

**ELSTREE GOLF AND COUNTRY
CLUB, HERTS**

RECONNAISSANCE SURVEY

**Agricultural Land Classification
ALC Map and Report**

April 1998

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Eastern Region
FRCA Cambridge**

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AGRICULTURAL LAND CLASSIFICATION REPORT

ELSTREE GOLF AND COUNTRY CLUB, HERTS

RECONNAISSANCE SURVEY

INTRODUCTION

1. This report presents the findings of a reconnaissance Agricultural Land Classification (ALC) survey of 53.8 ha of land west of Borehamwood in Hertfordshire. The survey was carried out during April 1998.
2. The survey was carried out by the Farming and Rural Conservation Agency (FRCA) for the Ministry of Agriculture, Fisheries and Food (MAFF), in connection with an application to extend a golf course area. This survey supersedes previous ALC information for this land.
3. The work was conducted by members of the Resource Planning Team in the Eastern Region of FRCA. 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 much of the agricultural land on the south of the site was leased to provide public open space. In the north of the site are several grassland paddocks. The areas mapped as 'Other land' comprise an area of woodland in the north, two soil mounds in the centre of the site and a large shed and associated outside concrete floor area in the south.

SUMMARY

5. The findings of the reconnaissance 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.

Table 1: Area of grades and other land

Grade/Other land	Area (hectares)	% site area
3b	50.8	94
Other land	3.0	6
Total site area	53.8	100

7. The fieldwork was conducted at an average density of one boring per three hectares. A total of 16 borings and one soil pit was described.

8. The entire site has been graded 3b (moderate quality agricultural land) due to significant wetness and workability limitations.

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 5 km grid datasets using the standard interpolation procedures (Met. Office, 1989).

Table 2: Climatic and altitude data

Factor	Units	Values
Grid reference	N/A	TQ 176976
Altitude	m, AOD	80
Accumulated Temperature	day°C (Jan-June)	1411
Average Annual Rainfall	mm	690
Field Capacity Days	days	147
Moisture Deficit, Wheat	mm	106
Moisture Deficit, Potatoes	mm	98
Overall climatic grade	N/A	Grade 1

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 (ATO, January to June), as a measure of the relative warmth of a locality.

13. The combination of rainfall and temperature at this site impose no limitation on the climate grade of this site. Therefore, the climatic grade for this site has been assessed as 1.

Site

14. The site occupies undulating land which ranges in altitude from 100 m AOD in the south to 80 m AOD in the centre. Neither gradient nor altitude constitute a limitation to the ALC grade.

Geology and soils

15. The published 1:63 360 scale geology map, sheet 256, North London, (Geological Survey of Great Britain, 1951) maps the southern half of the site as comprising London Clay. The northern part is shown as comprising mainly floodplain gravel.

16. On the 1:250 000 reconnaissance scale published soils map, sheet 4, Soils of Eastern England (Soil Survey of England and Wales, 1983) the entire site is shown as the Windsor Association which is briefly described as slowly permeable seasonally waterlogged clayey soils mostly with brown subsoils. Some fine loamy over clayey and fine silty over clayey soils and, locally on slopes, clayey soils with only slight seasonal waterlogging.

17. During this reconnaissance survey an inspection of the soils was carried out and two main soil types were identified.

18. In the southern half of the site soils typically comprise heavy silty clay loam, heavy clay loam or occasionally clay topsoils which directly overlie slowly permeable clay subsoils. Profiles are non-calcareous and very slightly or slightly stony throughout.

19. Soils in the northern portion of the site typically comprise slightly stony heavy clay loam or clay topsoils which directly overlie slowly permeable, moderately to very stony clay subsoils. These profiles are also non-calcareous throughout.

AGRICULTURAL LAND CLASSIFICATION

20. 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 1.

21. The location of the auger borings and pits is shown on the attached sample location map.

Subgrade 3b

22. The entire site has been graded 3b and corresponds with the imperfectly drained, clayey soils described in paragraphs 18 and 19. Both of these soils have been assessed as Wetness Class IV. This factor in combination with the heavy fine loam and clay topsoil textures limits land quality to subgrade 3b due to significant wetness and workability constraints.

Ruth Tarrant
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SOURCES OF REFERENCE

Geological Survey of Great Britain (England and Wales) (1951) *Sheet No. 256, North London, Drift Edition, Scale 1:63 360.*

BGS: London.

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

Met. Office: Bracknell.

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.

Soil Survey of England and Wales (1983) *Sheet 4, Soils of Eastern England, Scale 1:250 000.*

SSEW: Harpenden.

Soil Survey of England and Wales (1984) *Soils and their Use in Eastern England.*

SSEW: Harpenden

APPENDIX I

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.