A1

Isle of Thanet Local Plan
Site 10 Pysons Road, Broadstairs
Agricultural Land Classification, Summary Report
September 1994

AGRICULTURAL LAND CLASSIFICATION REPORT

ISLE OF THANET LOCAL PLAN
SITE 10 PYSONS ROAD, BROADSTAIRS

1 Summary

1 1 ADAS was commissioned by MAFF's Land Use Planning Unit to provide information on land quality for five sites in the Thanet district of Kent The work forms part of MAFF s statutory input to the preparation of the Isle of Thanet Local Plan

1 2 Site 10 comprises approximately 37 hectares of land to the east of Pysons Road and to the south of Bromstone Road in Broadstairs Kent An Agricultural Land Classification (ALC) survey was carried out during September 1994 The survey was undertaken at a detailed level of approximately one boring per hectare A total of 35 borings and two 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 3 The work was carried out by members of the Resource Planning Team in the Guildford Statutory Group of ADAS

1 4 At the time of the survey the land use was a mixture of cereal stubble and cauliflowers The Urban mapped comprises a house garden and gravelly track The Non-agricultural shown consists of a footpath

1 5 The distribution of grades and subgrades is shown on the attached ALC map and the areas 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

Table 1 Distribution of Grades and Subgrades

Grade	Area (ha)	% of Site	% of Agricultural Land
2	19 3	51 6	53 3
3a	16 9	45 2	46 7
Urban	0 7	1 9	100 0 (36 2 ha)
Non agricultural	0 5	1 3	
Total area of site	37 4	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 agricultural land surveyed has been classified as a mixture of very good quality Grade 2 and good quality Subgrade 3a In the north of the site Grade 2 land is primarily restricted by a minor soil droughtiness limitation Profiles comprise calcareous clay loam topsoils and subsoils occasionally becoming heavier with depth Profiles are very slightly stony or stoneless throughout The interaction between these soil textures and profile stone contents with the regionally dry climate which prevails at this locality acts to slightly restrict the amount of profile available water for uptake by crops In the south of the site profiles tend to have similar subsoils but heavier topsoils Consequently this land is also subject to slight soil workability limitations Subgrade 3a land is principally limited by moderate soil droughtiness limitations though part of this mapping unit is equally restricted by moderate soil wetness limitations Profiles comprise calcareous clays The interaction between these soil textures and poorly structured lower subsoils with the regionally dry climatic conditions at this site acts to impart a restriction on the profile available water for uptake by crop roots In addition impeded drainage resulting from slowly permeable layers causes soil wetness restrictions

2 Climate

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

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

2 3 A detailed assessment of the prevailing climate was made by interpolation from a 5km gridpoint dataset (Met Office 1989) The details are given in the table below and these show that there is no overall climatic limitation affecting the site However in a regional context the crop adjusted soil moisture deficits are very high at this locality and the field capacity days are very low These climatic factors respectively increase the likelihood of soil droughtiness limitations and decrease that of soil wetness restrictions

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

3 Relief

3 1 The land on the site is gently undulating The highest land on the site occurs as a broad shallow ridge across the centre of the site in the south east corner These areas lie at approximately 50m AOD Elsewhere on the site the land lies at approximately 45 48m AOD

Table 2 Climatic Interpolations

Grid Reference	TR383673	TR380669
Altitude (m)	50	45
Accumulated Temperature (degree days Jan June)	1431	1437
Average Annual Rainfall (mm)	610	612
Field Capacity (days)	122	122
Moisture Deficit Wheat (mm)	126	126
Moisture Deficit Potatoes (mm)	123	124
Overall Climatic Grade	1	1

4 Geology and Soil

4 1 The relevant geological sheet (BGS 1980) shows the solid geology of the site to be predominantly Thanet Beds Upper Chalk is shown adjacent to part of Newlands Lane and south of the School Drift deposits of old and young head brickearth are shown across the north of the site and also in the south west and south east corners of the site

4 2 The published Soil Survey map (SSEW 1980) shows argillic brown earths across the majority of the site These soils are described as silty soils in brickearth associated with loamy soils in Thanet and Woolwich Beds free drainage locally with slight impedance (SSEW 1980) The southern third of the site is shown as brown calcareous earths which are described as variably chalky and flinty soils in head associated with shallow soils over chalk free drainage (SSEW 1980)

4 3 Detailed field examination found deep loamy and clayey soils which range from being well to imperfectly drained

5 Agricultural Land Classification

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

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

Grade 2

5 3 Just over half of the land surveyed has been classified as Grade 2 very good quality This land which generally occurs on the slightly lower lying parts of the site is limited by minor soil droughtiness restrictions in the north of the site and equally so by slight soil wetness and workability limitations in the south of the site

5 4 In the north of the site topsoils typically comprise calcareous medium clay loams These overlie calcareous moderately structured heavy clay loam upper and lower subsoils which occasionally pass into clay at depth These profiles are very slightly stony or stoneless throughout typically containing less than 2% total flints

by volume and are well drained (Wetness Class I) The interaction between these soil textures profile stone contents and subsoil structural conditions with the very dry prevailing local climate results in a slight restriction in the amount of soil profile water available for uptake by crop roots This minor limitation may cause plants to suffer drought stress for all or part of the growing season and crop yields may be slightly depressed as a result

5 5 Land in the vicinity of Orchard House is equally restricted by minor soil workability and occasionally soil wetness restrictions Profiles typically comprise calcareous heavy clay loam topsoils over similarly textured well drained subsoils The heavier topsoil texture acts to slightly restrict the flexibility of cropping stocking and cultivations Profiles within this mapping unit may also pass into clay lower subsoils at approximately 50-70 cm depth From Pit 1 which represents such profiles it can be seen that these clays are slowly permeable and act to slightly impair drainage Consequently Wetness Class II is appropriate This minor soil wetness may slightly inhibit crop growth and thus lower crop yield

Subgrade 3a

5 6 Just under half of the agricultural land surveyed has been classified as good quality This land which generally occurs on the slightly higher parts of the site is primarily restricted by moderate soil droughtiness limitations though sometimes in conjunction with moderate soil wetness and workability limitations For land limited by soil droughtiness topsoils typically comprise calcareous heavy clay loams or clays over similarly textured upper subsoils which are gleyed These generally pass into poorly structured clay lower subsoils at about 45 55 cm These lower subsoils are slowly permeable and act to slightly impede drainage Consequently these profiles are assigned to Wetness Class II However the overriding limitation is that of soil droughtiness Profiles are generally stoneless to slightly stony throughout containing 0 5% total flints by volume Occasionally profiles include horizons which are chalky containing approximately 10 25 % chalk fragments by volume In comparison to land classified as Grade 2 crop roots are able to extract less moisture from these heavier textured soils (especially where they are poorly structured) and consequently have less profile available water for uptake by crop roots Given the very dry prevailing climate the restricted available water for crops in such profiles will tend to reduce the level and consistency of crop yields and may impart a moderate risk of drought stress for those crops which are grown

5 7 Areas of land within this mapping unit are also restricted by soil wetness and workability limitations These occur where the slowly permeable clay horizons directly underlay the topsoils causing profiles to be imperfectly drained (Wetness

Class III) Such profiles are represented by Pit 2 The interaction between the heavy topsoil textures and these drainage characteristics with the very dry prevailing climatic conditions act to impart moderate restrictions on the flexibility of cropping stocking and cultivations

ADAS Ref 2012/216/94
MAFF Ref EL20/248

Resource Planning Team
Guildford Statutory Group
ADAS Reading

SOURCES OF REFERENCE

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

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

Meteorological Office (1989) Climatological Data for Agricultural Land Classification

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

APPENDIX I

DESCRIPTION OF THE GRADES AND SUBGRADES

Grade 1 Excellent Quality Agricultural Land

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

Grade 2 Very Good Quality Agricultural Land

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

Grade 3 Good to Moderate Quality Land

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

Subgrade 3a Good Quality Agricultural Land

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

Subgrade 3b Moderate Quality Agricultural Land

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

Grade 4 Poor Quality Agricultural Land

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

Grade 5 Very Poor Quality Agricultural Land

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

Urban

Built-up or 'hard' uses with relatively little potential for a return to agriculture including housing industry commerce education transport religous buildings cemetries 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

SAMPLE NO	GRID REF	USE	ASPECT	GRDNT	GLEY	SPL	-WETNESS- CLASS	GRADE	-WHEAT- AP	MB	-POTS- AP	MB	DRT	M REL FLOOD	EROSN EXP	FROST DIST	CHEM LIMIT	ALC	COMMENTS
1P	TR38006700	STB	S	01	050	065	2	2	137	11	117	-7	2				WD	2	P100Dr=2to120
2	TR38006730	VEG					1	2	135	9	117	-7	2				WD	2	
2P	TR38176708	STB			035	035	3	3A	128	2	105	-19	3A				WD	3A	P65Dr=3ato120
3	TR38106730	VEG					1	1	155	29	117	-7	2				DR	2	
4	TR38206730	VEG					1	1	155	29	117	-7	2				DR	2	
5	TR38306730	PLO			080	080	1	1	139	13	115	-9	2				DR	2	
6	TR37706720	VEG			032	050	3	3A	99	-27	111	-13	3B				WD	3A	Dr=3a to 120
7	TR37906720	VEG			048	048	2	2	99	-27	111	-13	3B				DR	3A	Dr=3a to 120
8	TR38006720	VEG					1	1	155	29	117	-7	2				DR	2	
9	TR38106720	STB			055	055	2	2	97	-29	110	-14	3B				DR	3A	Dr=3a to 120
10	TR38206720	VEG					1	1	93	-33	99	-25	3B				DR	2	Imp60 2to120
11	TR38306720	PLO					1	2	155	29	117	-7	2				WD	2	Wk/Dr limting
12	TR38406720	VEG			060	060	2	2	132	6	111	-13	3A				DR	3A	
13	TR37606710	VEG			060	060	2	2	107	-19	114	-10	3A				WD	2	MB pot = -10
15	TR37806710	VEG			065	065	2	2	105	-21	112	-12	3B				DR	3A	Dr=3a to 120
17	TR38006710	VEG			045	045	2	2	130	4	107	-17	3A				DR	3A	
18	TR38106710	VEG			030	030	3	3A	77	-49	77	-47	3B				DR	3B	Dr=3b to 120
19	TR38206710	STB			030	040	3	3A	93	-33	105	-19	3B				WD	3A	Dr=3a to 120
20	TR38306710	STB			080	080	2	2	134	8	114	-10	2				WD	2	MB pots = -10
21	TR38406710	VEG			028	038	3	3A	92	-34	104	-20	3B				WD	3A	Dr=3a/b to120
22	TR37606700	VEG					1	1	120	-6	120	-4	3A				DR	2	Imp85 Q 2 dr
23	TR37706700	VEG					1	1	113	-13	115	-9	3A				DR	2	Imp80 Q 2 dr
24	TR37806700	STB	S	01			1	2	110	-16	115	-9	3A				WD	2	Imp80 Q 2 dr
25	TR37906700	STB	S	01	085	085	1	1	143	17	116	-8	2				DR	2	
26	TR38006700	STB	S	01	070	070	2	2	136	10	116	-8	2				WD	2	
27	TR38106700	STB	S	01			1	2	153	27	116	-8	2				WD	2	
28	TR38206700	STB	S	01			1	2	124	-2	116	-8	3A				WD	2	Imp90 v dry
29	TR38306700	STB	S	01	095	095	1	2	144	18	119	-5	2				WD	2	
30	TR38406700	VEG					1	2	101	-25	113	-11	3B				DR	3A	Dr=3a to 120
31	TR37806690	STB	S	01			1	2	134	8	116	-8	2				WD	2	
32	TR37906690	STB	S	01			1	2	114	-12	111	-13	3A				DR	3A	Imp68 chalk
33	TR38006690	STB	S	01			1	2	109	-17	116	-8	3A				WD	2	Imp80 chalky
34	TR38106690	VEG			027		2	2	138	12	112	-12	3A				DR	3A	Chalky t/s
35	TR38206690	VEG					1	2	154	28	116	-8	2				WD	2	Wk/Dr limting
36	TR38306690	VEG					1	2	149	23	117	-7	2				WD	2	Wk/Dr limting
37	TR38206680	VEG	N	01	055	055	2	2	134	8	112	12	3A				DR	3A	Pots limit Ap
38	TR38306680	VEG			045	045	2	2	132	6	109	15	3A				DR	3A	Pots limit Ap

SOIL PIT DESCRIPTION

Site Name ISLE OF THANETLP SITE 10 Pit Number 1P

Grid Reference TR38006700 Average Annual Rainfall 612 mm
Accumulated Temperature 1437 degree days
Field Capacity Level 122 days
Land Use
Slope and Aspect 01 degrees S

HORIZON	TEXTURE	COLOUR	STONES	2	TOT STONE	LITH	MOTTLES	STRUCTURE	CONSIST	SUBSTRUCTURE	CALC
0 30	HCL	10YR32 00	0		2	HR					Y
30- 50	HZCL	10YR53 00	0		1	CH		MDCSAB	FR	M	Y
50- 65	C	10YR53 00	0		2	HR	C	MDCSAB	FR	M	Y
65-120	C	10YR53 00	0		0		M	STCAB	VM	P	Y

Wetness Grade 2 Wetness Class II
Gleying 050 cm
SPL 065 cm

Drought Grade 2 APW 137mm MBW 11 mm
APP 117mm MBP -7 mm

FINAL ALC GRADE 2
MAIN LIMITATION Soil Wetness/Droughtiness

SOIL PIT DESCRIPTION

Site Name ISLE OF THANETLP SITE 10 Pit Number 2P

Grid Reference TR38176708 Average Annual Rainfall 612 mm
Accumulated Temperature 1437 degree days
Field Capacity Level 122 days
Land Use
Slope and Aspect degrees

HORIZON	TEXTURE	COLOUR	STONES >2	TOT STONE	LITH	MOTTLES	STRUCTURE	CONSIST	SUBSTRUCTURE	CALC
0- 25	HCL	10YR42 00	0	2	HR					Y
25- 35	C	10YR53 00	0	2	HR		MCSAB	FR	M	Y
35- 48	C	10YR53 52	0	0		M	MCAB	VM	P	Y
48-120	C	10YR52 53	0	0		M	SCAB	VM	P	Y

Wetness Grade 3A Wetness Class III
Gleying 035 cm
SPL 035 cm

Drought Grade 3A APW 128mm MBW 2 mm
APP 105mm MBP -19 mm

FINAL ALC GRADE 3A
MAIN LIMITATION Soil Wetness/Droughtiness

AMPLE	DEPTH	TEXTURE	COLOUR	MOTTLES COL	MOTTLES ABUN	MOTTLES CONT	PED COL	GLEY	STONES >2	STONES 6	LITH	TOT	STRUCT/ CONSIST	SUBS STR	POR	IMP	SPL	CALC	
1P	0 30	hcl	10YR32 00						0	0	HR	2						Y	
	30 50	hzcl	10YR53 00						0	0	CH	1	MDCSAB	FR M	Y			Y	
	50-65	c	10YR53 00	10YR56 00	C			Y	0	0	HR	2	MDCSAB	FR M	Y			Y	
	65-120	c	10YR53 00	10YR68 00	M			Y	0	0		0	STCAB	VM P	Y		Y	Y	
2	0-30	hcl	10YR42 00						0	0	HR	2						Y	
	30-100	mcl	10YR54 53						0	0		0		M				Y	
2P	0 25	hcl	10YR42 00						0	0	HR	2						Y	
	25-35	c	10YR53 00						0	0	HR	2	MCSAB	FR M	Y			Y	
	35 48	c	10YR53 52	10YR68 00	M			Y	0	0		0	MCAB	VM P	Y		Y	Y	
	48-120	c	10YR52 53	10YR68 00	M			Y	0	0		0	SCAB	VM P	Y		Y	Y	
3	0-30	mcl	10YR42 00						0	0	HR	1						Y	
	30 80	mcl	10YR54 00						0	0		0		M				Y	
	80-120	hcl	10YR54 00						0	0		0		M				Y	
4	0-30	mcl	10YR42 00						0	0	HR	2						Y	
	30-75	mcl	10YR54 00						0	0		0		M				Y	
	75 120	hcl	10YR54 53						0	0		0		M				Y	
5	0-32	mcl	10YR42 00						0	0	HR	4						Y	
	32-60	hcl	75YR54 00						0	0	HR	2		M				Y	
	60-70	hcl	10YR54 00						0	0		0		M				Y	
	70 80	c	25Y 53 00						0	0		0		M				Y	
	80-120	c	25Y 63 00	000C00 00	M			Y	0	0		0		P			Y	Y	
6	0 32	hcl	10YR42 00						0	0	HR	2						Y	
	32 50	c	10YR53 00	000C00 00	C			Y	0	0		0		M				Y	
	50 70	c	25Y 63 00	000C00 00	M			Y	0	0		0		P			Y	Y	
7	0-32	hcl	10YR42 00						0	0	HR	2						Y	
	32-48	hcl	10YR54 00						0	0		0		M				Y	
	48 70	c	25Y 52 00	000C00 00	M			Y	0	0		0		P			Y	Y	
8	0-30	mcl	10YR42 00						0	0	HR	2						Y	
	30-120	hcl	10YR53 00						0	0		0		M				Y	
9	0-30	c	10YR32 00						0	0	HR	2						Y	
	30-55	c	25Y 53 00						0	0		0		M				Y	
	55-70	c	25Y 63 00	000C00 00	M			Y	0	0		0		P			Y	Y	
10	0 25	mcl	10YR42 00						0	0	HR	2						Y	
	25-60	hcl	10YR53 00						0	0	HR	2		M				Y	Imp 60 flint
11	0 30	hcl	10YR32 00						0	0	HR	2						Y	
	30 80	hcl	10YR54 00						0	0		0		M				Y	
	80-120	hcl	75YR54 00						0	0		0		M				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	
12	0-35	c	10YR32 00						0	0	HR	2						Y	
	35-60	c	25Y 53 00						0	0		0		M				Y	
	60-120	c	25Y 63 00	000C00	00	M		Y	0	0		0		P			Y	Y	
13	0-32	hcl	10YR42 00						0	0	HR	2						Y	
	32-40	c	10YR54 00						0	0		0		M				Y	
	40-60	c	10YR54 00	000C00	00	C		S	0	0		0		M				Y	Sl gleyed
	60-80	c	10YR53 00	000C00	00	M		Y	0	0		0		P			Y	Y	
15	0-32	c	10YR42 00						0	0	HR	2						Y	
	32-55	hcl	10YR53 00						0	0	CH	5		M				Y	
	55-65	c	10YR53 00						0	0		0		M				Y	
	65-80	c	25Y 63 00	000C00	00	M		Y	0	0		0		P			Y	Y	
17	0-30	c	10YR42 00						0	0	HR	2						Y	
	30-45	c	10YR53 00						0	0		0		M				Y	
	45-120	c	25Y 63 00	000C00	00	M		Y	0	0		0		P			Y	Y	
18	0-30	c	10YR42 00						0	0		0						Y	
	30-50	c	25Y 62 00	000C00	00	M		Y	0	0		0		P			Y	Y	
19	0-30	c	10YR32 00						0	0	HR	2						Y	
	30-40	c	25Y 63 00	000C00	00	C		Y	0	0		0		M				Y	
	40-70	c	25Y 63 00	000C00	00	M		Y	0	0		0		P			Y	Y	
20	0-30	c	10YR32 00						0	0	HR	2						Y	
	30-50	c	25Y 53 00						0	0		0		M				Y	
	50-80	c	10YR54 00	000C00	00	C		S	0	0		0		M				Y	Sl gleyed
	80 120	c	25Y 63 00	000C00	00	M		Y	0	0		0		P			Y	Y	
21	0 28	c	10YR32 00						0	0	HR	2						Y	
	28 38	c	25Y 63 00	000C00	00	C		Y	0	0		0		M				Y	
	38-70	c	25Y 63 00	000C00	00	M		Y	0	0		0		P			Y	Y	
22	0-32	mzcl	10YR43 00						0	0	HR	2						Y	
	32-70	hcl	10YR54 00						0	0		0		M				Y	
	70-85	c	75YR44 00						0	0		0		M				Y	Imp 85 flint
23	0-28	mcl	10YR43 00						0	0	HR	2						Y	
	28-70	hcl	10YR54 00						0	0	HR	2		M				Y	
	70-80	hcl	75YR44 00						0	0	HR	2		M				Y	Imp 80 flint
24	0-27	hcl	10YR42 00						0	0	HR	1						Y	
	27-45	hcl	10YR54 44						0	0	HR	1		M				Y	
	45-65	hcl	10YR54 00						0	0	HR	5		M				Y	
	65-80	c	75YR44 00						0	0	HR	5		M				Y	Imp 80 flint
25	0-30	mcl	10YR42 00						0	0	HR	2						Y	
	30-55	hcl	10YR54 00						0	0	CH	1		M				Y	
	55-85	hcl	10YR54 00						0	0	HR	5		M				Y	
	85-120	c	10YR53 00	10YR56	52	M		Y	0	0		0		P			Y	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	
26	0-27	hcl	10YR42 00						0	0	HR	2						Y	
	27-45	hcl	10YR54 00						0	0	CH	3		M				Y	
	45-55	hcl	10YR54 00						0	0		0		M				Y	
	55-70	c	10YR56 00	10YR68 00	C			S	0	0		0		M				Y	Sl gleyed
	70 120	c	10YR53 00	10YR58 00	M			Y	0	0		0		P			Y	Y	
27	0 25	hcl	10YR42 00						0	0	HR	2						Y	
	25-37	hcl	10YR42 43						0	0	CH	2		M				Y	
	37-60	hcl	10YR54 00						0	0	CH	10		M				Y	
	60-120	hzcl	10YR54 00						0	0	CH	1		M				Y	
28	0-27	hcl	10YR42 00						0	0	HR	2						Y	
	27-50	hcl	10YR54 00						0	0	CH	1		M				Y	
	50-90	hcl	10YR54 56						0	0		0		M				Y	
29	0-32	hcl	10YR42 00						0	0	HR	2						Y	
	32-47	hcl	10YR43 44						0	0	HR	1		M				Y	
	47-75	hzcl	10YR56 00	75YR46 00	F		00MN00 00		0	0		0		M				Y	
	75-95	c	10YR54 00	10YR68 00	M			S	0	0		0		M				Y	Sl gleyed
	95-120	c	10YR62 00	10YR68 00	M			Y	0	0		0		P			Y	Y	
30	0-32	c	10YR42 00						0	0	HR	2						Y	
	32-75	c	10YR54 00						0	0	HR	2		M				Y	
31	0-27	hcl	10YR42 00						0	0	HR	2						Y	
	27-55	hcl	75YR44 00						0	0		0		M				Y	
	55-100	hcl	10YR56 00						0	0		0		M				Y	
32	0-27	hcl	10YR42 00						0	0	HR	1						Y	
	27-45	hcl	10YR54 00						0	0	HR	1		M				Y	
	45-60	c	10YR56 00						0	0		0		M				Y	
	60-90	ch	10YR81 00						0	0		0		P				Y	Imp 68 chalk
33	0-27	hcl	10YR42 00						0	0	HR	1						Y	
	27-50	hcl	10YR54 00						0	0		0		M				Y	
	50-60	c	10YR56 00						0	0	HR	3		M				Y	
	60-75	c	25Y 54 00						0	0		0		M				Y	
	75-80	hcl	10YR64 00						0	0	CH	25		M				Y	Imp 80 chalky
34	0-27	c	25Y 53 00						0	0	CH	15						Y	
	27 60	hcl	10YR52 00	10YR56 00	C			Y	0	0		0		M				Y	
	60-120	c	10YR44 54						0	0		0		M				Y	
35	0 30	hcl	10YR42 00						0	0	HR	3						Y	
	30-40	hcl	10YR54 00						0	0	CH	4		M				Y	
	40-70	hcl	10YR54 00						0	0		0		M				Y	
	70-120	hcl	10YR56 00						0	0		0		M				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
36	0-27	hcl	10YR42 00						0	0	HR	1						Y
	27-40	hcl	10YR54 00						0	0	CH	5		M				Y
	40-75	hcl	10YR56 00						0	0		0		M				Y
	75-95	hzcl	10YR56 00						0	0		0		M				Y
	95-120	c	10YR56 00						0	0	HR	4		M				Y
37	0-27	hcl	10YR42 00						0	0	HR	2						Y
	27-55	c	10YR54 00						0	0		0		M				Y
	55-120	c	10YR53 00	10YR56 52	M			Y	0	0		0		P			Y	Y
38	0-30	hcl	10YR42 00						0	0	HR	2						Y
	30-45	hcl	10YR54 00						0	0		0		M				Y
	45-65	c	10YR53 00	10YR56 00	M			Y	0	0		0		P			Y	Y
	65-120	c	10YR53 00	10YR58 62	M			Y	0	0		0		P			Y	Y