A1

Land at Oldfields Farm, Amersham Road, Beaconsfield, Buckinghamshire
Agricultural Land Classification
ALC Map and Report
January 1995

AGRICULTURAL LAND CLASSIFICATION REPORT

LAND AT OLDFIELDS FARM, AMERSHAM ROAD, BEACONSFIELD

1. Summary

1.1 ADAS was commissioned by MAFF's Land Use Planning Unit to provide information on land affected by a proposed golf course development. The site is bounded to the west by the A355, to the south by Longbottom Lane and to the east by Bottom Lane, near Beaconsfield, Buckinghamshire. An Agricultural Land Classification (ALC) survey of this site was carried out in January 1995.

1.2 The site comprises 99.4 hectares of land. Survey work was undertaken at a detailed level of approximately one boring per hectare of agricultural land. A total of 62 borings, two soil inspection pits and a number of topsoil stone assessments were assessed 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 long-term limitations 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 agricultural land on the site was in permanent grass. The areas marked as Woodland typically comprise mature, deciduous trees with small areas of younger trees in the south of the site. The narrow strip marked as Non-agricultural comprises a track running from Bottom Wood through to Blue Close Wood.

1.5 The attached ALC 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 ALC survey information for this site.

Table 1 : Distribution of Grades and Subgrades

Grade	Area (ha)	% of Site	% of Agricultural Land
2	8.6	8.6	14.9
3a	9.3	9.4	16.1
3b	39.2	39.4	68.0
4	0.6	0.6	1.0
Non-agricultural	0.1	0.1	100.0 (57.7 ha)
Woodland	41.6	41.9	
Total area of site	99.4	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 majority of agricultural land surveyed has been classified as Subgrade 3b. Smaller areas of Grade 2, Subgrade 3a and Grade 4 land are also present. Land classified as Grade 2, very good quality, typically occurs in the dry valleys on the site. Land of this quality is subject to a slight soil droughtiness or topsoil stone limitation. Slightly stony silty clay loam topsoils, generally containing 5-10% of flints larger than 2cm by volume, and upper subsoils either extend to depth or overlie moderately stony clay lower subsoils.

1.8 Land classified as Subgrade 3a, good quality, in the north of the site is restricted by moderate soil droughtiness limitations. Slightly stony silty clay loam topsoils and upper subsoils overlie very stony subsoils at moderate depth. Elsewhere, land classified as Subgrade 3a is generally restricted by either soil droughtiness or topsoil stone contents.

1.9 Subgrade 3b land, moderate quality, is principally limited by soil droughtiness, sometimes in conjunction with topsoil stoniness, or gradient. The soils typically comprise slightly or moderately stony silty clay loam topsoils which overlie similarly textured but very stony subsoils. Across part of this area, typically the higher flatter land on the site, topsoil stoniness is the main limitation. Such topsoil stoniness may act to significantly impede cultivation, harvesting and crop growth and cause excessive implement and tyre wear. To the west of Cleare Craft Wood and to the south-east of Blue Close Wood gradient is the main limitation, with slopes in the range of 7-11°. Such slopes, which are limited to Subgrade 3b, may act to impose significant restrictions on the range and efficiency of agricultural machinery that may be safely used.

1.10 Where the gradients are within the range of 11-18° such land has been classified as Grade 4, poor quality.

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 Table 2 and these show that there is no overall climatic limitation affecting the site. However climatic factors do interact with soil factors to influence soil wetness and droughtiness limitations. The crop adjusted soil moisture deficits and field capacity days at this locality are average for this region, and thus do not increase the likelihood of either soil droughtiness or wetness limitations.

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

Table 2 : Climatic Interpolations

Grid Reference	SU 958 918	SU 960 923
Altitude (m)	80	105
Accumulated Temperature (degree days, Jan-June)	1418	1389
Average Annual Rainfall (mm)	716	726
Field Capacity (days)	152	154
Moisture Deficit, Wheat (mm)	105	102
Moisture Deficit, Potatoes (mm)	96	93
Overall Climatic Grade	1	1

3. Relief

3.1 The highest land occurs in the west and east of the site where the land occupies broad plateaux at approximately 100 to 105 m AOD. Running through the centre of the site, along a north-south transect, is a dry valley which lies at approximately 85 m AOD. There are also dry valleys along the southern site boundary and along part of the eastern site boundary. These dry valleys also lie at approximately 85 m AOD. From the easterly plateau the site falls to the west and south through gradients of 4-12°. Where gradients of greater than 7° to 11° were measured then the land is limited to moderate quality (Subgrade 3b). Where there are gradients within the range of greater than 11° to 18° (to the west of Cleare Craft Wood) such land is classified as poor quality (Grade 4). Elsewhere on the site the land is gently undulating and thus imposes no restriction to agricultural land quality. Very small areas of the site, to the south-west of Cleare Craft Wood and to the east of Blue Close Wood, are downgraded to moderate quality (Subgrade 3b) because of micro-relief limitations imposed by irregular terrain.

4. Geology and Soil

4.1 The relevant geological sheet (BGS, 1948) shows the site to be underlain by four different geological deposits. The majority of land on the site is shown to be underlain by Upper Chalk. Drift deposits of glacial gravel (on the higher flatter parts of the site) and dry valley gravel (in the central dry valley) are shown to overlie the Upper Chalk. The extreme north-west of the site is shown as Reading Beds overlain by drift deposits of pebbly clay and sand.

4.2 The published Soil Survey map (SSEW, 1983) maps soils of the Sonning 2 Association across most of the site. These soils are described as 'well drained flinty coarse loamy and gravelly soils. Associated with slowly permeable seasonally waterlogged fine loamy over clayey soils, and coarse loamy over clayey soils with slowly permeable subsoils and slight seasonal waterlogging'. A narrow band, approximate with that of the central dry valley, is mapped as soils of the Frilsham Association. These soils are described as 'well drained mainly fine loamy soils over chalk, some calcareous. Shallow calcareous fine loamy and fine silty soils in places'.

4.3 Detailed field examination found three broad soil types. The predominant is that of well drained very stony profiles derived from the drift deposits of glacial gravel and dry valley gravel. Such profiles typically occur on the higher, flatter land on the site. The dry valleys on the site and also the area overlying the Reading Beds tends to comprise profiles which are also well drained but less stony. The third soil type, found in the vicinity of Cleare Craft Wood, comprises heavier textured soils which are moderately well to poorly 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 Approximately 15% of the agricultural land surveyed has been classified as very good quality. In the north of the site, land of Grade 2 quality is associated with the drift deposits of pebbly clay and sand over Reading Beds. This land is restricted by minor soil droughtiness limitations. Profiles typically comprise non-calcareous medium silty clay loam topsoils and upper subsoils which overlie heavy silty clay loam or clay lower subsoils, and are well drained (Wetness Class I). Profiles are slightly stony to about 75-80 cm depth, containing approximately 0-2% flints >2cm and 5-15% total flints by volume; at which depth they proved impenetrable to a soil auger. From Pit 2, which represents such profiles, it can be seen that from approximately 80-120 cm the lower horizon of such profiles comprises a moderately stony clay, containing about 30% total flints by volume. The interaction between these soil textures, profile stone contents and moderate subsoil structures with the prevailing local climate results in a slight restriction in the amount of soil profile water available for uptake by crop roots. This minor limitation causes plants to suffer drought stress for all or part of the growing season and crop yields will be slightly lowered as a result.

5.4 In the south of the site, land of very good quality is restricted by slight soil droughtiness and/or topsoil stoniness limitations. Profiles comprise deep silty textured soils. Non-calcareous medium silty clay loam topsoils overlie similarly textured subsoils which sometimes pass into heavy silty clay loams at approximately 55-70 cm depth. Profiles are well drained (Wetness Class I). The topsoils are slightly stony, containing 2-10% flints >2cm and 5-15% total flints by volume. Where topsoils contain between 6 and 10% flints >2cm, the land is subject to slight topsoil stone content limitations. These act to cause minor restrictions on cultivations, harvesting and crop growth. The subsoils are also similarly stony. Within this mapping unit some of the profiles proved impenetrable to a soil auger, between 85-100 cm depth, because of moderately stony lower subsoils. The interaction between the soil textures and profile stone contents with the prevailing local climate results in a slight restriction in the amount of soil profile water available for uptake by crop roots. This minor limitation causes plants

to suffer drought stress for all or part of the growing season and crop yields will be slightly lowered as a result.

Subgrade 3a

5.5 Agricultural land of good quality occurs south of Cleare Craft Wood and also on the slightly sloping, lower lying land on the site. This land is restricted either by moderate soil droughtiness, soil wetness or topsoil stoniness limitations. This mapping unit is somewhat variable, arising from a large range of soil textures and profile stone contents. In the north of the site, profiles typically comprise non-calcareous medium silty clay loam topsoils over similarly textured subsoils which extend to approximately 55-70 cm depth before proving impenetrable to a soil auger. The profiles are well drained (Wetness Class I). The topsoils are slightly stony, containing 3-8% flints >2cm and 5-15% total flints by volume. These overlie moderately stony upper subsoils (containing approximately 15-30% total flints by volume) and very stony subsoils (containing approximately 40% total flints by volume) at 45-50 cm depth. From Pit 1, it has been assumed that the 'impenetrable' nature of these profiles arises from lower subsoils containing approximately 60% total flints by volume. The stony nature means that these subsoils are deemed to be poorly structured. The interaction of the soil conditions (i.e., texture, stone contents and subsoil structures) with the local climatic conditions at this site results in a moderate restriction in the amount of soil profile water available for uptake by crop roots. This causes plants to suffer drought stress for all or part of the growing season and crop yields will be moderately lowered as a result.

5.6 Adjacent to Bottom Lane the principal limitation is that of topsoil stoniness. Medium silty clay loam topsoils contain between 11-15% of flints >2cm by volume. These overlie similarly textured subsoils which extend to depth. The moderate amounts of large flints within the topsoil act to impede cultivation, harvesting and crop growth.

5.7 South of Cleare Craft Wood the land is limited by soil droughtiness or topsoil stones, arising from similar soil conditions to those described in paragraphs 5.5 and 5.6. However, discrete parts of this area are also limited by soil wetness. Non-calcareous medium clay loam or medium sandy loam topsoils overlie clay lower subsoils at about 45 cm depth. This clay is poorly structured and its slowly permeable characteristics act to cause imperfect soil drainage conditions (Wetness Class III). Such drainage impedance is indicated by gleying within the clay horizon and slight gleying directly below the topsoil. Consequently this land may be subject to moderate restrictions on the flexibility of cultivations, cropping and stocking.

Subgrade 3b

5.8 Approximately two-thirds of the agricultural land surveyed has been classified as moderate quality. The main limitation is that of soil droughtiness, sometimes in conjunction with topsoil stoniness or gradient. Profiles within this mapping unit typically comprise medium silty clay loam topsoils which overlie similarly textured

but very stony subsoils. Topsoils are generally moderately stony, and contain approximately 9-20% flints >2cm and 20-35% total flints by volume[1]. Where topsoils contain 16-20% of larger flints the land is restricted by significant topsoil stone content limitations. The high percentage of flints acts to impede cultivation, harvesting and crop growth plus cause excessive tyre and implement wear.

5.9 Due to the very stony nature of the subsoils the majority of auger borings within this mapping unit proved impenetrable to a soil auger either directly below the topsoil, or at very shallow depths within the soil profile (typically 35-50 cm depth). Where penetrable to the auger, subsoils were assessed as being moderately or very stony, with 30-45% total flints by volume. A soil inspection pit (Pit 1) was dug to fully assess conditions at depth. Subsoils were found to comprise medium silty clay loams which are very stony, changing from 60% to 65% total flints by volume at approximately 40 cm depth. Such subsoil stone contents meant that size/shape of peds and their degree of development could not be assessed. However, given the very high percentage of flints subsoil structures are assumed to be poor. In comparison with soil, flints retain much less available water for uptake by crop roots. Consequently the interaction between the soil conditions (especially that of profile stoniness and poor subsoil structures) and the prevailing local climate acts to significantly reduce the amount of profile available water. This will reduce the level and consistency of crop yields.

5.10 To the west of Cleare Craft Wood and to the south-east of Blue Close Wood the land can be classified as no higher than Subgrade 3b because of significant slope limitations. Gradients within the range of greater than 7° to 11° act to restrict the range of agricultural machinery that may be safely and efficiently used.

Grade 4

5.11 Land classed as poor agricultural quality is associated with severe slope limitations. Gradients within the range of greater than 11° to 18° may act to severely restrict or preclude mechanised farm operations from safe and efficient use. Such land is best suited to grazing.

[1] Due to underestimation of topsoil stone contents from auger boring observations a number of topsoil stone measurements using 2cm riddles were undertaken. The data from these riddlings has been used to grade the land where topsoil stoniness was found to be limiting, rather than relying upon estimates of topsoil stone contents from auger borings. The volume percentages cited in this report are those determined from the riddlings.

SOURCES OF REFERENCE

British Geological Survey (1948), Sheet No. 255, Beaconsfield, 1:63,360 Series (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 (1983), Sheet 6, Soils of South East England, 1:250,000 accompanying legend.

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 **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 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

Site Name : PROPSED GC, BEACONSFIELD Pit Number : 1P

Grid Reference: SU95509180 Average Annual Rainfall : 724 mm
Accumulated Temperature : 1395 degree days
Field Capacity Level : 154 days
Land Use : Permanent Grass
Slope and Aspect : degrees

HORIZON	TEXTURE	COLOUR	STONES >2	TOT.STONE	LITH	MOTTLES	STRUCTURE	CONSIST	SUBSTRUCTURE	CALC
0- 25	MZCL	10YR54 00	20	30	HR					
25- 40	MZCL	10YR54 00	0	60	HR			FR	P	
40- 60	MZCL	10YR54 00	0	65	HR			FR	P	
60-120	MZCL	75YR56 00	0	65	HR			FR	P	

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

Drought Grade : 3B APW : 064mm MBW : -40 mm
APP : 057mm MBP : -38 mm

FINAL ALC GRADE : 3B
MAIN LIMITATION : Topsoil Stoniness

SOIL PIT DESCRIPTION

Site Name : PROPSED GC, BEACONSFIELD Pit Number : 2P

Grid Reference: SU95329275 Average Annual Rainfall : 724 mm
Accumulated Temperature : 1395 degree days
Field Capacity Level : 154 days
Land Use : Permanent Grass
Slope and Aspect : 03 degrees E

HORIZON	TEXTURE	COLOUR	STONES >2	TOT.STONE	LITH	MOTTLES	STRUCTURE	CONSIST	SUBSTRUCTURE	CALC
0- 30	MZCL	10YR42 00	2	15	HR					
30- 53	MZCL	10YR54 00	0	8	HR		MDCSAB	FR	M	
53- 80	MZCL	10YR56 00	0	12	HR		MDCSAB	FR	M	
80-120	C	75YR56 00	0	30	HR	C	MDCSAB	FM	M	

Wetness Grade : 1 Wetness Class : I
Gleying :080 cm
SPL : No SPL

Drought Grade : 2 APW : 130mm MBW : 26 mm
APP : 111mm MBP : 16 mm

FINAL ALC GRADE : 2
MAIN LIMITATION : Droughtiness

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
1	SU95409280	PGR	E	01			1	1	113	9	117	24	2				DR	2	I80flinty Re2P
1P	SU95509180	PGR					1	1	064	-40	057	-38	3B				ST	3B	3b dr also
1S	SU95789184	PGR	E	02			1	1		0		0					ST	2	6% flints>2cm
2	SU95509280	PGR	E	02			1	1	102	-2	114	21	3A				DR	2	I75flinty Re2P
2P	SU95329275	PGR	E	03	080		1	1	130	26	111	16	2				DR	2	Trench cuttng
2S	SU95849171	PGR	E	03			1	1		0		0					ST	2	Border 2/3a st
3	SU95609280	PGR	E	02			1	1	078	-26	078	-15	3B				DR	3B	I50flinty Re1P
3S	SU95849166	PGR	E	03			1	1		0		0						1	2% flints >2cm
4	SU95609270	PGR	SE	03			1	1	067	-37	067	-26	3B				DR	3B	I40flinty Re1P
4S	SU95699182	PGR	E	03			1	1		0		0					ST	2	8% flints >2cm
5	SU95669259	PGR	E	03			1	1	093	-11	102	9	3A				DR	3A	I70 3a to 120
5S	SU95509180	PGR	NE	06			1	1		0		0					ST	3A	3a/3b topsl st
6	SU95509250	PGR	E	04			1	1	052	-52	052	-41	4				DR	3B	I35flinty Re1P
6S	SU95409190	PGR	E	01			1	1		0		0					ST	3B	16% flnts >2cm
7	SU95609250	PGR	E	03			1	1	084	-20	086	-7	3B				DR	3A	I55 3a to 120
7S	SU95459208	PGR	E	01			1	1		0		0					ST	3A	14% flnts >2cm
8	SU95679250	PGR	E	01			1	1	049	-55	049	-44	4				DR	3B	I30flinty Re1P
8S	SU95539226	PGR	NE	03			1	1		0		0					ST	3B	20% flnts >2cm
9	SU96109250	PGR			060	060	2	1	092	-12	094	-1	3A				ST	3A	Tsoil st sievd
9S	SU95599238	PGR	E	03			1	1		0		0						1	2% flints >2cm
10	SU95509240	PGR	E	02			1	1	049	-55	049	-44	4				DR	3B	I30flinty Re1P
10S	SU95679250	PGR	E	01			1	1		0		0					ST	3A	14% flnts >2cm
11	SU95609240	PGR	E	04			1	1	155	51	120	27	1					1	Deep profile
11S	SU95609246	PGR	E	03			1	1		0		0					ST	2	At Boring 63
12S	SU95409250	PGR	E	03			1	1		0		0					ST	2	9% flints >2cm
13	SU95819247	PGR	W	05	040	025	4	3B		0		0	3B				WE	3B	Sl. gley 25
13S	SU95609261	PGR	E	03			1	1		0		0						1	3% flints >2cm
14	SU96109240	PGR					1	1	046	-58	046	-49	4				DR	3B	I35flinty Re1P
15	SU96209240	PGR					1	1		0		0					ST	3B	Tsoil st sievd
16	SU95509230	PGR	NE	05			1	1	036	-68	036	-57	4				DR	3B	I25flinty Re1P
17	SU95669231	PGR	E	01			1	1	031	-73	031	-62	4				DR	3B	I20flinty Re1P
18	SU95719230	PGR	E	01			1	1	039	-65	039	-54	4				DR	3B	I25flinty Re1P
20	SU95909230	PGR	W	03			1	1	090	-14	091	-4	3A				DR	2	I80 3a to 120
21	SU96009230	PGR			045	045	3	3A		0		0					WE	3A	Sl. gley 28
22	SU96109230	PGR			045	060	2	1	113	9	088	-7	2				ST	3B	
23	SU96209230	PGR					1	1	073	-31	077	-18	3B				ST	3B	Augd 60
24	SU95509220	PGR					1	1	039	-65	039	-54	4				DR	3B	I25flinty Re1P
25	SU95909220	PGR	W	04			1	1	075	-29	077	-18	3B				DR	3B	I65 3b to 120
26	SU96009220	PGR				060	2	1	123	19	092	-3	2				ST	2	Sand lens 60
27	SU96109220	PGR					1	1	141	37	105	10	1				ST	3A	Tsoil st sievd
28	SU95109210	PGR					1	1	062	-42	062	-31	3B				DR	3B	I35flinty Re1P
29	SU95209210	PGR					1	1	111	7	119	26	2				ST	3B	Imp 75 flinty

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
30	SU95309210	PGR					1	1	050	-54	050	-43	4				DR	3B	I30flinty Re
31	SU95409210	PGR					1	1	080	-24	080	-13	3B				DR	3B	I48flinty Re
32	SU95509210	PGR					1	1	075	-29	075	-18	3B				DR	3B	I50flinty Re1P
33	SU95909210	PGR	W	04			1	1	064	-40	064	-31	3B				DR	3B	I45flinty Re1P
34	SU96009210	PGR					1	1	063	-41	063	-32	3B				DR	3B	I45flinty Re
35	SU96109210	PGR	E	04		025	3	3B		0		0					ST	3B	3b we also
36	SU95409200	PGR					1	1	070	-34	070	-23	3B				DR	3B	I40flinty Re
37	SU95509200	PGR					1	1	058	-46	058	-35	3B				DR	3B	I40flinty Re
38	SU95909200	PGR	W	05			1	1	051	-53	051	-44	4				ST	3B	I40flinty Re1P
39	SU96009200	PGR	W	02			1	1	051	-53	051	-44	4				DR	3B	I40flinty Re1P
40	SU96109200	PGR	E	04			1	1	145	41	109	14	1				ST	3A	Tsoil st sievd
41	SU95409190	PGR	S	02	085		1	1	144	40	110	17	1				ST	3B	Deep profile
42	SU95509190	PGR	S	03			1	1	036	-68	036	-57	4				DR	3B	I25flinty Re
43	SU95809190	PGR	E	01			1	1	118	14	114	21	2				DR	2	Imp 90 flinty
44	SU95909190	PGR	W	04			1	1	067	-37	067	-28	3B				DR	3A	I40flinty Re1P
45	SU96009190	PGR	E	06			1	1	140	36	108	13	1				ST	2	Tsoil st siev
46	SU95409180	PGR			045	055	2	1	105	1	114	21	3A				DR	2	I75flinty Re2P
47	SU95509180	PGR					1	1	057	-47	057	-36	3B				DR	3B	I40flinty Re1P
48	SU95609180	PGR	NE	06			1	1	064	-40	064	-29	3B				DR	3B	I50flinty Re
49	SU95709180	PGR	E	05			1	1	051	-53	051	-42	4				DR	3B	I30flinty Re1P
50	SU95809180	PGR	E	02			1	1	155	51	119	26	1				ST	2	Deep profile
51	SU99501980	PGR	SW	05			1	1	088	-16	094	-1	3A				DR	3A	Chalk 35
52	SU95609170	PGR	E	03			1	1	046	-58	046	-49	4				DR	3B	I30flinty Re1P
53	SU95709170	PGR	E	05	060		1	1	089	-15	100	7	3A				DR	3A	I70 3a to 120
54	SU95809170	PGR	E	03			1	1	152	48	118	25	1				ST	2	Deep profile
55	SU95409160	PGR	S	06			1	1	051	-53	051	-42	4				DR	3B	I30flinty Re1P
56	SU95809160	PGR	E	02			1	1	114	10	114	21	2				DR	2	Imp 85 flinty
57	SU95409150	PGR	S	03	080		1	1	129	25	115	22	2				DR	2	Imp 100 flinty
58	SU95709150	PGR	S	03	080	080	1	1	147	43	119	26	1					1	
59	SU95809150	PGR	S	02			1	1	910	-43	061	-32	3B				DR	3B	Chalk 25
60	SU95749160	PGR	E	05			1	1	063	-41	063	-30	3B				DR	3B	I35flinty Re1P
61	SU95599273	PGR	E	03			1	1	050	-54	050	-45	4				DR	3B	I32flinty Re
62	SU95519262	PGQ	E	03			1	1	059	-45	059	-36	3B				DR	3B	I40flinty Re
63	SU95609246	PGR	E	03	055		1	1	088	-16	099	4	3A				DR	3A	I70 3a to 120
64	SU95909190	PGR	W	05			1	1	076	-28	082	-13	3B				DR	3B	Chalk 18

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	0-28	mzcl	10YR42 00						2	0	HR	5							
	28-78	mzcl	10YR54 00						0	0	HR	8		M					
	78-80	hzcl	10YR54 00						0	0	HR	20		M					Impen 80 flinty
1P	0-25	mzcl	10YR54 00						20	0	HR	30							3B Topsoil stones
	25-40	mzcl	10YR54 00						0	0	HR	60		FR	P				
	40-60	mzcl	10YR54 00						0	0	HR	65		FR	P				
	60-120	mzcl	75YR56 00						0	0	HR	65		FR	P				
1S	0-25	mzcl	10YR42 00						6	0	HR	12							2 Topsoil stones
2	0-28	mzcl	10YR42 00						2	0	HR	5							
	28-38	mzcl	10YR54 00						0	0	HR	15		M					
	38-48	hzcl	10YR54 00						0	0	HR	10		M					
	48-68	c	75YR54 00	75YR56 00	F				0	0	HR	5		M					
	68-75	c	75YR56 00						0	0	HR	5		M					Impen 75 flinty
2P	0-30	mzcl	10YR42 00						2	0	HR	15							
	30-53	mzcl	10YR54 00						0	0	HR	8	MDCSAB	FR	M				
	53-80	mzcl	10YR56 00						0	0	HR	12	MDCSAB	FR	M				
	80-120	c	75YR56 00	05YR46 00	C			S	0	0	HR	30	MDCSAB	FM	M				Stony:not spl
2S	0-25	mzcl	10YR42 00						10	0	HR	15							2 Topsoil stones
3	0-28	mzcl	10YR43 00						2	0	HR	8							
	28-50	c	75YR46 00						0	0	HR	20		M					Impen 50 flinty
3S	0-25	mzcl	10YR42 00						2	0	HR	5							
4	0-28	mzcl	10YR32 00						2	0	HR	5							
	28-40	hzcl	75YR46 00						0	0	HR	20		M					Impen 40 flinty
4S	0-25	mzcl	10YR42 00						8	0	HR	15							2 Topsoil stones
5	0-28	mzcl	10YR43 00						2	0	HR	5							
	28-45	mzcl	10YR54 00						0	0	HR	15		M					
	45-70	mzcl	10YR54 00						0	0	HR	40		M					Impen 70 flinty
5S	0-25	mzcl	10YR43 00						15	0	HR	30							3a Topsoil stones
6	0-28	mzcl	10YR42 00						5	0	HR	20							Re 12S topsoil st
	28-35	mzcl	10YR54 00						0	0	HR	30		M					Impen 35 flinty
6S	0-25	mzcl	10YR43 00						16	0	HR	25							3b Topsoil stones
7	0-30	mzcl	10YR43 00						3	0	HR	10							Re 11S topsoil st
	30-50	mzcl	10YR54 00						0	0	HR	15		M					
	50-55	mzcl	10YR64 54						0	0	HR	40		M					Impen 55 flinty

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	CALC	
7S	0-25	mzcl	10YR43 00						14	0	HR	25							3A Topsoil stones
8	0-30	mzcl	10YR43 00						6	0	HR	15							Re 10S;I30 flinty
8S	0-25	mzcl	10YR42 00						20	0	HR	35							3B Topsoil stones
9	0-25	mszl	10YR43 00						12	0	HR	20							
	25-60	msl	10YR54 00						0	0	HR	20		M					
	60-80	c	10YR53 00	05YR56 00	M			Y	0	0		0		P		Y			
9S	0-25	mzcl	10YR42 00						2	0	HR	5							
10	0-30	mzcl	10YR42 00						5	0	HR	15							Re 12S;I30 flinty
10S	0-25	mzcl	10YR43 00						14	0	HR	20							3A Topsoil stones
11	0-30	mzcl	10YR43 00						2	0	HR	5							
	30-58	mzcl	10YR54 00						0	0	HR	5		M					
	58-120	hzcl	10YR54 00						0	0	HR	2		M					
11S	0-25	mzcl	10YR43 00						8	0	HR	15							2 Topsoil stones
12S	0-25	mzcl	10YR42 00						9	0	HR	20							2 Topsoil stones
13	0-25	hcl	10YR52 00						2	0	HR	5							
	25-40	c	10YR54 00	10YR56 00	C			S	0	0	HR	10		P		Y			Sl. gleyed
	40-60	c	10YR53 00	10YR56 00	C			Y	0	0	HR	5		P		Y			Sl. gleyed
13S	0-25	mzcl	10YR32 00						3	0	HR	15							
14	0-28	mcl	10YR43 00						15	0	HR	25							
	28-35	mcl	10YR56 00						0	0	HR	35		M					Impen 35 flinty
15	0-25	mcl	10YR43 00						16	0	HR	25							Impen 25 flinty
16	0-25	mzcl	10YR43 00						12	0	HR	25							Re 8S;I25 flinty
17	0-20	mzcl	10YR42 00						12	0	HR	20							Impen 20 flinty
18	0-25	mzcl	10YR42 00						9	0	HR	20							Impen 25 flinty
20	0-30	msl	10YR43 00						4	0	HR	8							
	30-55	msl	10YR54 00						0	0	HR	5		M					
	55-80	lms	10YR54 00						0	0	HR	30		M					Impen 80 flinty
21	0-28	mcl	10YR43 00						9	0	HR	12							
	28-45	mcl	10YR54 00	10YR56 00	C			S	0	0	HR	10		M					Sl. gleyed
	45-65	c	10YR53 00	10YR58 00	M			Y	0	0	HR	10		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	
22	0-20	msl	10YR43 00						16	0	HR	25							
	20-45	msl	10YR54 00						0	0	HR	30		M					
	45-60	msl	10YR53 00	10YR56 00	C			Y	0	0	HR	2		M					
	60-120	c	10YR53 00	05YR58 00	M			Y	0	0		0		P			Y		
23	0-28	mzcl	10YR43 00						16	0	HR	25							
	28-60	hcl	10YR54 00						0	0	HR	30		M					Augered 60
24	0-25	mzcl	10YR43 00						12	0	HR	20							Impen 25 flinty
25	0-28	msl	10YR43 00						8	0	HR	12							
	28-45	msl	10YR44 00						0	0	HR	12		M					
	45-65	ms	10YR66 00						0	0	HR	25		G					Impen 65 flinty
26	0-25	msl	10YR43 44						9	0	HR	20							
	25-45	msl	10YR54 00						0	0	HR	20		M					
	45-60	scl	10YR56 00	75YR58 00	C			S	0	0	HR	10		M					Sl. gleyed
	60-120	sc	10YR56 00	75YR58 00	M			S	0	0		0		P			Y		Sl. gleyed
27	0-28	mcl	10YR43 00						12	0	HR	20							
	28-45	hzcl	10YR54 00						0	0	HR	25		M					
	45-120	hzcl	10YR54 00	10YR58 00	F				0	0		0		M					
28	0-28	mzcl	10YR42 00						0	0	HR	3							Re 7S topsoil st
	28-35	mzcl	10YR43 00						0	0	HR	15		M					Impen 35 flinty
29	0-30	mzcl	10YR42 00						0	0	HR	6							Re 7S topsoil st
	30-48	mzcl	10YR54 00						0	0	HR	2		M					
	48-58	hzcl	10YR54 00						0	0	HR	2		M					
	58-78	c	10YR54 00	10YR56 00	F				0	0	HR	1		M					
30	0-25	mzcl	10YR42 00						0	0	HR	10							Re 7S topsoil st
	25-30	hzcl	10YR43 00						0	0	HR	25		M					Impen 30 flinty
31	0-28	mzcl	10YR42 00						0	0	HR	4							Re 7S topsoil st
	28-48	mzcl	10YR54 00						0	0	HR	15		M					Impen 48 flinty
32	0-25	mzcl	10YR43 00						6	0	HR	15							Re 7S topsoil st
	25-50	mzcl	10YR54 00						0	0	HR	20		M					Impen 50 flinty
33	0-28	mzcl	10YR43 00						8	0	HR	15							
	28-40	msl	10YR54 00						0	0	HR	25		M					
	40-45	msl	10YR54 00						0	0	HR	45		M					Impen 45 flinty
34	0-28	mzcl	10YR43 00						12	0	HR	20							
	28-45	mzcl	10YR54 00						0	0	HR	35		M					Impen 45 flinty
35	0-25	hcl	10YR43 00						16	0	HR	25							
	25-55	c	10YR56 00	75YR58 00	M			S	0	0	HR	10		P			Y		Sl. gleyed

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	0-35	mzcl	10YR33 00						0	0	HR	6							Re 7S topsoil st
	35-40	mzcl	10YR53 00						0	0	HR	15		M					Impen 40 flinty
37	0-30	mzcl	10YR43 00						8	0	HR	20							Re 7S topsoil st
	30-40	mzcl	10YR54 00						0	0	HR	35		M					Impen 40 flinty
38	0-28	mcl	10YR43 00						16	0	HR	25							
	28-40	hcl	10YR54 00						0	0	HR	40		M					Impen 40 flinty
39	0-30	mcl	10YR42 00						15	0	HR	25							
	30-40	mcl	10YR43 00						0	0	HR	45		M					Impen 40 flinty
40	0-30	mzcl	10YR43 00						12	0	HR	20							
	30-40	mzcl	10YR54 00						0	0	HR	30		M					
	40-120	mzcl	10YR54 00						0	0		0		M					
41	0-30	mzcl	10YR43 00						0	0	HR	10							Re 6S topsoil st
	30-85	mzcl	10YR54 00						0	0	HR	15		M					
	85-120	hcl	10YR63 00	75YR56 00	C			Y	0	0	HR	5		M					
42	0-25	mzcl	10YR43 00						13	0	HR	25							Re 6S;I25 flinty
43	0-30	mzcl	10YR42 00						2	0	HR	8							Re 1S topsoil st
	30-75	mzcl	10YR54 00						0	0	HR	10		M					
	75-90	mzcl	10YR44 00						0	0	HR	20		M					Impen 90 flinty
44	0-28	mzcl	10YR53 00						0	0	CH	10							
	28-40	c	75YR54 00						0	0	CH	40		M				Y	Imp40 chlk/flint
45	0-28	mzcl	10YR43 00						9	0	HR	20							
	28-120	hzcl	10YR54 00						0	0	HR	10		M					
46	0-30	mzcl	10YR43 00						0	0	HR	6							Re 1P topsoil st
	30-45	mzcl	10YR56 00						0	0	HR	4		M					
	45-55	hzcl	75YR46 00						0	0	HR	2		M					
	55-75	c	75YR56 00	75YR46 00	M			S	0	0	HR	5		P		Y			Sl. gleyed
47	0-28	mzcl	10YR43 00						8	0	HR	20							Re 1P topsoil st
	28-40	mzcl	10YR66 00						0	0	HR	35		M					Impen 40 flinty
48	0-25	mzcl	10YR43 00						8	0	HR	20							Re 5S topsoil st
	25-50	csl	10YR68 00						0	0	HR	40		M					Impen 50 flinty
49	0-30	mzcl	10YR42 00						5	0	HR	12							Re 4S;I30 flinty
50	0-30	mzcl	10YR42 00						3	0	HR	8							Re 1S topsoil st
	30-55	mzcl	10YR54 56						0	0	HR	5		M					
	55-120	hzcl	10YR56 00	00MN00 00	F				0	0		0		M					

AMPLE	DEPTH	TEXTURE	COLOUR	----MOTTLES----- COL	ABUN	CONT	PED COL.	GLEY	----STONES---- >2	>6	LITH	TOT	STRUCT/ CONSIST	SUBS STR	POR	IMP	SPL	CALC	
51	0-25	mzcl	10YR53 00						0	0	CH	8						Y	
	25-35	hzcl	10YR54 00						0	0	CH	30		M				Y	
	35-70	ch	10YR81 00						0	0	HR	5		P				Y	
52	0-30	mzcl	10YR43 00						8	0	HR	20							Impen 30 flinty
53	0-30	mzcl	10YR42 43						7	0	HR	20							
	30-60	mzcl	10YR54 53	10YR56 00	F				0	0	HR	20		M					
	60-70	hzcl	10YR53 00	10YR56 00	C			Y	0	0	HR	30		M					Impen 70 flinty
54	0-30	mzcl	10YR42 00						3	0	HR	7							Re 2S topsoil st
	30-70	mzcl	10YR54 00						0	0	HR	5		M					
	70-120	mzcl	10YR42 00	10YR64 00	F				0	0	HR	5		M					
55	0-20	mzcl	10YR42 00						0	0	HR	6							Re 1P topsoil st
	20-30	mzcl	10YR42 00						0	0	HR	20		M					
	30-32	mzcl	10YR54 00						0	0	HR	60		M					Impen 32 flinty
56	0-33	mzcl	10YR42 00						4	0	HR	10							
	33-70	mzcl	10YR54 00						0	0	HR	10		M					
	70-85	hzcl	10YR54 56						0	0	HR	15		M					Impen 85 flinty
57	0-25	mzcl	10YR43 00						3	0	HR	10							
	25-50	mzcl	10YR54 00						0	0	HR	10		M					
	50-80	mzcl	10YR54 00						0	0	HR	3		M					
	80-100	mzcl	10YR54 00	10YR56 00	C		00MN00 00	S	0	0	HR	8		M					Sl. gleyed
58	0-35	mcl	10YR42 43						1	0	HR	5							
	35-55	mzcl	10YR54 56						0	0	CH	2		M					
	55-80	hzcl	10YR54 56						0	0		0		M					
	80-120	zc	10YR53 54	10YR56 00	C			Y	0	0		0		P			Y		
59	0-25	mzcl	10YR43 00						0	0	CH	5						Y	
	25-40	ch	10YR81 00						0	0	HR	2		P				Y	
60	0-30	fszl	10YR42 00						7	0	HR	15							
	30-35	c	75YR58 00						0	0	HR	25		M					Impen 35 flinty
61	0-28	mzcl	10YR43 00						9	0	HR	15							
	28-32	hzcl	75YR56 00						0	0	HR	40		M					Impen 32 flinty
62	0-28	mzcl	10YR32 00						3	0	HR	15							
	28-40	mzcl	10YR54 00						0	0	HR	35		M					Impen 40 flinty
63	0-28	mzcl	10YR43 00						8	0	HR	15							2 Topsoil stones
	28-55	mzcl	10YR54 00						0	0	HR	30		M					
	55-70	hzcl	10YR54 00	10YR56 00	C			S	0	0	HR	20		M					Sl. gleyed;I70

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
64	0-18	mzcl	10YR53 00						0	0	CH	10						Y
	18-70	ch	10YR81 00						0	0	HR	5			P			Y