

**OASIS SITE, HARE GREEN  
GREAT BROMLEY, ESSEX  
Agricultural Land Classification  
March 1997**

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# AGRICULTURAL LAND CLASSIFICATION REPORT

## OASIS SITE, HARE GREEN GREAT BROMLEY, ESSEX

### Introduction

1. This report presents the findings of a detailed, Agricultural Land Classification (ALC) survey of 10.4 ha of land at Hare Green, Great Bromley, Essex. The survey was carried out during March 1997.
2. The survey was commissioned by the Ministry of Agriculture, Fisheries and Food (MAFF) Land Use Planning Unit, Cambridge in connection with a planning application for employment purposes development. This survey supersedes previous ALC surveys on this land
3. The work was conducted by members of the Resource Planning Team in the Huntingdon Statutory Group in 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 the survey the land use was autumn sown cereals. A small area in the east had been planted with saplings.

### 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.

Table 1: Areas of grades and other land

Grade/Other land	Area (hectares)	% surveyed
2	9.9	95.2
Other land	0.5	4.8
Total agricultural land	9.9	95.2
Total survey area	10.4	100.0

7. The fieldwork was conducted at an average density of 1 boring per hectare. A total of 10 borings and 2 soil pits were described.

8. The whole of the site is mapped as grade 2 land (very good agricultural quality), and is restricted to this grade due to a slight wetness and workability limitation and/or slight droughtiness 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 5km grid datasets using the standard interpolation procedures (Met. Office, 1989).

Table 2: Climatic and altitude data

Parameter	Value
Grid reference	TM 104 251
Altitude (m, AOD)	32
Accumulated Temperature (day °C, Jan.–June)	1432
Average Annual Rainfall (mm)	566
Field Capacity Days	98
Moisture Deficit, Wheat (mm)	127
Moisture Deficit, Potatoes (mm)	124
Overall Climatic 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 (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 there are no overriding climatic limitations, and therefore the climatic grade 1 is assigned.

#### Site

14. The site is bounded in the south and east by the A604, the north by the A120(T) and the west by open farmland. The land slopes very slightly in an easterly direction.

## **Geology and soils**

15. The published 1:253 440 scale geology map (Geol. Survey, 1907) shows the site to comprise Glacial Drift over London Clay.

16. The published 1:250 000 reconnaissance soil survey map for the area (SSEW, 1983) shows the site to comprise soils of the Tendring Association. These are briefly described as deep often stoneless coarse loamy soils, with some slowly permeable seasonally waterlogged coarse and fine loamy over clayey soils.

17. During the current survey one soil type was encountered. Profiles typically comprise very slightly stony, non-calcareous medium silty clay loam (occasionally silt loam) topsoil over stoneless, non-calcareous fine sandy silt loam (occasionally sandy clay loam) upper subsoil. Lower subsoils typically comprise stoneless, non-calcareous sandy clay loam or sandy clay with gleying and common manganese concretions occurring at 55/60cm. These soils have been assessed as Wetness Class II (q.v. Appendix II). Towards the eastern end of the site profiles are free draining and are assessed as Wetness Class I.

## **Agricultural Land Classification**

18. 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.

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

### *Grade 2*

20. The whole of the agricultural land area is mapped as grade 2, and is restricted to this grade by slight wetness and workability limitation and/or slight droughtiness limitations. Where soils are slowly permeable below 55/60cm they have been assessed as Wetness Class II. The combination of these soil drainage characteristics and coarse and fine silty topsoils result in a minor wetness and workability limitation. In addition, the combination of profile textures, stone content and subsoil structures together with a relatively low rainfall result in some of the land being limited by slight droughtiness.

### *Other Land*

21. Other land comprises an area in the east of the site which has been planted with saplings.

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## SOURCES OF REFERENCE

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