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# Vale of the White Horse Local Plan
# Land at Abingdon
# Agricultural Land Classification
# ALC Map and Report
# October 1996

Resource Planning Team
Guildford Statutory Group
ADAS Reading

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# AGRICULTURAL LAND CLASSIFICATION REPORT

## VALE OF THE WHITE HORSE LOCAL PLAN
## LAND AT ABINGDON

### Introduction

1. This report presents the findings of a semi-detailed Agricultural Land Classification (ALC) survey on 38 hectares of land situated to the south west of Abingdon, Oxfordshire. The survey was carried out during October 1996.

2. The survey was commissioned by the Ministry of Agriculture, Fisheries and Food (MAFF) from its Land Use Planning Unit, in Reading, in connection with the Vale of the White Horse 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 large field to the west of the site was partly in winter sown oilseed rape, the remainder of this area was newly ploughed. Arable crops cover the field in the far east and the remainder of the smaller fields are in permanent pasture. The areas shown as 'Other Land' comprise numerous farm buildings, some wooded areas, private gardens and wetland areas. Approximately 3-4 ha of land was not surveyed in the central part of the site.

### Summary

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

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

7. The fieldwork was conducted at an average density of 1 boring per 2 hectares. A total of 19 borings and three soil pits were described.

8. Extensive areas of land at this site have been classified as 'best and most versatile'. Grade 2 land (very good quality) and Subgrade 3a land (good quality) has been mapped on the basis of soil wetness and/or soil droughtinesss limitations. The remaining smaller pockets of land have been divided into two agricultural land classes. Subgrade 3b (moderate quality land) to the east of the site is relatively inextensive and has been designated on the basis of a soil wetness limitation. The area of Grade 4 land (poor quality agricultural land) to the west of Stonehill House, suffers from an extreme droughtiness limitation.

Table 1: Area of grades and other land

| Grade/Other land | Area (hectares) | % site area | % surveyed area |
|---|---|---|---|
| 2 | 8.6 | 22.6 | 27.5 |
| 3a | 19.8 | 52.1 | 63.3 |
| 3b | 0.9 | 2.4 | 2.8 |
| 4 | 2.0 | 5.3 | 6.4 |
| Other Land | 3.3 | 8.7 | - |
| Area not surveyed | 3.4 | 8.9 | - |
| Total surveyed area | 31.3 | - | 100.0 |
| Total site area | 38.0 | 100.0 | - |

## Factors Influencing ALC Grade

### Climate

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

10. 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 |
|---|---|---|
| Grid reference | N/A | SU 482 961 |
| Altitude | m, AOD | 60 |
| Accumulated Temperature | day°C (Jan-June) | 1450 |
| Average Annual Rainfall | mm | 603 |
| Field Capacity Days | days | 126 |
| Moisture Deficit, Wheat | mm | 116 |
| Moisture Deficit, Potatoes | mm | 110 |

11. 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.

12. 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.

13. The combination of rainfall and temperature at this site mean that there is no overall climatic limitation (Climatic Grade 1). However, climatic factors do interact with soil properties to influence soil wetness and droughtiness. At this locality the climate is relatively dry, in regional terms, such that the risk of soil droughtiness will be enhanced.

14. Local climatic factors such as frost risk and exposure are not thought likely to adversely affect agricultural land use on this site.

## Site

15. The land on this site ranges from 50m AOD along the south-eastern side of the site to 65m AOD in the north-west. Gradient and microrelief does not affect agricultural land quality across the site.

16. Flooding does not appear to be limiting on this site.

## Geology and soils

17. The relevant geological sheet (BGS, 1971) shows the majority of the site in the central and western sections of the site to be underlain by Kimmeridge Clay which is often dark grey in colour and calcareous. Over towards the eastern part of the site, fluvial gravels associated with thames deposits are mapped.

18. The most recently published soils information for this area (SSEW, 1983) maps the Charity 1 Association in the eastern half of the site which is developed over fluvial gravel deposits. In the western half of the site, the Wickham 2 Association is shown to occur. These are developed over the Kimmeridge Clay deposits. The soils of the Charity 1 Association are described as 'well drained fine silty and fine silty over clayey soils, locally very flinty, some shallow over flint gravel.'(SSEW, 1983). The soils of the Wickham 2 Association are described as 'slowly permeable seasonally waterlogged fine loamy over clayey, fine silty over clayey and clayey soils. Small areas of slowly permeable calcareous soils on steeper slopes.'(SSEW,1983).

## Agricultural Land Classification

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

20. 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*

21. Very good quality land has been mapped across the south-eastern part of the site interspersed with patches of poorer quality. The land is limited to a minor extent by soil droughtiness and/or soil wetness/workability.

22. Soils within this mapping unit were found to comprise calcareous, medium clay loam topsoils which may contain up to 5% total hard limestone and flint fragments. Subsoils are variable but commonly comprise similarly textured or clay subsoils which may contain up to 40% hard rock with occasional profiles containing soft limestone limestone fragments. A few profiles were found to become sandier with depth. The stonier profiles were impenetrable to the soil auger at depths between 85 and 90cm, but the soil resource below this was assumed to continue to 120cm depth.

23. The majority of soils in the Grade 2 mapping unit show signs of slightly impeded drainage through the presence of ochreous mottling at depths below 38cm. In very occasional

profiles a slowly permeable clayey horizon exists. The soils are thereby assessed as wetness classes I, II, or III, (see Appendix II) resulting in an ALC wetness grade of 1, or 2.

24. The overriding limitation to most of the Grade 2 land is minor soil droughtiness. The soil characteristics described in para. 22 above, combine with the prevailing climatic conditions (which are relatively dry in a regional context), to restrict the amount of water in the profile which will be available to plants. Moisture balance calculations indicate that there is insufficient soil moisture to meet the demands of a growing crop throughout the growing season. As a result the yield potential may be reduced, such that land cannot be classified higher than ALC Grade 2.

*Subgrade 3a*

25. Good quality land has been mapped across the western part of the site. Soils are variable within this unit but they are affected by either soil droughtiness or soil wetness restrictions.

26. Soil profiles affected by wetness comprise calcareous or non-calcareous, medium or heavy clay loam topsoils which may be very slightly stony (i.e., 1-5% total flint fragments) or slightly stony (6-8% flint). These overlie heavy clay loam and clay subsoils which are gleyed and slowly permeable between 28cm and 50cm depth. As a result, soil drainage will be impeded to the extent that wetness classes II and III are appropriate, which when combined with local climatic conditions, gives rise to a land classification of Subgrade 3a on the basis of soil wetness. Soil pit 3 (see Appendix III) is representative of these soils. This is likely to cause crop growth and development to be adversely affected, as well as restricting the timing of landwork and/or grazing.

27. Towards the central part of the site, soils were found to be impenetrable to the soil auger at shallow depths between 30cm and 48cm due to the presence of stony subsoil horizons. Calcareous and non-calcareous, medium clay loam and heavy clay loam topsoils containing 4-8% flint fragments with occasional soft limestone fragments were described. Some upper subsoils were impenetrable to the auger but where they were not, they consisted of calcareous, heavy clay loams with 5-10% total flint fragments. The soil pit (2P, see Appendix III) was described to determine the nature of the subsoil characteristics. They were found to be heavy clay loams, grading to medium sand at depth, which are freely draining (wetness class I), but which contain up to about 50% total stone by volume. Upper subsoil structures were found to be moderately developed and lower subsoils had a poorly developed structural condition. Despite part of the lower subsoil being extremely compacted , plant roots were able to penetrate it. A rooting depth of 120cm was assumed. The interaction between these stony soils and the prevailing climate (i.e., relatively dry), gives rise to soil droughtiness which will adversely affect the yield potential of crops.

*Subgrade 3b*

28. Moderate quality, Subgrade 3b land is limited by soil droughtiness restrictions. This land is confined to the far eastern section of the site and is limited in extent.

29. Soils with more severe soil droughtiness restrictions occur as a result of coarser textured (medium sand) subsoils occurring at shallower depths in the profile e.g.50cm depth together

with a high percentage of total flint rock e.g.40%. In view of soil the soil characteristics, Subgrade 3b is the most appropriate classification for the land.

*Grade 4*

30. The area of Grade 4 land (poor quality agricultural land) occurs in the central part of the site to the west of Stonehill House.

31. This land suffers from an extreme droughtiness limitation. Soils were found to be impenetrable to the soil auger at shallow depths (e.g.25 cm) due to the presence of stony subsoil horizons. The topsoils comprise calcareous, slightly to moderately stony, (2% > 2cm., 7-17% total flint fragments) medium clay loams overlying similar, but moderately or very stony (40-64% flint fragments) medium clay loam or medium sand subsoils. The soil pit (1P) was described to determine the nature of the subsoil characteristics. They were found to be medium clay loams, grading to medium sand at depth, which are freely draining (wetness class I), but which contain up to about 64% total stone by volume. The subsoil structure was found to be moderately developed with a loose consistency. The combination of soil textures, structures and very high stone contents together with the prevailing climate (i.e., relatively dry), gives rise to severe soil droughtiness restrictions. This will adversely affect the crop growth and yield potential on this land.

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## SOURCES OF REFERENCE

British Geological Survey (1971) *Sheet No. 253* (1:50,000 Scale).

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

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

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

Soil Survey of England and Wales (1984) *Soils and their Use in South East England, Bulletin No. 15.* SSEW: Harpenden.

| 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 | SU48209630 | OSR | | | 050 | 060 | 2 | 2 | 132 | 16 | 112 | 2 | 2 | | | | WD | 2 | |
| 1P | SU48509560 | PGR | | | | | 1 | 1 | 049 | -67 | 051 | -59 | 4 | | | | DR | 4 | |
| 2 | SU48109620 | OSR | N | 01 | 050 | 050 | 2 | 3A | 115 | -1 | 117 | 7 | 3A | | | | WE | 3A | |
| 2P | SU48209580 | PLO | N | 02 | | | 1 | 1 | 100 | -16 | 094 | -16 | 3A | | | | DR | 3A | ASSUME TO 120 |
| 3 | SU48309620 | OSR | N | 01 | 028 | 028 | 3 | 3A | 107 | -9 | 115 | 5 | 3A | | | | WE | 3A | |
| 3P | SU48109620 | OSR | N | 02 | 045 | 045 | 2 | 3A | 111 | -5 | 109 | -1 | 3A | | | | WE | 3A | |
| 4 | SU48009610 | OSR | N | 01 | 042 | 042 | 2 | 3A | | 0 | | 0 | | | | | WE | 3A | |
| 5 | SU48209610 | OSR | N | 02 | 035 | 035 | 3 | 3B | | 0 | | 0 | | | | | WE | 3B | |
| 6 | SU48109600 | OSR | N | 03 | 040 | 040 | 3 | 3A | | 0 | | 0 | | | | | WE | 3A | |
| 7 | SU48309600 | PLO | | | | | 1 | 2 | 052 | -64 | 052 | -58 | 4 | | | | DR | 3A | IMP32 SEEPIT 2 |
| 8 | SU48009590 | PLO | | | 050 | 050 | 2 | 3A | | 0 | | 0 | | | | | WE | 3A | |
| 9 | SU48209590 | PLO | | | | | 1 | 2 | 078 | -38 | 078 | -32 | 3B | | | | DR | 3A | IMP48 SEEPIT 2 |
| 10 | SU48109580 | PLO | | | 030 | 030 | 3 | 3B | | 0 | | 0 | | | | | WE | 3B | POSS 3A |
| 11 | SU48309580 | PLO | | | | | 1 | 2 | 067 | -49 | 067 | -43 | 3B | | | | DR | 3A | IMP40 SEEPIT 2 |
| 12 | SU48809570 | ARA | | | 075 | | 1 | 2 | 122 | 6 | 096 | -14 | 2 | | | | DR | 2 | IMP90 ASS 120 |
| 13 | SU49009570 | ARA | | | 070 | | 1 | 1 | 137 | 21 | 113 | 3 | 2 | | | | DR | 2 | IMP85 ASS 120 |
| 14 | SU48509560 | PGR | | | | | 1 | 1 | 038 | -78 | 038 | -72 | 4 | | | | DR | 4 | IMP25 SEEPIT 1 |
| 15 | SU48709560 | PGR | SE | 02 | | | 1 | 1 | 154 | 38 | 110 | 0 | 2 | | | | DR | 2 | |
| 16 | SU48909560 | PGR | | | | | 1 | 1 | 082 | -34 | 080 | -30 | 3B | | | | DR | 3B | |
| 17 | SU48309550 | PGR | S | 01 | 038 | 038 | 3 | 3A | | 0 | | 0 | | | | | WE | 3A | |
| 18 | SU48409550 | PGR | S | 01 | 038 | 038 | 3 | 2 | | 0 | | 0 | | | | | WE | 2 | |
| 19 | SU48809550 | PGR | E | 02 | | | 1 | 1 | 137 | 21 | 113 | 3 | 2 | | | | DR | 2 | |
| 20 | SU48309590 | PLO | S | 01 | | | 1 | 1 | 050 | -66 | 050 | -60 | 4 | | | | DR | 3A | IMP30 SEEPIT 2 |

| 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 | IMP | SPL | CALC | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10 | 0-30 | hcl | 10YR42 00 | | | | | | 2 | 0 | HR | 5 | | | | | | Y | |
| | 30-70 | c | 25Y 62 63 | 10YR58 00 | M | | 00MN00 | 00 Y | 0 | 0 | HR | 3 | | P | | | Y | Y | |
| 11 | 0-28 | mcl | 10YR32 00 | | | | | | 2 | 0 | HR | 4 | | | | | | Y | |
| | 28-40 | hcl | 10YR42 00 | | | | | | 0 | 0 | HR | 5 | | M | | | | Y | IMP FLINT |
| 12 | 0-25 | mcl | 10YR43 00 | | | | | | 0 | 0 | HR | 5 | | | | | | Y | |
| | 25-40 | mcl | 10YR44 00 | | | | | | 0 | 0 | HR | 5 | | M | | | | Y | |
| | 40-75 | mcl | 25Y 63 00 | | | | | | 0 | 0 | HR | 40 | | M | | | | Y | |
| | 75-90 | msl | 25Y 63 00 | 10YR58 00 | C | | | Y | 0 | 0 | HR | 40 | | M | | | | Y | IMP FLINT |
| 13 | 0-25 | mcl | 10YR42 00 | | | | | | 0 | 0 | HR | 5 | | | | | | Y | |
| | 25-38 | hcl | 10YR43 00 | | | | | | 0 | 0 | HR | 5 | | M | | | | Y | |
| | 38-70 | hcl | 25Y 63 72 | 10YR58 00 | F | | | | 0 | 0 | HR | 2 | | M | | | | Y | |
| | 70-85 | mcl | 25Y 63 00 | 10YR58 00 | M | | | Y | 0 | 0 | HR | 30 | | M | | | | Y | IMP FLINT |
| 14 | 0-20 | mcl | 10YR42 00 | | | | | | 2 | 0 | HR | 10 | | | | | | Y | |
| | 20-25 | mcl | 10YR43 00 | | | | | | 0 | 0 | HR | 40 | | M | | | | Y | IMP FLINT |
| 15 | 0-25 | mcl | 10YR42 00 | | | | | | 0 | 0 | HR | 5 | | | | | | Y | |
| | 25-58 | hcl | 10YR44 00 | | | | | | 0 | 0 | HR | 5 | | M | | | | Y | |
| | 58-120 | msl | 10YR53 00 | | | | | | 0 | 0 | HR | 5 | | M | | | | Y | |
| 16 | 0-28 | mcl | 10YR42 00 | | | | | | 0 | 0 | HR | 7 | | | | | | Y | |
| | 28-50 | mcl | 10YR43 00 | | | | | | 0 | 0 | HR | 40 | | M | | | | Y | |
| | 50-75 | ms | 10YR63 53 | | | | | | 0 | 0 | HR | 5 | | M | | | | Y | |
| | 75-90 | ms | 10YR63 53 | | | | | | 0 | 0 | HR | 40 | | M | | | | Y | IMP FLINT |
| 17 | 0-29 | hcl | 10YR43 53 | | | | | | 0 | 0 | SLST | 2 | | | | | | Y | |
| | 29-38 | c | 25 Y53 00 | | | | | | 0 | 0 | SLST | 2 | | M | | | | Y | |
| | 38-80 | c | 05 Y52 00 | 10YR58 00 | C | | | Y | 0 | 0 | SLST | 5 | | P | | | Y | Y | |
| 18 | 0-28 | mcl | 10YR43 00 | | | | | | 0 | 0 | SLST | 2 | | | | | | Y | |
| | 28-38 | c | 10YR53 00 | | | | | | 0 | 0 | SLST | 10 | | M | | | | Y | |
| | 38-80 | c | 05 Y52 00 | 10YR58 00 | C | | | Y | 0 | 0 | SLST | 2 | | P | | | Y | Y | |
| 19 | 0-25 | mcl | 10YR44 00 | | | | | | 0 | 0 | HR | 5 | | | | | | Y | |
| | 25-45 | hcl | 10YR44 00 | | | | | | 0 | 0 | HR | 5 | | M | | | | Y | |
| | 45-120 | c | 10YR36 00 | | | | | | 0 | 0 | | 0 | | M | | | | Y | |
| 20 | 0-30 | mcl | 10YR32 00 | | | | | | 3 | 0 | HR | 8 | | | | | | Y | IMP FLINT |

| 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 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0-30 | hcl | 10YR32 00 | | | | | | 1 | 0 | HR | 5 | | | | | | Y | |
| | 30-50 | c | 25 Y42 00 | | | | | | 0 | 0 | HR | 5 | | M | | | | Y | |
| | 50-60 | c | 25 Y53 00 | 10YR56 00 | C | | | Y | 0 | 0 | HR | 5 | | M | | | | Y | |
| | 60-68 | c | 25 Y53 00 | 10YR56 00 | C | | | Y | 0 | 0 | HR | 1 | | P | | | Y | Y | |
| | 68-120 | c | 05 Y41 00 | 10YR68 00 | C | | | Y | 0 | 0 | SLST | 2 | | P | | | Y | Y | |
| 1P | 0-25 | mcl | 10YR42 00 | | | | | | 2 | 0 | HR | 17 | | | | | | Y | |
| | 25-70 | ms | 10YR56 00 | | | | | | 0 | 0 | HR | 64 | SG L | M | | | | Y | ROOTS TO 70 |
| 2 | 0-32 | hcl | 10YR33 00 | | | | | | 1 | 0 | HR | 7 | | | | | | | |
| | 32-50 | c | 10YR34 00 | | | | | | 0 | 0 | HR | 2 | | M | | | | | |
| | 50-70 | c | 25 Y53 00 | 10YR58 00 | C | | | Y | 0 | 0 | SLST | 1 | | P | | | Y | Y | |
| | 70-90 | c | 25 Y43 00 | 25 Y56 00 | C | | | Y | 0 | 0 | SLST | 1 | | P | | | Y | Y | |
| 2P | 0-32 | mcl | 10YR42 00 | | | | | | 3 | 0 | HR | 8 | | | | | | Y | BORDER HCL |
| | 32-53 | hcl | 10YR42 43 | | | | | | 0 | 0 | HR | 15 | MDCSAB FM | M | | | | Y | |
| | 53-76 | hcl | 10YR54 00 | | | | | | 0 | 0 | HR | 38 | | P | | | | Y | |
| | 76-95 | ms | 10YR56 00 | | | | | | 0 | 0 | HR | 51 | SG L | M | | | | Y | |
| 3 | 0-28 | hcl | 25 Y42 00 | | | | | | 1 | 0 | HR | 3 | | | | | | Y | |
| | 28-80 | c | 25 Y53 00 | 10YR58 00 | C | | | Y | 0 | 0 | HR | 2 | | P | | | Y | Y | |
| 3P | 0-27 | hcl | 10YR42 00 | | | | | | 1 | 0 | HR | 7 | | | | | | | BORDER HCL |
| | 27-45 | c | 10YR43 00 | | | | | | 0 | 0 | HR | 2 | MDCSAB FM | M | | | | Y | |
| | 45-57 | c | 25Y 53 00 | 10YR56 00 | M | | | Y | 0 | 0 | | 0 | STCAB FM | P | Y | | Y | Y | |
| | 57-90 | c | 05Y 41 00 | 10YR58 00 | M | | | Y | 0 | 0 | | 0 | STCAB FM | P | Y | | Y | Y | |
| 4 | 0-28 | hcl | 25 Y42 00 | | | | | | 0 | 0 | HR | 1 | | | | | | | |
| | 28-42 | c | 25 Y54 00 | 10YR58 00 | F | | | | 0 | 0 | SLST | 1 | | M | | | | Y | |
| | 42-80 | c | 25 Y53 00 | 10YR58 00 | C | | | Y | 0 | 0 | SLST | 1 | | P | | | Y | Y | |
| 5 | 0-35 | hcl | 25 Y33 00 | | | | | | 2 | 0 | HR | 5 | | | | | | | |
| | 35-60 | c | 25 Y53 00 | 10YR56 00 | C | | | Y | 0 | 0 | SLST | 2 | | P | | | Y | | |
| | 60-80 | c | 05 Y41 00 | 25 Y56 00 | C | | | Y | 0 | 0 | SLST | 2 | | P | | | Y | Y | |
| 6 | 0-30 | hcl | 25 Y43 00 | | | | | | 4 | 1 | HR | 8 | | | | | | Y | |
| | 30-40 | c | 25 Y33 00 | | | | | | 0 | 0 | SLST | 2 | | M | | | | Y | |
| | 40-45 | c | 25 Y54 00 | 10YR56 00 | C | | 00MN00 00 | Y | 0 | 0 | SLST | 5 | | P | | | Y | Y | IMP FLINT |
| 7 | 0-25 | mcl | 10YR43 00 | | | | | | 0 | 0 | HR | 7 | | | | | | Y | |
| | 25-32 | hcl | 10YR43 00 | | | | | | 0 | 0 | HR | 10 | | M | | | | Y | IMP FLINT |
| 8 | 0-30 | hcl | 25Y 42 00 | | | | | | 1 | 0 | HR | 5 | | | | | | | |
| | 30-50 | c | 25Y 54 53 | | | | | | 0 | 0 | HR | 5 | | M | | | | | |
| | 50-75 | c | 25Y 62 63 | 10YR58 00 | C | | 00MN00 00 | Y | 0 | 0 | HR | 5 | | P | | | Y | Y | |
| 9 | 0-35 | hcl | 10YR32 00 | | | | | | 2 | 0 | HR | 6 | | | | | | | |
| | 35-48 | hcl | 10YR42 00 | 10YR58 00 | F | | | | 0 | 0 | HR | 10 | | M | | | | Y | IMP FLINT |

SOIL PIT DESCRIPTION

Site Name : LAND AT DRAYTON ROAD, AB  Pit Number :  1P

Grid Reference: SU48509560  Average Annual Rainfall :  603 mm
Accumulated Temperature : 1450 degree days
Field Capacity Level : 126 days
Land Use : Permanent Grass
Slope and Aspect :  degrees

| HORIZON | TEXTURE | COLOUR | STONES >2 | TOT.STONE | LITH | MOTTLES | STRUCTURE | CONSIST | SUBSTRUCTURE | CALC |
|---|---|---|---|---|---|---|---|---|---|---|
| 0- 25 | MCL | 10YR42 00 | 2 | 17 | HR | | | | | Y |
| 25- 70 | MS | 10YR56 00 | 0 | 64 | HR | | SG | L | M | Y |

Wetness Grade : 1  Wetness Class : I
Gleying :  cm
SPL :  cm

Drought Grade : 4  APW : 049mm  MBW : -67 mm
APP : 051mm  MBP : -59 mm

FINAL ALC GRADE : 4
MAIN LIMITATION : Droughtiness

SOIL PIT DESCRIPTION

Site Name : LAND AT DRAYTON ROAD, AB  Pit Number : 2P

Grid Reference: SU48209580
Average Annual Rainfall : 603 mm
Accumulated Temperature : 1450 degree days
Field Capacity Level : 126 days
Land Use : Ploughed
Slope and Aspect : 02 degrees N

| HORIZON | TEXTURE | COLOUR | STONES >2 | TOT.STONE | LITH | MOTTLES | STRUCTURE | CONSIST | SUBSTRUCTURE | CALC |
|---|---|---|---|---|---|---|---|---|---|---|
| 0- 32 | MCL | 10YR42 00 | 3 | 8 | HR | | | | | Y |
| 32- 53 | HCL | 10YR42 43 | 0 | 15 | HR | | MDCSAB | FM | M | Y |
| 53- 76 | HCL | 10YR54 00 | 0 | 38 | HR | | | | P | Y |
| 76- 95 | MS | 10YR56 00 | 0 | 51 | HR | | SG | L | M | Y |

Wetness Grade : 1
Wetness Class : I
Gleying : cm
SPL : cm

Drought Grade : 3A
APW : 100mm MBW : -16 mm
APP : 094mm MBP : -16 mm

FINAL ALC GRADE : 3A
MAIN LIMITATION : Droughtiness

SOIL PIT DESCRIPTION

Site Name : LAND AT DRAYTON ROAD, AB  Pit Number : 3P

Grid Reference: SU48109620
Average Annual Rainfall : 603 mm
Accumulated Temperature : 1450 degree days
Field Capacity Level : 126 days
Land Use : Oilseed Rape
Slope and Aspect : 02 degrees N

| HORIZON | TEXTURE | COLOUR | STONES >2 | TOT.STONE | LITH | MOTTLES | STRUCTURE | CONSIST | SUBSTRUCTURE | CALC |
|---|---|---|---|---|---|---|---|---|---|---|
| 0- 27 | HCL | 10YR42 00 | 1 | 7 | HR | | | | | |
| 27- 45 | C | 10YR43 00 | 0 | 2 | HR | | MDCSAB | FM | M | Y |
| 45- 57 | C | 25Y 53 00 | 0 | 0 | | M | STCAB | FM | P | Y |
| 57- 90 | C | 05Y 41 00 | 0 | 0 | | M | STCAB | FM | P | Y |

Wetness Grade : 3A
Wetness Class : II
Gleying :045 cm
SPL :045 cm

Drought Grade : 3A
APW : 111mm MBW : -5 mm
APP : 109mm MBP : -1 mm

FINAL ALC GRADE : 3A
MAIN LIMITATION : Wetness