

## **AGRICULTURAL LAND CLASSIFICATION**

### **LAND AT WOODHALL SPA**

#### **1.0 INTRODUCTION**

- 1.1 An Agricultural Land Classification (ALC) survey of the 79.4 ha site was undertaken on behalf on MAFF in March 1995 using guidelines contained in MAFF published Revised Guidelines and Criteria for Grading the Quality of Agricultural Land (MAFF, 1988).
- 1.2 The survey was undertaken using a hand held dutch auger and soils were sampled at 100 m grid intersections to 120 cm depth wherever possible. This information was supplemented by data collected from three soil inspection pits.
- 1.3 On the provisional 1:63 360 scale ALC map Sheet 113, the site has been mapped as grade 3 and non-agricultural. The map is of a provisional nature and the current survey was undertaken to provide more detailed site specific information.
- 1.4 At the time of survey the majority of the site was forested, with open land under permanent grass, winter cereals or ploughed and rolled awaiting planting.

#### **2.0 PHYSICAL FACTORS AFFECTING LAND QUALITY**

##### Climate

- 2.1 Climate data for the site was interpolated from data published in the Agricultural Climatic Dataset (Meteorological Office, 1989). This indicates that for an average site altitude of 10 m AOD, the average annual rainfall is 587 mm (23.1"), while the accumulated temperature (ATO) is 1416 days °C. The field capacity days are 120, and moisture deficits for wheat and potatoes

are 116 mm and 110 mm respectively. The climatic characteristics do not impose any climatic limitation to the ALC grading of the site.

### Altitude and Relief

- 2.2 The site comprises level land at an altitude of approximately 10 m AOD. Altitude does not constitute a limitation to the ALC grading of the site.

### Geology and Soils

- 2.3 The published 1:253 440 scale drift edition geology map, sheet 12 (Geol. Survey 1953) shows the majority of the site to comprise Glacial Drift Boulder Clay with Post Glacial Plateau Gravels on the northern and eastern edges of the site.
- 2.4 No detailed soil map exists for the area but the reconnaissance 1:250 000 scale map "Soils of Eastern England" (Soil Survey of England and Wales, 1983) shows the whole area to comprise the Beccles 2 Association (\*1).
- 2.5 Three soil types were encountered. The first type occurs in the area to the north of Coal Pit Wood and typically comprises very slightly stony, non calcareous sandy clay loam topsoil over very slightly stony non calcareous clay subsoil. Gleying invariably occurs within 30/35 cms and is evident to depth giving rise to wetness class III. Occasionally at depths in excess of 80 cms chalky boulder clay was encountered.
- 2.6 The second soil type occurs in a small area in the extreme north of the site and also in the area between The Rough and the drainage ditch to the north.

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\*1 Beccles 2 Association - Slowly permeable, seasonally waterlogged fine and coarse loamy over clayey soils. Some deep sandy soils affected by groundwater.

### Subgrade 3b

- 3.3 This grade occurs on the remainder of the surveyed area. In the areas described in paragraph 2.6 soils comprise well drained (wetness class I/II) sandy soils over sand. Consequently profiles are significantly droughty and precluded from a higher grade due to droughtiness restrictions.

In the areas described in paragraph 2.7 soils comprise imperfectly drained (wetness class III) fine loamy over clayey soils. The heavy textured non calcareous topsoils combine with the poor drainage status to impose a significant wetness and workability restriction. The land is therefore restricted to subgrade 3b.

### Non Agricultural

- 3.4 The majority of the land mapped as non agricultural is under mixed coniferous and broad leaved woodland. There is a small area to the south east of Bracken Woodside Farm which is a mix of ponds and swamp land.

March 1995

Resource Planning Team  
ADAS Cambridge

## **REFERENCES**

**GEOLOGICAL SURVEY OF GREAT BRITAIN, (England and Wales) 1953. Drift Edition Sheet 12. 1:253 440 scale.**

**MAFF, 1974. Agricultural Land Classification map Sheet 113, Provisional 1:63 360 scale.**

**MAFF, 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. Met. Office, Bracknell.**

**SOIL SURVEY OF ENGLAND AND WALES 1983. Sheet 4. Eastern England 1:250 000 scale.**

## Appendix 1

### **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 include 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 and horticultural crops can usually be grown but on some land in the grade there may be reduced flexibility due to difficulties with the production of the more demanding crops such as winter harvested vegetables and arable crops. The level of yield is generally high but may be lower or more variable than Grade 1.

### **Grade 3 - good to moderate quality agricultural land**

Land with moderate limitations which affect the choice of crops, timing and type of cultivation, harvesting or the level of yield. Where 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 levels of yields. It is mainly suited to grass with occasional arable crops (e.g. cereals and forage crops) the yield of which are variable. In most 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 very severe limitations which restrict use to permanent pasture or rough grazing, except for occasional pioneer forage crops.

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#### **2.0 PHYSICAL FACTORS AFFECTING LAND QUALITY**

##### Climate

- 2.1 Climate data for the site was interpolated from data published in the *Agricultural Climatic Dataset (Meteorological Office, 1989)*. This indicates that for an average site altitude of 10 m AOD, the average annual rainfall is 587 mm (23.1”), while the accumulated temperature (ATO) is 1416 days °C. The field capacity days are 120, and moisture deficits for wheat and potatoes

are 116 mm and 110 mm respectively. The climatic characteristics do not impose any climatic limitation to the ALC grading of the site.

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