	c	10YR62 00	10YR78 61	M			Y	0	0	HR	10		P		Y			
60	0 22	mcl	10YR42 00						0	0	HR	2							
	22 45	lms	75YR52 00						0	0		0		M					
	45 120	ms	75YR52 72						0	0		0		M					
61	0 20	mzcl	10YR42 00	10YR56 00	C			Y	0	0	HR	2							
	20 52	h cl	10YR52 00	10YR68 61	M			Y	0	0		0		M					
	52 80	c	10YR62 00	10YR68 72	M			Y	0	0		0		P		Y			
63	0 30	m cl	10YR42 43						5	0	HR	15							
	30 50	mz l	10YR63 00	10YR66 00	F				0	0	HR	35		M					IMP FLINTS
64	0 24	mzcl	10YR42 00						6	0	HR	10							
	24 50	mzcl	10YR54 00						0	0	HR	15		M					IMP FLINTS
65	0 26	mzcl	10YR43 00						6	0	HR	10							
	26 60	mzcl	10YR54 00						0	0	HR	10		M					
	60 85	l	10YR54 00						0	0	HR	15		M					IMP FLINTS
66	0 30	mzcl	10YR42 00						11	0	HR	15							
	30 55	mzcl	10YR54 00						0	0	HR	25		M					IMP FLINTS
72	0 5	ol	25Y 31 00	10YR46 00	C			Y	0	0	HR	3							
	5 30	mzcl	10YR52 00	10YR56 00	C			Y	0	0	HR	10		M					
	30 45	mz l	25Y 53 00	10YR58 00	M			Y	0	0	HR	30		M					
	45 100	c	25Y 63 00	75YR68 00	M			Y	0	0		0		P		Y			
73	0 30	ol	25Y 31 00	10YR46 00	C			Y	0	0		0							
	30 50	mzcl	25Y 52 00	10YR68 00	M			Y	0	0		0		M					
	50 80	c	05Y 71 00	75YR68 00	M			Y	0	0		0		P		Y			
74	0 30	m l	10YR41 00	10YR46 00	C			Y	0	0		0							
	30 55	msl	10YR53 00	10YR56 00	C			Y	0	0		0		M					
	55 80	lm	25Y 53 00	10YR58 00	M			Y	0	0		0		M					
	80 120	scl	05Y 71 00	10YR78 00	M			Y	0	0		0		M					
75	0 30	mzcl	10YR42 00	10YR56 00	C			Y	2	1	HR	5							
	30 50	c	25Y 53 00	75YR58 00	M	00MN00	00	Y	0	0	HR	15		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	
76	0 30	mzcl	10YR42 00						4	0 HR	15							
	30 50	mzcl	10YR63 00						0	0 HR	30		M					IMP FLINTS
77	0 30	mzcl	10YR42 00						2	0 HR	8							
	30 60	mzcl	10YR44 54 10YR56 00	F					0	0 HR	20		M					
	60 65	gh	10YR56 00						0	0	0		P					IMP FLINTS
78	0 35	mzcl	10YR42 43						1	0 HR	5							
	35 65	mzcl	10YR44 54						0	0 HR	5		M					
	65 70	hzcl	10YR54 00 10YR56 00	C				S	0	0 HR	10		M					
	70 75	hzcl	10YR54 00 10YR56 00	C				S	0	0 HR	30		M					IMP FLINTS
79	0 30	mz l	10YR42 00						5	0 HR	12							
	30 60	mzcl	10YR44 54						0	0 HR	40		M					IMP FLINTS
85	0 33	h cl	25Y 41 00 10YR46 00	C				Y	0	0 HR	5							
	33 60	c	25Y 53 00 75YR58 00	M				Y	0	0 HR	30		P		Y			
86	0 30	mzcl	10YR42 00						0	0 HR	2							
	30 45	mzcl	10YR62 00 10YR66 00	C				Y	0	0	0		M					
	45 80	c	05Y 61 00 10YR58 00	M				Y	0	0	0		P		Y			
87	0 30	m l	10YR42 00						0	0 HR	2							
	30 55	mzcl	10YR53 00 10YR58 00	C				Y	0	0	0		M					
	55 65	c	25Y 53 00 10YR58 00	M				Y	0	0 HR	5		P		Y			
	65 100	c	05Y 61 00 75YR58 00	M			25YR48 00	Y	0	0	0		P		Y			
88	0 28	mzcl	10YR42 00						2	1 HR	10							
	28 45	c	05Y 71 00 75YR58 00	M				Y	0	0 HR	20		P		Y			
	45 60		25Y 53 00 75YR58 00	M			00MN00 00	Y	0	0 HR	25		P		Y			
89	0 30	mzcl	10YR42 00						6	0 HR	10							
	30 50	hzcl	25Y 52 00 10YR58 00	C				Y	0	0 HR	20		M					IMP FLINTS
90	0 30	mzcl	10YR42 43						0	0 HR	3							
	30 50	mzcl	10YR44 54						0	0 HR	3		M					
	50 60	h cl	10YR54 00 10YR56 00	C				S	0	0 HR	5		M					
	60 70	hzcl	10YR54 00 10YR56 00	C				S	0	0 HR	25		M					IMP FLINTS
91	0 25	mzcl	10YR42 00						2	0 HR	5							
	25 60	mzcl	10YR44 54						0	0 HR	5		M					IMP FLINTS
92	0 30	mzcl	10YR42 00						3	0 HR	12							
	30 45	mzcl	10YR54 00						0	0 HR	25		M					
	45 70	mzcl	10YR56 00						0	0 HR	40		P					IMP FLINTS
94	0 33	hzcl	25Y 42 00						0	0	0							
	33 65	c	25Y 63 61 75YR68 00	M				Y	0	0	0		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	
95	0 33	hzcl	10YR42 52 10YR56 00 F						0	0		0							
	33 70	c	25Y 63 61 75YR68 00 M					Y	0	0		0		P			Y		
96	0 30	hzcl	10YR42 00						0	0	CH	2							
	30 45	c	25Y 42 00 10YR58 00 M					Y	0	0		0		M					
	45 80	c	05Y 61 00 75YR68 00 M					Y	0	0		0		P			Y		
97	0 30	mz l	10YR42 00 10YR56 00 F						0	0	HR	3							
	30 55	mz l	10YR63 00 10YR58 00 M					Y	0	0		0		M					
	55 80	hzcl	25Y 62 00 10YR58 00 M					Y	0	0		0		M					
	80 120	c	25Y 62 00 10YR58 00 M					Y	0	0		0		P			Y		
98	0 30	mzcl	10YR42 00 10YR56 00 F						0	0	HR	2							
	30 45	mzcl	10YR63 00 10YR56 00 C					Y	0	0		0		M					
	45 120	hzcl	25Y 63 61 10YR58 00 M					Y	0	0		0		M					
99	0 28	mzcl	10YR42 00						4	0	HR	5							
	28 50	mzcl	25Y 52 00 75YR58 00 C					Y	0	0	HR	10		M					
	50 60	h cl	25Y 52 00 75YR58 00 C					Y	0	0	HR	30		M					IMP FLINTS
100	0 30	mzcl	10YR42 00 75YR58 00 F						6	0	HR	12							
	30 60	c	25Y 63 00 10YR88 00 M					Y	0	0	HR	5		P	Y		Y		
101	0 28	mzcl	10YR43 00						2	0	HR	3							
	28 55	mzcl	10YR54 00						0	0	HR	3		M					
	55 70	hzcl	10YR54 00 10YR58 00 C				00MN00 00	S	0	0	HR	10		M					IMP FLINTS
102	0 30	mzcl	10YR42 00						1	0	HR	3							
	30 50	m cl	10YR54 00						0	0	HR	5		M					
	50 65	hzcl	10YR54 00						0	0	HR	15		M					
	65 85	hzcl	10YR54 00						0	0	HR	25		M					IMP FLINTS
103	0 29	hzcl	10YR42 00 10YR56 00 F						0	0		0							
	29 41	c	10YR52 53 10YR58 61 C					Y	0	0		0		P			Y		
	41 70	c	10YR73 64 10YR78 71 M					Y	0	0	HR	10		P			Y		
104	0 29	mzcl	10YR42 00 10YR56 00 F						0	0	T	0							
	29 60	c	10YR62 64 10YR78 71 M					Y	0	0	HR	10		P			Y		
105	0 30	mzcl	10YR42 00						0	0	HR	3							
	30 40	hzcl	25Y 71 00 10YR68 00 C					Y	0	0	HR	5		M					
	40 65	c	25Y 62 00 75YR68 00 M					Y	0	0	HR	30		P			Y		
	65 80	c	25Y 62 00 75YR68 00 M				00MN00 00	Y	0	0	HR	35		P			Y		
107	0 30	mzcl	10YR42 00						4	0	HR	5							
	30 60	c	25Y 62 00 10YR58 00 M					Y	0	0	HR	5		P	Y		Y		
108	0 28	mzcl	10YR42 00						4	0	HR	6							
	28 40	mzcl	10YR52 00						0	0	HR	30		M					IMP FLINTS

SAMPLE	DEPTH	TEXTURE	COLOUR	MOTTLES COL	ABUN	CONT	PED COL	GLEY	STONES 2	6	LITH	TOT	STRUCT/ CONSIST	SUBS STR	POR	IMP	SPL	CALC	
109	0 28	mzcl	10YR42 00						4	0	HR	6							
	28 40	hzcl	25Y 62 00						0	0	HR	20		M					IMP FLINTS
110	0 28	mzcl	10YR43 00						2	0	HR	3							
	28 48	mzcl	10YR54 00						0	0	HR	3		M					
	48 58	hzcl	10YR54 00	10YR58 00	C		00MN00 00	S	0	0	HR	5		M					
	58 65	hzcl	10YR54 00	10YR58 00	C		00MN00 00	S	0	0	HR	20		M					IMP FLINTS
111	0 30	mzcl	10YR42 00						2	0	HR	3							
	30 48	mzcl	10YR54 00						0	0	HR	10		M					
	48 65	hzcl	10YR53 00	10YR58 00	C		00MN00 00	Y	0	0	HR	20		M					IMP FLINTS
115	0 25	c	25Y 41 00	10YR58 00	C			Y	0	0		0							
	25 55	c	05Y 61 00	75YR58 00	M			Y	0	0		0		P			Y		
	55 60	c	05Y 71 00	75YR58 00	M			Y	0	0	HR	20		P			Y		
116	0 28	m cl	10YR42 00						2	0	HR	3							
	28 48	mzcl	25Y 64 00	10YR58 00	C			Y	0	0	HR	3		M					
	48 65	h cl	10YR64 00	75YR58 00	M		00MN00 00	Y	0	0	HR	10		M					
	65 75	hzcl	10YR64 00	75YR58 00	M		00MN00 00	Y	0	0	HR	25		M					IMP FLINTS
117	0 30	m cl	10YR42 00						2	0	HR	3							
	30 50	mzcl	10YR53 00	10YR58 00	C			Y	0	0	HR	5		M					
	50 60	mzcl	10YR53 00	10YR58 00	C			Y	0	0	HR	20		M					IMP FLINTS
122	0 25	hcl	10YR42 00	10YR56 00	C			Y	0	0		0							
	25 35		10YR53 00	10YR56 00	C			Y	0	0		0		M					
	35 60	c	05Y 61 00	10YR58 00	M			Y	0	0		0		P			Y		
127	0 25	m cl	10YR42 00						2	0	HR	3							
	25 35	cl	10YR42 00	75YR58 00	C			Y	0	0	HR	3		M					
	35 45	mzcl	10YR52 00	10YR58 00	C			Y	0	0	HR	3		M					
	45 60	c	10YR62 00	75YR58 00	M			Y	0	0	HR	10		P	Y		Y		