

**Babergh District Local Plan  
Sudbury, Suffolk. Site 2**

**Agricultural Land Classification  
ALC Map and Report**

**May 1999**

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Eastern Region  
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# AGRICULTURAL LAND CLASSIFICATION REPORT

## Babergh District Local Plan, Sudbury, Suffolk. Site 2.

### INTRODUCTION

1. This report presents the findings of a detailed Agricultural Land Classification (ALC) survey of 57.5 ha of land at Site 2 (south of Chilton Hall) in the Babergh District Local Plan. The survey was carried out during May 1999.
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 the Babergh District Local Plan. 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 the land on the site was under cereals, oilseed rape and rough grass. The areas mapped as 'Other' include farm buildings, private dwellings, small areas of woodland and a large pond. The area covered by oilseed rape was not surveyed as the crop was impenetrable.

### 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: Area of grades and other land

Grade/Other land	Area (hectares)	% surveyed area	% site area
2	30.8	74	54
3a	10.7	26	19
Agricultural land not surveyed	11.6	N/A	20
Other land	4.4	N/A	7
Total surveyed area	41.5	100	73
Total site area	57.5	-	100

7. The fieldwork was conducted at an average density of 1 boring per hectare. A total of 45 borings and 3 soil pits was described.

8. Land mapped as grade 2 (very good quality agricultural land) occurs over the majority of the site and is restricted to this grade due to a minor droughtiness limitation, or minor wetness and workability limitation.

9. Land mapped as subgrade 3a (good quality agricultural land) occurs on the southeastern boundary and in a narrow ribbon in the northern part of the site and is restricted to this subgrade due to a moderate droughtiness limitation, or moderate wetness and workability limitation.

## FACTORS INFLUENCING ALC GRADE

### Climate

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

11. 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	TL 893 424
Altitude	m, AOD	65
Accumulated Temperature	day°C (Jan-June)	1392
Average Annual Rainfall	mm	598
Field Capacity Days	days	106
Moisture Deficit, Wheat	mm	119
Moisture Deficit, Potatoes	mm	114
Overall climatic grade	N/A	Grade 1

13. 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.

14. 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.

15. The combination of rainfall and temperature impose no overall limitation to land quality and hence the site has a climatic grade of 1.

### Site

16. The site lies to the northeast of Sudbury. It is bounded in the north by Chilton Hall Farm and associated woodland, the south by the A134 road, with all other boundaries to open farmland. From a height of approximately 68 m AOD on the eastern boundary the land gently

slopes in a westerly direction to a height of 60 m AOD on the western boundary, with the extreme southwest corner being at an approximate height of 50 m AOD. Broad Oak, Chilton Grange and farm buildings and Winthrop Hall with associated private dwellings are situated within the site.

### **Geology and soils**

17. The 1:50 000 scale geology map (BGS, 1991) maps the area as predominately boulder clay over Crag, with sands and gravels in the southeast and extreme northeast. A narrow band of head material runs through the centre of the site in an east/west direction with a small outcrop in the extreme south east of the site.

18. The 1:250 000 scale reconnaissance soil map (SSEW, 1983) shows the majority of the site to comprise soils of the Melford Association. These are briefly described as deep well drained fine loamy over clayey, coarse loamy over clayey and fine loamy soils, some with calcareous subsoils. To the northwest soils of the Ashley Association are mapped these being briefly described as fine loamy over clayey soils, some with slowly permeable subsoils and slight seasonal waterlogging.

19. During the current survey three main soil types were encountered.

20. The first soil type occurs in the north, northwest and south of the site with profiles typically comprising variably calcareous, very slightly stony medium clay loam or heavy clay loam topsoils over variably calcareous, slightly stony heavy clay loam upper subsoil. Lower subsoils comprise calcareous, slightly stony clay merging to chalky boulder clay at depth. The profiles are free draining although gleying occurred occasionally at depth.

21. The second soil type occurs in the northeast and central southern parts of the site with profiles typically comprising non-calcareous, very slightly stony medium or heavy clay loam topsoils over non-calcareous, slightly stony heavy clay loam upper subsoils. Lower subsoils comprise calcareous, slightly stony clay.

22. The third soil type occurs in small areas in the southeast and southwest of the site with profiles typically comprising non-calcareous, very slightly stony medium silty clay loam topsoils over non-calcareous, slightly stony heavy silty clay loam upper subsoils. Lower subsoils comprise slightly stony, permeable clay.

### **AGRICULTURAL LAND CLASSIFICATION**

23. 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.

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

#### **Grade 2**

25. Land mapped as grade 2 occurs over the majority of the surveyed area and corresponds to the soils described in paragraphs 20 and 22. These soils are generally well

drained (Wetness Class I) and hold moderately good reserves of available water for crop growth. However the dry climate in this area results in a minor droughtiness limitation which restricts the land to this grade. Some profiles were assessed as wetness class II and land in these areas is restricted to this grade due to a minor wetness and workability limitation.

### **Subgrade 3a**

26. Land mapped as subgrade 3a occurs in a narrow ribbon in the north of the site and on the southwest boundary and corresponds to the soils described in paragraph 21. The soils have been assessed as either as Wetness Class I or III, dependant upon the permeability of the lower subsoil, and land is restricted to this subgrade due to either a moderate droughtiness limitation or a moderate wetness and workability limitation.

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## SOURCES OF REFERENCE

British Geological Survey (1991) *Sheet No. 206, Sudbury. Solid and Drift. Scale 1:50 000.*  
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 4. 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.