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Wokingham District Local Plan
Site WT 01, 03, & 08, WK 18, 34
Chapel Green, Berkshire
Agricultural Land Classification
January 1996

Resource Planning Team
Guildford Statutory Group
ADAS Reading

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AGRICULTURAL LAND CLASSIFICATION REPORT

WOKINGHAM DISTRICT LOCAL PLAN
SITES WT 01, 03 & 08, WK 18 & 34 -
CHAPEL GREEN, BERKSHIRE.

Introduction

1. This report presents the findings of a semi-detailed Agricultural Land Classification (ALC) survey of approximately 114 hectares of land at Chapel Green, to the immediate south and east of Wokingham, in Berkshire. The survey was carried out during January 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 Wokingham District Local Plan. 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 majority of the agricultural land on this site was under permanent grassland, including a number of pheasant enclosures, and set-aside land. However, to the south west of Waterloo Crossing one field was under a cereal crop. The areas shown as 'Other Land' mainly include farm buildings, private houses, roads and trackways, though a small copse occurs to south of the site, in front of Ludgrove School. To the east of this a large reservoir has been excavated for flood alleviation purposes.

Summary

5. The findings of the survey are shown on the enclosed ALC map. The map has been drawn at a scale of 1:15,000. 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 over leaf.

7. The fieldwork was conducted at an average density of approximately 1 boring every 2 hectares. A total of 65 borings and five soil pits were described.

Table 1: Area of grades and other land

Grade/Other land	Area (hectares)	% Agricultural area	% Site area
2	11.4	11.1	10.0
3a	28.1	27.3	24.6
3b	62.1	60.3	54.4
4	1.3	1.3	1.1
Other Land	11.2	N/A	9.9
Total agricultural land	102.9	100.0	N/A
Total site area	114.1	N/A	100.0

8. The majority of the agricultural land on this site has been classified as Subgrade 3b (moderate quality) with Subgrade 3a or Grade 2 (good or very good quality respectively) being assigned to much of the remainder of the land. The key limitation here is either soil wetness or soil droughtiness. A small area of Grade 4 has also been mapped adjacent to the railway line, in the north west, where the land is believed to have been disturbed.

9. There are three main soil types on this site. In the east and the west the land is principally limited by soil wetness. Soils generally comprise medium textured topsoils over slowly permeable clay loams and clays which restrict drainage through the profile causing seasonal waterlogging. As a result crop growth and yields may be restricted as wet soils can impede seed germination and root development. The combination of medium topsoils and wet soils may also result in structural damage through trafficking by grazing livestock or agricultural machinery. Such land has therefore been mapped as a mixture of Grade 2, Subgrade 3a and Subgrade 3b depending upon the degree of drainage impedance.

10. Towards the centre of the site, north of Ludgrove School, the soils are distinctly lighter in texture being sandy and slightly to moderately stony throughout. In this locally dry climatic regime the combination of light, well drained soils and the slight to moderate stone content act to reduce the amount of profile available water for crops such that soil droughtiness limits the land quality. On the higher ground, where the topsoils are generally medium sandy loams, the land has been mapped as Subgrade 3a. The lower slopes, however, are more sandy and have thus been classified as Subgrade 3b.

11. Between Starlane Crossing and Waterloo Crossing the profiles are more gravelly and/or more variable. Again the combination of the locally dry climatic regime, light soils and high flint content act to reduce the amount of profile available water for crops such that the land is limited by soil droughtiness. In the valley bottom, where stony soils overlie gravel at depth, the land has been classified as Subgrade 3b. On the slightly higher land the profiles are less flinty and the land is therefore assigned to Grade 2.

Factors Influencing ALC Grade

Climate

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

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

Table 2: Climatic and altitude data

Factor	Units	Values	Values	Values
Grid reference	N/A	SU 811 676	SU 819 678	SU 832 687
Altitude	m, AOD	55	60	70
Accumulated Temperature	day°C	1460	1455	1443
Average Annual Rainfall	mm	653	658	669
Field Capacity Days	days	137	138	140
Moisture Deficit, Wheat	mm	114	113	111
Moisture Deficit, Potatoes	mm	108	107	105

14. 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.

15. 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.

16. The combination of rainfall and temperature at this site mean that there is no overall climatic limitation (Climate Grade 1). However, climatic factors do interact with soil properties to influence soil wetness and droughtiness limitations. At this locality the slightly high crop adjusted soil moisture deficits may increase the likelihood of soil droughtiness while the correspondingly low average annual rainfall may reduce the likelihood of soil wetness.

17. Local climatic factors such as exposure or frost risk are not believed to affect the site.

Site

18. The site is gently undulating situated between 53-73m AOD. Nowhere on this site do either altitude or gradient adversely affect agricultural land use.

Geology and soils

19. The relevant geological sheets (BGS, 1971 & 1981) map the majority of the site as London Clay with a narrow strip of alluvium along the stream. To the west of the site Bagshot Beds occur on the higher land, capped by plateau gravel. Plateau gravel also occurs to the south of Woods Farm while a small area of flood plain gravel is mapped to the west of Waterloo Crossing.

20. The most recently published soil information for the site (SSEW, 1983) shows the Wickham 3 soil association to be mapped across the east of the site, with the Swanwick association to the west. The former are described as 'slowly permeable, seasonally waterlogged fine loamy over clayey and coarse loamy over clayey soils, and similar more permeable soils with slight waterlogging. Some deep coarse loamy soils affected by groundwater. Landslips with irregular terrain locally.' (SSEW, 1983). The latter are said to be 'deep permeable coarse loamy and sandy soils, some with peaty surface horizons, affected by groundwater.' (SSEW, 1983).

21. Detailed field survey broadly confirms the existence of such soils.

Agricultural Land Classification

22. The details of the classification of the site are shown on the attached ALC map and the area statistics of each grade are given in Table 1, page 2.

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

Grade 2

24. Grade 2, very good quality land, has been mapped on the slightly higher ground to the east of Wood's Farm and is typified by soil inspection pit 3. The soil profiles are generally very slightly to slightly stony throughout (1% > 2&6 cm, 2-10% total flint) comprising medium sandy loam or sandy clay loam topsoils over similar, gleyed upper subsoils. The sandy clay loam and clay lower subsoils are slowly permeable from between 50-95cm depth thus restricting drainage through the profile. As a result seed germination and root development may be very slightly restricted. This land has been assigned to Wetness Class II or III, Grade 2 as the light topsoil textures are less susceptible to workability restrictions. In this locally dry climatic regime the combination of soil textures, structures and stone content also acts to slightly reduce profiles available water for crops thus partially inhibiting crop growth and yields. This land is therefore subject to both a minor soil wetness and soil droughtiness limitation.

Subgrade 3a

25. To the centre of the site, also on the higher ground, the soil profiles are very slightly to moderately flinty comprising 0-6% > 2cm in the topsoils & 2-20% total stone v/v

throughout the rest of the profile. The soil textures are much lighter here, however, comprising medium sandy loam topsoils over a mixture of sandy loam, loamy sand and sand subsoils. Medium sand more commonly occurs but occasional horizons of fine or coarse sand were also noted. In this locally dry climatic regime the combination of light soil textures and stone content deplete the amount of profile available water for plants resulting in a significant soil droughtiness limitation. This land has therefore been classified as Subgrade 3a.

26. On the higher ground to the extreme east and in a small valley to the west the land is limited by soil wetness and/or soil droughtiness. In general stoneless to slightly stony (0-10% total flint) medium clay loam or medium sandy loam topsoils and upper subsoils overlie poorly structured, slowly permeable, heavy clay loam, sandy clay loam and clay lower subsoils. The resultant drainage impedance limits this land to Wetness Class III, Subgrade 3a or Grade 2 where the lighter topsoil textures reduce the workability restriction. The combination of light soil textures, poor structures, slight stone content and the locally dry climatic regime also act to slightly reduce the amount of profile available water for crops. As a result the level of crop growth and yields will be slightly affected thus restricting this land to Subgrade 3a on the basis of soil droughtiness. Occasional borings of slightly better quality were found in this area. However, due to the level of detail of the survey these borings were not extensive enough to map separately.

Subgrade 3b

27. The majority of the Subgrade 3b mapping unit is limited by soil wetness. Here medium and heavy clay loam topsoils overlie heavy clay loam and sandy clay loam upper subsoils before passing to clay in the lower subsoil. Soil inspection pit 4 revealed the upper subsoils to be moderately structured and the lower subsoils to be poorly structured, all of which were slowly permeable. Drainage is thus significantly impeded causing prolonged seasonal waterlogging in the soil profile. As a result, crop germination and growth may be adversely affected. The heavier topsoil textures can also restrict the timing of cultivations as trafficking by agricultural machinery or grazing by livestock may lead to structural damage. Wetness Class IV, Subgrade 3b is therefore considered appropriate for this land.

28. Towards the centre of the site the soil profiles are extremely light and well drained. These are typified by soil inspection pit 1 which comprises a slightly flinty (6% > 2cm, 10% total stone by volume) loamy medium sand topsoil over a similar upper subsoil with 20% total flint by volume. From 46cm depth the profile becomes lighter in texture and less stony (2% total flint by volume) comprising a well structured medium sand. At 73cm this passes to a moderately structured, stoneless, fine sand and continues to depth. In this locally dry climatic regime the combination of very light soil textures and slight to moderate stone content acts to reduce the amount of profile available moisture for crops. This land has therefore been mapped as Subgrade 3b due to a significant soil droughtiness limitation.

29. A small area of land, to the south east of Wood's Farm, has also been classified as Subgrade 3b due to soil droughtiness. The topsoils comprise slightly flinty (6% >2cm, 10% total stone by volume) medium sandy loams over progressively more stony (15-40% flint) upper subsoils of similar texture. At around 40-60 cm depth the profile became impenetrable to the soil auger. Soil inspection pit 2 revealed that below this depth approximately 10cm of very stony (60% total flint) loamy medium sand overlies gravel deposits. As above the locally

dry climatic regime, light soil textures and high stone content act to reduce profile available water causing significant drought risk.

Grade 4

30. Finally a small area of the site has been classified as Grade 4, poor quality land, due to disturbance, presumably from the adjoining railway line. The land lies to the west of The Knoll Farm and is extremely hummocky. The soil profile comprises very slightly flinty (1-2% total stone) medium sandy loam topsoil and upper subsoils which become impenetrable to the soil auger at 70cm depth. This land is therefore limited to Grade 4 on the basis of soil mixing and micro relief.

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SOURCES OF REFERENCE

British Geological Survey (1971) *Sheet No. 268*, Reading. 1:63,360 scale (Drift Edition). BGS: London.

British Geological Survey (1981) *Sheet No. 269*, Windsor. 1:50,000 scale (Solid & Drift Edition). BGS: London.

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

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

Soil Survey of England and Wales (1983) *Sheet 6, Soils of South East England.* SSEW: Harpenden.

Soil Survey of England and Wales (1983) *Soils and their Use in South East England* SSEW: Harpenden.

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

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 : WOK'HAM DLP,CHAPEL GREEN Pit Number : 1P

Grid Reference: SU81606760 Average Annual Rainfall : 658 mm
Accumulated Temperature : 1455 degree days
Field Capacity Level : 138 days
Land Use : Permanent Grass
Slope and Aspect : 01 degrees S

HORIZON	TEXTURE	COLOUR	STONES >2	TOT.STONE	LITH	MOTTLES	STRUCTURE	CONSIST	SUBSTRUCTURE	CALC
0- 29	LMS	10YR32 00	6	10	HR					
29- 46	LMS	10YR43 00	0	20	HR	C			M	
46- 73	MS	10YR53 00	0	2	HR	C	MDCAB	VF	G	
73-120	FS	10YR63 00	0	0		M	WKCAB	VF	M	

Wetness Grade : 2 Wetness Class : I
Gleying :046 cm
SPL : No SPL

Drought Grade : 3B APW : 112mm MBW : -1 mm
APP : 50 mm MBP : -50 mm

FINAL ALC GRADE : 3B
MAIN LIMITATION : Droughtiness

SOIL PIT DESCRIPTION

Site Name : WOK'HAM DLP,CHAPEL GREEN Pit Number : 2P

Grid Reference: SU82606780 Average Annual Rainfall : 658 mm
Accumulated Temperature : 1455 degree days
Field Capacity Level : 138 days
Land Use : Permanent Grass
Slope and Aspect : degrees

HORIZON	TEXTURE	COLOUR	STONES >2	TOT.STONE	LITH	MOTTLES	STRUCTURE	CONSIST	SUBSTRUCTURE	CALC
0- 22	MSL	10YR42 00	3	10	HR					
22- 35	MSL	10YR42 52	6	15	HR		MDCSAB	VF	M	
35- 45	MSL	10YR42 52	0	40	HR				M	
45- 53	LMS	10YR42 52	40	60	HR				M	
53-120	GH	25Y 62 00	0	0					M	

Wetness Grade : 1 Wetness Class : I
Gleying : cm
SPL : No SPL

Drought Grade : 3B APW : 69 mm MBW : -44 mm
APP : 66 mm MBP : -41 mm

FINAL ALC GRADE : 3B
MAIN LIMITATION : Droughtiness

SOIL PIT DESCRIPTION

Site Name : WOK'HAM DLP,CHAPEL GREEN Pit Number : 3P

Grid Reference: SU82706770 Average Annual Rainfall : 658 mm
Accumulated Temperature : 1455 degree days
Field Capacity Level : 138 days
Land Use : Permanent Grass
Slope and Aspect : degrees

HORIZON	TEXTURE	COLOUR	STONES >2	TOT.STONE	LITH	MOTTLES	STRUCTURE	CONSIST	SUBSTRUCTURE	CALC
0- 29	MSL	10YR42 00	1	5	HR					
29- 39	MSL	10YR42 00	0	10	HR		MDCSAB	FR	M	
39- 53	MSL	10YR63 00	0	5	HR	C	WKCSAB	VF	G	
53- 77	SCL	25Y 62 00	0	2	HR	M	MDCPR	FR	M	
77-120	SCL	25 Y72 00	0	5	HR	M	WKCSAB	FM	P	

Wetness Grade : 2 Wetness Class : III
Gleying :039 cm
SPL :053 cm

Drought Grade : 2 APW : 138mm MBW : 25 mm
APP : 108mm MBP : 1 mm

FINAL ALC GRADE : 2
MAIN LIMITATION : Soil Wetness/Droughtiness

SOIL PIT DESCRIPTION

Site Name : WOK'HAM DLP,CHAPEL GREEN Pit Number : 4P

Grid Reference: SU82906850 Average Annual Rainfall : 658 mm
Accumulated Temperature : 1455 degree days
Field Capacity Level : 138 days
Land Use : Permanent Grass
Slope and Aspect : 01 degrees S

HORIZON	TEXTURE	COLOUR	STONES >2	TOT.STONE	LITH	MOTTLES	STRUCTURE	CONSIST	SUBSTRUCTURE	CALC
0- 33	MCL	10YR31 00	0	3	HR					
33- 52	HCL	10YR53 00	0	2	HR	C	WKCSAB	FR	M	
52-120	C	25Y 62 00	0	3	HR	M	MDCAB	FM	P	

Wetness Grade : 3B Wetness Class : IV
Gleying :033 cm
SPL :033 cm

Drought Grade : 2 APW : 133mm MBW : 20 mm
APP : 110mm MBP : 3 mm

FINAL ALC GRADE : 3B
MAIN LIMITATION : Wetness

SOIL PIT DESCRIPTION

Site Name : WOK'HAM DLP,CHAPEL GREEN Pit Number : 5P

Grid Reference: SU82906830 Average Annual Rainfall : 658 mm
Accumulated Temperature : 1455 degree days
Field Capacity Level : 138 days
Land Use : Permanent Grass
Slope and Aspect : degrees

HORIZON	TEXTURE	COLOUR	STONES >2	TOT.STONE	LITH	MOTTLES	STRUCTURE	CONSIST	SUBSTRUCTURE	CALC
0- 25	MSL	10YR42 00	2	5	HR					
25- 50	MSL	10YR62 72	0	25	HR	C	MDCSAB	FR	M	
50- 60	MSL	25 Y72 00	0	15	HR	M	MDCOAB	FR	M	
60- 90	SCL	10YR63 00	0	2	HR	M	MDCOAB	FR	M	

Wetness Grade : 2 Wetness Class : III
Gleying :025 cm
SPL :060 cm

Drought Grade : 3A APW : 108mm MBW : -5 mm
APP : 97 mm MBP : -10 mm

FINAL ALC GRADE : 3A
MAIN LIMITATION : Droughtiness

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
1	SU82906870	PGR			030	055	3	2	124	11	100	-7	2				WD	2	
1P	SU81606760	PGR	S	01	046		1	2	112	-1	50	-50	3B				DR	3B	At Boring 100
2	SU83106870	PGR			0	030	4	3B		0		0					WE	3B	
2P	SU82606780	PGR					1	1	69	-44	66	-41	3B				DR	3B	Occas Fe Pan
3	SU83306870	RGR	SE	01	0	030	4	3B	117	4	115	8	3A				WE	3B	Imp 90
3P	SU82706770	PGR			039	053	3	2	138	25	108	1	2				WD	2	
4	SU82806860	PGR			030	055	3	3A	121	8	112	5	2				WE	3A	
4P	SU82906850	PGR	S	01	033	033	4	3B	133	20	110	3	2				WE	3B	At Boring 24
5	SU83006860	PGR			030	050	3	2	129	16	104	-3	2				WD	2	
5P	SU82906830	PGR			025	060	3	2	108	-5	97	-10	3A				DR	3A	At Boring 15
6	SU83206860	PGR	SE	01	030	060	3	3A	142?	29	118	11	2				WE	3A	
7	SU82706850	PGR			0	060	3	3A		0		0					WE	3A	Imp 85
8	SU82906850	PGR	S	01	028	055	3	2	139	26	110	3	3A				DR	3A	See 5P
9	SU83106850	PGR			030	030	4	3B		0		0					WE	3B	Imp 70
10	SU82806840	PGR	S	01	028	028	4	3B		0		0					WE	3B	
11	SU83006840	PGR			0	025	4	3B		0		0					WE	3B	
12	SU82906830	PGR			030	030	4	3B		0		0					WE	3B	See 4P
13	SU83106830	PGR	SE	01	030	030	4	3B		0		0					WE	3B	
14	SU83006820	PGR			030	030	4	3B		0		0					WE	3B	
15	SU83206820	CER			030	030	4	3B		0		0					WE	3B	
16	SU83226818	CER			030	030	4	3A		0		0					WE	3A	
17	SU83106810	CER	W	01	030	070	2	1	123	10	104	-3	2				DR	2	
18	SU83256805	CER	SE	02	030		2	2	71	-42	71	-36	3B				DR	3B	Imp 45 See 2P
19	SU82606800	PGR	S	01	040	085	1	1	124	11	97	-10	2				DR	2	
20	SU82806800	PGR			030	095	2	2	146	33	109	2	2				WD	2	
21	SU83006800	PGR			035	035	4	3B		0		0					WE	3B	
22	SU81136785	PGR			030	040	3	3A		0		0					WE	3A	
23	SU81206790	PGR	S	02	025		2	1	100	-13	108	1	3A			Y	DS	4	Disturbed
24	SU82306790	PGR			0	025	4	3B		0		0					WE	3B	
25	SU82406790	PGR	S	01	0		2	1	44	-69	44	-63	4				DR	3B	Imp 30 See 2P
26	SU82506790	PGR			035	035	4	3B		0		0					WE	3B	Q Disturbed
27	SU82706790	PGR	S	01			1	1	34	-79	34	-73	4				DR	3B	Imp 40 See 2P
28	SU81006780	PGR			0	035	4	3B		0		0					WE	3B	Groundwater
29	SU81106780	PGR			0	045	3	3A		0		0					WE	3A	
30	SU81206780	PGR	S	01	025	025	4	3B		0		0					WE	3B	
31	SU81406780	PGR	S	04	0	045	3	2	133	20	105	-2	2				WE	3B	Wet Flush
32	SU81606780	PGR	S	04	045	060	2	1	104	-9	87	-20	3A				DR	3A	
33	SU81686780	PGR	W	02	050		1	1	110	-3	94	-13	3A				DR	3A	S1 Gleyed 30
34	SU81806780	PGR	S	01	045		1	1	152	39	94	-13	3A				DR	3A	S1 Gleyed 30
35	SU81976779	PGR	W	02	030	030	4	3B		0		0					WE	3B	
36	SU82186782	PGR	S	02	030	045	3	3A		0		0					WE	3A	
37	SU82406780	PGR	N	02	0	078	2	2	149	36	107	0	3A				DR	3A	

SAMPLE NO.	GRID REF	USE	ASPECT	GRDNT	GLEY	SPL	--WETNESS-- CLASS	GRADE	-WHEAT- AP	MB	-POTS- AP	MB	M.REL DRT	FLOOD	EROSN EXP	FROST DIST	CHEM LIMIT	ALC	COMMENTS
38	SU82606780	PGR					1	1	51	-62	51	-56	4				DR	3B	Imp 40 See 2P
39	SU82806780	PGR			026	055	3	2	148	35	108	1	2				WD	2	
40	SU80906770	PGR	NE	01	0	030	4	3B		0		0					WE	3B	
41	SU81106768	PGR	N	02	030	070	3	2	137	24	110	3	2				WD	2	
42	SU81306770	PGR			030	070	3	2	145	32	122	15	1				WE	2	
43	SU81506770	PGR	S	03	050		1	1	126	13	65	-42	3B				DR	3B	
44	SU81706770	PGR	W	02	030		1	1	117	4	66	-41	3B				DR	3B	
45	SU81906770	PGR	S	02	026	026	4	3B		0		0					WE	3B	
46	SU82066775	PGR	S	02	030	040	3	3A		0		0					WE	3A	
47	SU82306770	PGR			038	075	2	1	124	11	84	-23	3A				DR	3A	
48	SU82506770	PGR	N	01	0		2	1	77	-36	80	-27	3B				DR	3B	Imp 60, See 2P
49	SU82706770	PGR			040	070	2	1	152	39	109	2	2				DR	2	
50	SU80986762	PGR	E	01	0	030	4	3B		0		0					WE	3B	
51	SU81206760	PGR	N	03	030	080	2	1	114	1	86	-21	3A				DR	3A	
52	SU81406760	PGR			0	035	4	3B		0		0					WE	3B	Imp 75
53	SU81606760	PGR	S	01	075		1	1	112	-1	50	-50	3B				DR	3B	See 1P,S1 Gley
54	SU81826761	PGR	S	02	070		1	1	74	-39	58	-49	3B				DR	3B	V Wet 80
55	SU81906760	PGR			025		2	2	100	-13	107	0	3A				DR	3A	Imp 65
56	SU82006760	PGR			028	028	4	3B		0		0					WE	3B	
57	SU82206760	PGR			030	030	4	3B		0		0					WE	3B	Q Disturbed
58	SU82606760	PGR			025	060	3	2	99	-14	102	-5	3A				DR	3A	Imp 75
59	SU82786764	PGR			028	068	2	1	149	36	107	0	2				DR	2	
60	SU81106750	PGR	W	01			1	1	64	-49	57	-50	3B				DR	3B	Imp 60
61	SU81306750	PGR	NE	02	030	080	2	1	131	18	101	-6	2				DR	2	
62	SU81506750	PGR			025		1	1	126	13	117	10	2				DR	2	Reddish
63	SU81006740	PGR			0	025	4	3B		0		0					WE	3B	
64	SU81206740	PGR			030		2	1	86	-27	71	-36	3B				DR	3B	Sandy
65	SU81406740	PGR	NE	02			1	1	66	-47	49	-58	4				DR	4	Sandy

SAMPLE	DEPTH	TEXTURE	COLOUR	----MOTTLES----- COL	ABUN	CONT	PED COL.	GLEY	----STONES---- >2	>6	LITH	TOT	STRUCT/ CONSIST	SUBS STR	POR	IMP	SPL	CALC	
1	0-30	msl	10YR42 00						2	0	HR	2							
	30-45	msl	10YR62 00	75YR68 72	C			Y	0	0	HR	5		M					
	45-55	lms	10YR71 00	10YR58 00	C			Y	0	0	HR	5		M					
	55-65	scl	10YR63 00	10YR68 71	C			Y	0	0		0		M			Y		
	65-100	sc	10YR62 00	10YR71 00	C		75YR58 00	Y	0	0	HR	2		P			Y		
	100-120	lms	10YR71 00	10YR58 00	C			Y	0	0		0		M					
1P	0-29	lms	10YR32 00						6	0	HR	10							Almost MS
	29-46	lms	10YR43 00	10YR56 00	C			S	0	0	HR	20		M					Almost MS
	46-73	ms	10YR53 00	75YR46 00	C			Y	0	0	HR	2	MDCAB	VF G					Almost FS
	73-120	fs	10YR63 00	75YR56 00	M			Y	0	0		0	WKCAB	VF M					
2	0-30	mcl	10YR42 00	10YR46 00	C			Y	1	0	HR	1							
	30-120	zc	10YR63 00	10YR68 71	M			Y	0	0		0		P			Y		
2P	0-22	msl	10YR42 00						3	0	HR	10							PSD
	22-35	msl	10YR42 52						6	0	HR	15	MDCSAB	VF M					PSD
	35-45	msl	10YR42 52				00MN00 00		0	0	HR	40		M					Too stony for struc
	45-53	lms	10YR42 52				00MN00 00		40	0	HR	60		M					Too stony for struc
	53-120	gh	25Y 62 00						0	0		0		M					V Wet
3	0-30	mcl	10YR41 00	10YR46 00	M			Y	0	0	HR	0							
	30-40	hcl	10YR51 00	10YR58 00	C			Y	0	0		0		M			Y		
	40-70	scl	10YR62 00	10YR68 71	M			Y	0	0		0		M			Y		
	70-80	lms	10YR62 00	10YR68 00	M			Y	0	0		0		M					
	80-90	c	10YR63 00	10YR68 71	M			Y	0	0		0		P					Imp Gravelly
3P	0-29	msl	10YR42 00						1	0	HR	5							PSD
	29-39	msl	10YR42 00						0	0	HR	10	MDCSAB	FR M					PSD
	39-53	msl	10YR63 00	75YR56 00	C		00MN00 00	Y	0	0	HR	5	WKCSAB	VF G					PSD
	53-77	scl	25Y 62 00	75YR68 00	M		25Y 63 00	Y	0	0	HR	2	MDCPR	FR M		Y		Y	PSD
	77-120	scl	25 Y72 00	75YR68 00	M			Y	0	0	HR	5	WKCSAB	FM P		Y		Y	PSD
4	0-30	mcl	10YR42 00						0	0	HR	3							
	30-55	msl	10YR62 00	10YR58 00	C		10YR72 00	Y	0	0		0		M					Borderline SCL
	55-100	c	10YR72 00	75YR68 00	M			Y	0	0		0		P			Y		
4P	0-33	mcl	10YR31 00	03					0	0	HR	3							
	33-52	hcl	10YR53 00	10YR56 00	C		00MN00 00	Y	0	0	HR	2	WKCSAB	FR M		Y		Y	
	52-120	c	25Y 62 00	10YR58 00	M		00MN00 00	Y	0	0	HR	3	MDCAB	FM P		Y		Y	
5	0-30	msl	10YR42 00						2	0	HR	2							
	30-50	msl	10YR63 00	10YR66 00	C			Y	0	0		0		M					
	50-120	zc	10YR63 00	10YR68 71	M			Y	0	0		0		P			Y		
5P	0-25	msl	10YR42 00						2	0	HR	5							PSD
	25-50	msl	10YR62 72	10YR58 00	C			Y	0	0	HR	25	MDCSAB	FR M					
	50-60	msl	25 Y72 00	75YR58 00	M			Y	0	0	HR	15	MDCOAB	FR M					
	60-90	scl	10YR63 00	75YR68 00	M		10YR71 00	Y	0	0	HR	2	MDCOAB	FR M		Y		Y	Sdy/Clay lenses

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	
6	0-30	mzcl	10YR42 00						0	0		0							
	30-40	hzcl	10YR53 00	10YR68 00	C			Y	0	0	HR	3		M					
	40-60	mcl	10YR63 00	10YR58 00	C			Y	0	0		0		M					
	60-120	zc	10YR63 00	10YR58 71	C			Y	0	0		0		P			Y		
7	0-35	mcl	10YR41 00	75YR46 00	C			Y	0	0		0							Slightly Sandy
	35-60	scl	10YR62 00	75YR58 00	C		10YR71 00	Y	0	0	HR	2		M					Light
	60-85	c	25 Y62 00	75YR58 00	C		25 Y72 00	Y	0	0	HR	2		P			Y		Imp Gravelly
8	0-28	msl	10YR42 52						0	0		0							PSD
	28-55	msl	10YR73 00	75YR46 00	C		10YR71 00	Y	0	0	HR	5		M					
	55-60	scl	10YR62 00	75YR58 00	C			Y	0	0		0		M			Y		Sdy/Clay lenses
	60-70	c	10YR62 00	75YR68 00	M			Y	0	0		0		M			Y		
	70-80	scl	10YR62 00	75YR68 00	M			Y	0	0		0		M			Y		
	80-120	c	10YR71 00	75YR68 00	M			Y	0	0		0		M			Y		
9	0-30	mcl	10YR42 00						2	0	HR	2							Slightly Sandy
	30-70	c	10YR63 00	10YR58 00	C			Y	0	0	HR	2		P			Y		Imp Gravelly
10	0-28	mcl	10YR42 00						0	0		0							Slightly Sandy
	28-45	hcl	10YR62 00	75YR58 00	C		10YR72 00	Y	0	0	HR	5		M			Y		
	45-80	c	25 Y72 00	75YR68 00	M			Y	0	0		0		P			Y		
11	0-25	hcl	10YR42 00	75YR46 00	C			Y	0	0		0							
	25-45	c	10YR52 00	75YR58 00	C		10YR61 00	Y	0	0		0		P			Y		
	45-80	c	10YR61 00	75YR68 00	M			Y	0	0		0		P			Y		
12	0-30	mcl	10YR41 42						0	0	HR	2							
	30-53	hcl	10YR52 00	75YR56 00	C		10YR62 00	Y	0	0	HR	2		M			Y		
	53-85	c	10YR63 00	75YR68 00	M			Y	0	0		0		P			Y		
13	0-30	mcl	10YR43 00						3	0	HR	3							
	30-90	c	10YR72 00	75YR68 00	M			Y	0	0		0		P			Y		
14	0-30	mcl	10YR43 00						2	0	HR	2							
	30-70	c	10YR62 00	10YR68 00	M			Y	0	0		0		P			Y		
15	0-30	mcl	10YR53 00						7	2	HR	7							
	30-60	scl	10YR62 00	75YR46 00	M			Y	0	0	HR	2		M			Y		
	60-75	scl	10YR72 00	75YR46 00	M			Y	0	0	HR	2		M			Y		
	75-100	c	10YR52 00	75YR46 00	M			Y	0	0	HR	2		P			Y		
	100-120	c	10YR63 00	75YR46 00	M			Y	0	0		0		P			Y		
16	0-30	msl	10YR43 00						5	1	HR	7							
	30-55	scl	10YR63 00	10YR68 00	C			Y	0	0	HR	3		M			Y		
	55-65	c	10YR62 00	10YR68 00	M			Y	0	0	HR	2		P			Y		
	65-100	c	10YR62 00	75YR68 00	M			Y	0	0		0		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	
17	0-30	msl	10YR43 00						6	2	HR	15							PSD
	30-50	msl	25 Y63 00	10YR58 00	C			Y	0	0	HR	5		M					
	50-70	scl	10YR64 00	10YR68 00	C			Y	0	0	HR	2		M					Very Sandy
	70-110	c	10YR63 00	10YR68 00	M			Y	0	0		0		P			Y		
18	0-30	mcl	10YR42 00						6	2	HR	12							
	30-45	hcl	10YR52 00	10YR58 00	C			Y	0	0	HR	5		M					Imp Gravelly
19	0-35	msl	10YR43 00						0	0	HR	5							
	35-40	msl	10YR44 00						0	0	HR	10		M					
	40-60	msl	10YR53 00	10YR58 00	C			Y	0	0	HR	10		M					
	60-75	lms	10YR63 00	75YR68 00	M			Y	0	0	HR	20		M					
	75-85	ms	10YR63 00	75YR68 00	M			Y	0	0	HR	2		G					
	85-120	sc	10YR63 00	75YR68 00	M			Y	0	0	HR	2		P			Y		
20	0-30	scl	10YR42 00						0	0	HR	2							
	30-50	msl	10YR62 00	10YR68 00	C			Y	0	0	HR	2		M					
	50-95	msl	10YR63 00	75YR58 00	C			Y	0	0	HR	2		M					
	95-120	c	10YR63 00	75YR68 00	M			Y	0	0		0		P			Y		
21	0-35	mcl	10YR43 00						1	0	HR	5							
	35-80	c	10YR63 00	75YR68 00	M			Y	0	0		0		P			Y		
22	0-30	mzcl	10YR43 00						0	0		0							
	30-40	mzcl	10YR53 00	75YR53 00	C			Y	0	0		0		M					
	40-70	hzcl	10YR53 00	75YR58 00	M			Y	0	0		0		P			Y		Imp Gravelly
23	0-25	msl	10RR43 00						2	0	HR	2							Hummocky
	25-70	msl	10YR63 00	10YR58 00	C			Y	0	0	HR	2		M					Imp Q Disturbed
24	0-25	mcl	10YR42 00	75YR46 00	C			Y	2	0	HR	10							
	25-40	hcl	10YR52 00	75YR56 00	M			Y	0	0	HR	5		M			Y		
	40-60	c	10YR62 00	75YR56 00	M			Y	0	0	HR	5		P			Y		
25	0-20	msl	10YR42 41	75YR46 00	C			Y	0	0	HR	5							
	20-30	msl	10YR52 00	10YR58 00	C			Y	0	0	HR	25		M					Imp Gravelly
26	0-35	hcl	10YR42 00						0	0	HR	2							Q disturbed
	35-70	hcl	10YR52 00	10YR58 00	C		10YR73 00	Y	0	0	HR	2		M			Y		Imp Gravelly
27	0-30	lms	10YR43 00						0	0	HR	10							
	30-40	lms	75YR68 00						0	0	HR	20		M					Imp Gravelly
28	0-35	mcl	10YR41 00	75YR46 00	C			Y	0	0		0							
	35-55	hcl	10YR52 00	75YR56 00	C			Y	0	0	HR	5		M			Y		V Wet
	55-75	ms	10YR73 00	75YR58 00	C			Y	0	0	HR	10		M					Saturated
	75-100	c	10YR62 00	75YR68 00	M			Y	0	0		0		P			Y		Sandy lenses

SAMPLE	DEPTH	TEXTURE	COLOUR	----MOTTLES----- COL	ABUN	CONT	PED COL.	GLEY	----STONES---- >2	>6	LITH	TOT	STRUCT/ CONSIST	SUBS STR	POR	IMP	SPL	CALC	
29	0-30	mcl	10YR41 00	75YR46 00	C			Y	0	0		0							
	30-45	mcl	10YR53 00	75YR56 00	C			Y	0	0	HR	10		M					
	45-55	hcl	10YR52 00	75YR58 00	M			Y	0	0		0		P			Y		V Wet
	55-80	c	10YR62 00	75YR68 00	M			Y	0	0		0		P			Y		
30	0-25	mcl	10YR43 00						5	0	HR	5							
	25-90	c	10YR53 00	10YR58 61	M			Y	0	0	HR	5		P			Y		
31	0-35	msl	10YR42 00	10YR46 00	C			Y	3	0	HR	3							
	35-45	msl	10YR63 00	10YR58 00	M			Y	0	0	HR	2		M					
	45-70	c	10YR62 00	10YR68 00	C			Y	0	0		0		P			Y		
	70-120	scl	10YR71 00	25 Y66 00	M			Y	0	0		0		P			Y		
32	0-30	msl	10YR42 00						6	0	HR	15							
	30-45	lms	10YR43 00						0	0	HR	10		M					
	45-60	msl	10YR53 00	10YR56 00	C			Y	0	0	HR	5		M					
	60-75	c	10YR63 00	05Y 58 00	M			Y	0	0	HR	10		P			Y		
	75-100	scl	10YR53 00	05Y 58 00	M			Y	0	0	HR	15		M					Coarse sand
	100-105	lcs	10YR63 00	05Y 58 00	M			Y	0	0	HR	20		M					
33	0-30	msl	10YR41 00						0	0	HR	2							
	30-50	msl	10YR54 00	10YR56 00	C			S	0	0		0		M					
	50-70	lms	10YR63 00	10YR58 68	M			Y	0	0		0		M					
	70-120	ms	25Y 63 00	75YR58 00	M			Y	0	0		0		G					
34	0-30	msl	10YR42 00						0	0	HR	2							
	30-45	msl	10YR54 00	10YR56 00	C			S	0	0		0		M					
	45-65	lms	10YR63 00	10YR66 00	C			Y	0	0		0		M					
	65-90	lfs	10YR72 00	10YR68 00	M			Y	0	0		0		M					
	90-120	fs	05Y 61 00	10YR68 00	M			Y	0	0		0		M					
35	0-30	mcl	10YR41 42	10YR46 00	F				0	0		0							
	30-40	hcl	10YR52 53	10YR66 00	C			Y	0	0		0		M			Y		
	40-80	c	25Y 61 62	10YR58 68	M			Y	0	0		0		P			Y		
36	0-30	mcl	10YR42 00						2	0	HR	5							
	30-45	mcl	10YR52 00	10YR56 00	C			Y	0	0	HR	5		M					
	45-80	c	10YR62 00	10YR56 00	M			Y	0	0	HR	2		P			Y		
37	0-35	msl	10YR42 00	10YR56 00	C			Y	2	0	HR	5							
	35-55	msl	10YR52 00	10YR56 00	C			Y	0	0	HR	5		M					
	55-78	msl	10YR62 00	75YR56 00	M			Y	0	0	HR	2		M					
	78-120	scl	25Y 62 00	75YR56 00	M			Y	0	0	HR	2		M			Y		
38	0-30	msl	10YR32 00						9	0	HR	20							
	30-40	msl	10YR42 00	10YR56 00	F				0	0	HR	40		M					Imp Gravelly
39	0-26	msl	10YR41 00						0	0	HR	3							
	26-43	msl	10YR53 54	10YR56 00	C			Y	0	0	HR	5		M					
	43-55	msl	10YR62 00	10YR58 68	M			Y	0	0		0		M					
	55-120	scl	25Y 53 63	10YR58 00	M			Y	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	
40	0-30	mcl	10YR41 00	75YR46 00	C			Y	0	0		0							
	30-50	hcl	10YR52 00	75YR56 00	C			Y	0	0	HR	10		P		Y			V Wet
	50-80	c	10YR62 00	75YR68 00	M			Y	0	0		0		P		Y			
41	0-30	msl	10YR43 00						2	0	HR	2							
	30-70	msl	10YR62 00	10YR66 00	C			Y	0	0		0		M					
	70-120	c	10YR63 00	10YR68 71	M			Y	0	0		0		P		Y			
42	0-30	mzcl	75YR44 00						0	0	HR	0							
	30-40	mzcl	10YR53 00	75YR44 00	C			Y	0	0		0		M					
	40-70	mcl	10YR53 00	75YR46 00	C			Y	0	0		0		M					
	70-120	c	75YR53 00	75YR58 46	M			Y	0	0		0		P		Y			
43	0-30	lms	10YR32 00						0	0	HR	2							
	30-50	lms	10YR43 00	75YR46 00	F				0	0	HR	1		M					
	50-68	ms	10YR53 00	75YR46 52	M			Y	0	0		0		G					
	68-80	fs	25YR63 00	10YR56 00	M			Y	0	0		0		M					Wet
	80-120	lfs	10YR72 00	75YR56 00	M			Y	0	0		0		M					
44	0-30	lms	10YR41 42						0	0	HR	2							
	30-65	lms	10YR44 54	10YR56 00	C			Y	0	0		0		M					
	65-80	ms	10YR53 00	10YR68 00	M			Y	0	0		0		G					
	80-120	fs	25Y 53 00	75YR68 00	M			Y	0	0	HR	2		M					
45	0-26	mcl	10YR41 42	10YR46 00	F				0	0		0							
	26-60	c	25Y 53 63	10YR58 68	M			Y	0	0		0		P		Y			
46	0-30	mcl	10YR43 00						0	0	HR	2							
	30-40	scl	10YR53 00	75YR58 00	C			Y	0	0	HR	5		M		Y			
	40-80	c	10YR63 00	75YR68 00	M			Y	0	0		0		P					light/ Sandy
47	0-38	msl	10YR32 00						4	0	HR	10							
	38-65	lms	10YR53 00	10YR56 00	C			Y	0	0	HR	5		M					
	65-75	msl	10YR63 00	10YR56 00	C			Y	0	0	HR	2		M					
	75-95	scl	10YR62 00	75YR56 00	M			Y	0	0		0		M		Y			
	95-120	scl	25Y 62 00	75YR56 00	M			Y	0	0		0		P		Y			
48	0-30	msl	10YR32 00	75YR46 00	C			Y	0	0	HR	10							
	30-50	msl	10YR42 00	75YR46 00	C			Y	0	0	HR	20		M					V Wet
	50-60	msl	10YR52 00	10YR56 00	M			Y	0	0	HR	40		M					Saturated, Imp.
49	0-30	msl	10YR42 00						0	0	HR	3							
	30-40	mszl	10YR41 31	10YR46 00	F				0	0		0		M					
	40-70	msl	10YR51 00	10YR46 00	C			Y	0	0	HR	5		M					
	70-120	scl	25Y 63 00	10YR58 68	M			Y	0	0		0		M		Y			
50	0-30	mcl	10YR41 00	75YR46 00	C			Y	0	0		0							
	30-50	c	10YR63 73	75YR56 00	M			Y	0	0	HR	10		P		Y			
	50-80	c	10YR62 00	75YR68 00	M			Y	0	0		0		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	
51	0-30	msl	10YR42 00						8	1	HR	8							
	30-45	msl	10YR53 00	10YR56 00	C			Y	0	0	HR	3		M					
	45-80	lms	10YR63 00	10YR68 71	M			Y	0	0		0		M					
	80-120	c	10YR63 00	10YR68 71	M			Y	0	0		0		P			Y		
52	0-25	mcl	10YR42 00	75YR46 00	C			Y	0	0		0							
	25-35	hcl	10YR42 00	75YR56 00	C		10YR51 00	Y	0	0	HR	5		M					
	35-60	hcl	10YR62 00	75YR68 00	M			Y	0	0	HR	10		P			Y		V Heavy
	60-75	scl	05GY61 00	10YR68 00	M			Y	0	0		0		M			Y		Imp Gravelly
53	0-30	lms	10YR32 00						4	0	HR	15							
	30-50	lms	10YR43 00	75YR46 00	C			S	0	0	HR	10		M					
	50-75	ms	10YR43 00	75YR56 00	M			S	0	0	HR	5		G					
	75-120	fs	25Y 63 00	75YR56 00	M			Y	0	0		0		M					Wet
54	0-28	lms	10YR41 00						0	0	HR	2							
	28-40	lms	10YR43 00						0	0	HR	5		M					
	40-70	lms	10YR44 54						0	0		0		M					
	70-120	ms	25Y 62 00	10YR68 00	M			Y	0	0		0		G					Wet at 80
55	0-25	mcl	10YR41 00	10YR46 00	F				0	0		0							
	25-35	hcl	10YR53 00	10YR58 00	C			Y	0	0		0		M					
	35-55	hcl	25Y 62 00	10YR58 00	M			Y	0	0		0		M					
	55-65	msl	25Y 61 00	75YR58 00	M			Y	0	0	HR	10		M					Imp Flints
56	0-28	mcl	10YR41 00	10YR46 00	F				0	0	HR	2							
	28-55	hcl	10YR42 53	10YR58 00	M			Y	0	0	HR	15		M			Y		Q SPL/Disturbed
	55-90	c	25Y 61 00	10YR58 68	M			Y	0	0		0		P			Y		
57	0-30	mcl	10YR42 00						0	0	HR	2							
	30-55	scl	10YR63 00	10YR68 00	M			Y	0	0	HR	5		M			Y		Q SPL/Disturbed
	55-90	c	25Y 53 00	10YR68 00	M			Y	0	0		0		P			Y		
58	0-25	msl	10YR41 00						0	0	HR	5							
	25-43	msl	10YR53 00	10YR46 00	C			Y	0	0	HR	5		M					
	43-60	msl	25Y 63 00	10YR68 00	M			Y	0	0	HR	20		M					
	60-75	scl	25Y 62 00	10YR58 68	M			Y	0	0	HR	30		M			Y		Imp Flints
59	0-28	msl	10YR41 00						0	0	HR	2							
	28-50	msl	10YR62 00	10YR68 00	C			Y	0	0	HR	5		M					
	50-68	msl	25Y 63 00	10YR68 00	M			Y	0	0	HR	5		M					
	68-120	scl	25Y 63 00	10YR58 00	M			Y	0	0		0		M			Y		
60	0-25	msl	10YR43 00						0	0	HR	8							
	25-50	lms	10YR53 00						0	0	HR	15		M					
	50-60	ms	10YR73 00						0	0	HR	30		G					Imp Gravelly
61	0-30	msl	10YR42 00						0	0	HR	10							
	30-50	msl	10YR42 41	75YR56 00	C			Y	0	0	HR	10		M					
	50-80	msl	10YR63 00	75YR58 00	C			Y	0	0	HR	10		M					Thin stony band
	80-120	c	10YR61 00	75YR68 00	M			Y	0	0		0		P			Y		V Heavy

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	
62	0-25	mcl	10YR44 00						0	0		0							
	25-55	mcl	75YR46 00	05YR46 00	C		00MN00 00	Y	0	0		0		M					
	55-75	hcl	75YR52 00	75YR46 00	C		00MN00 00	Y	0	0		0		M					
	75-90	scl	10YR62 00	75YR58 00	C			Y	0	0		0		M					Saturated/I Grav
63	0-25	mcl	10YR41 00	75YR46 00	C			Y	0	0		0							
	25-40	c	10YR51 00	10YR56 00	M			Y	0	0		0		P		Y			V Wet
	40-50	c	10YR51 00	10YR56 00	M			Y	0	0	HR	30		P		Y			Saturated
64	0-30	msl	10YR42 00						0	0	HR	8							
	30-50	lms	10YR53 00	75YR58 00	C			Y	0	0	HR	10		M					
	50-120	ms	10YR73 00	75YR58 00	C			Y	0	0	HR	10		G					
65	0-30	lms	10YR31 00						0	0	HR	10							
	30-50	ms	10YR42 00						0	0	HR	15		G					
	50-120	ms	10YR62 00						0	0	HR	2		G					Saturated at 70