

AGRICULTURAL LAND CLASSIFICATION

LAND AT WEST WRATTING, CAMBRIDGESHIRE

1.0 INTRODUCTION

- 1.1 A semi-detailed Agricultural Land Classification survey was carried out over 130 ha of land at West Wrating, in connection with a planning application for a golf course.
- 1.2 The site is situated to the north east of West Wrating and to the south of Western Colville.
- 1.3 A total of 65 auger borings were made on the agricultural land across the site using alternative, parallel lines of a 100 metre grid, giving an overall boring density of approximately 1 every 2 hectares.
- 1.4 On the published one inch to one mile Agricultural Land Classification map sheet No 148 (MAFF, 1968) the site is shown as grade 2. The findings of the recent semi - detailed survey indicate that land of grades 2 and 3a quality occur on site.

2.0 PHYSICAL FACTORS AFFECTING LAND QUALITY

Relief

- 2.1 The site occupies a watershed location with a maximum altitude of 120 metres AOD being recorded on the plateau south west of Hill Crofts Wood. From this point the land falls in all directions, with a minimum altitude of 92 metres AOD being recorded in the small valley north of West Wrating Hall, to the west of the site. Maximum gradients of 3° were recorded in the vicinity of Hall Wood, but these do not constitute a limitation to land quality.

Climate

- 2.2 Climatic information for the site has been interpolated from the 5 km grid agro-climatic dataset compiled by the Meteorological Office (Met Office, 1989). The average annual rainfall for the site is 620 mm. The number of days at which the site is likely to be at field capacity is also low at 95. Soil moisture deficits of 106 mm & 98 mm are recorded for wheat and potatoes respectively.
- 2.3 These climatic characteristics do not impose a climatic limitation on the ALC grading of the site.

3.0 SOIL PHYSICAL CHARACTERISTICS

3.1 Geology

The published 1:63,360 drift edition geology map, sheet 205 (Saffron Walden) shows the geology of the site to comprise glacial boulder clay drift with a small area of Upper Cretaceous chalk exposed on the south west facing valley slopes to the north of West Wrattling Hall,

- 3.2 There is no detailed published soil map available for this area. During the course of this survey, a detailed inspection of the soils indicated the presence of two main soil types which are more fully described below.
- 3.3 The majority of the site typically comprised heavy clay loam topsoils to a depth of 28-32 cm, overlying heavy clay loam or clay upper subsoils becoming chalky clay typically at 55-60 cm. These soils were assessed as predominantly wetness class II or on the shoulders of some slopes where heavier clay occurs nearer the surface, occasionally wetness class III. Profiles were found to be calcareous throughout. Stone content was negligible in the topsoil, increasing with depth to 10-15% in the upper subsoil (comprising small flint and chalk stones) becoming 20-30% in the lower subsoil consisting mainly of small chalk stones and fragments.
- 3.4 A second soil type was identified on the south west facing valley slopes to the west of the site coinciding with the geological deposit of Upper Cretaceous chalk. These soils are slightly stony, calcareous throughout and typically comprised heavy clay loam topsoils overlying heavy clay loam or clay upper subsoils overlying chalk from typically 55 cm +.

These soils were assessed as wetness class I and soil pit investigations indicate that roots are able to penetrate and extract water from the underlying chalk to moderate depth. The main limitation to agricultural land quality is droughtiness.

4.0 AGRICULTURAL LAND CLASSIFICATION

4.1 The site has been graded using the revised guidelines of the ALC System (MAFF, 1988). A breakdown of the grades in hectares and in percentage terms is given below:-

| ALC Grade | Hectares | % |
|------------------|----------|-------|
| 2 | 82.4 | 60.3 |
| 3a | 35.5 | 26.0 |
| Non Agricultural | 18.6 | 13.6 |
| Urban | 0.1 | 0.1 |
| <hr/> | | |
| Total | 136.6 | 100.0 |

4.2 Grade 2

The majority of the site has been mapped as Grade 2. This land is associated with the wetness class II variants of the soils described in paragraph 3.3. The land is limited from a higher grade by slight wetness and droughtiness constraints.

4.3 Subgrade 3a

Land graded 3a was identified in three separate areas. Two areas towards the Southwest and Southeast of the site are associated with the more poorly drained (wetness class III) variants of the soils described in paragraph 3.3. These soils are excluded from a higher grade by wetness/workability imperfections. An area adjacent to the western site boundary was identified which is associated with the soils described in paragraph 3.4. These soils are excluded from a higher grade by droughtiness constraints.

4.4 Non Agricultural

Areas of woodland have been mapped as non agricultural.

4.5 Urban

Residential and farm buildings have been mapped as urban.

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