

AGRICULTURAL LAND CLASSIFICATION
RUTLAND LOCAL PLAN-SITES AT OAKHAM, LEICESTERSHIRE

1.0 INTRODUCTION

- 1.1 The site, an area of 19.2 hectares is being considered for residential development in the context of the Rutland Local Plan. ADAS Statutory Unit carried out a detailed Agricultural Land Classification survey of the site in July 1992 at an auger boring density of approximately 1 boring per hectare. These borings were supplemented by a soil inspection pit in order to assess subsoil conditions.
- 1.2 On the published Agricultural Land Classification Map sheet No 122 (Provisional, scale 1:63,360, MAFF 1972) the whole of the site is mapped as grade 3. The current survey was undertaken to provide a more detailed representation of the agricultural land quality.

2.0 PHYSICAL FACTORS AFFECTING LAND QUALITY

- 2.1 Climate data for the site was obtained from the published agricultural climatic dataset (Met Office 1989). This indicates that there is climatic boundary in relation to altitude crossing the site.
- 2.1.1 Land below 130m AOD has an average rainfall of 655mm (26.1"). This data also indicates that the field capacity days are 145 and moisture deficits are 96mm for wheat and 84mm for potatoes. These climatic characteristics do not impose any climatic limitation on the ALC grading of the survey site.
- 2.1.2 For land above 130m AOD, the climate is slightly cooler and wetter. Land with an altitude of 140m AOD, has an annual average rainfall of 680mm (27.7°) and accumulated temperature above 0° from January to June (ATO) of 1318.

The combination of a relatively high annual average rainfall and a low ATO imposes a slight climatic limitation on the Agricultural Land Classification (ALC) grade of the site. Consequently these climatic characteristics restrict this part of the site to grade 2 (see figure 1, page 6, MAFF, 1988).

- 2.2 The survey area comprises two sites which are divided by the Braunston Road. The smaller northern site has a maximum height of 140 m AOD. This falls moderately steeply towards a stream, slopes range from 6-7°. The larger site south of Braunston Road slopes gently south easterly. There are minor microtopographic undulations across the site but these do not form a limitation to the ALC grade. Consequently neither gradient or relief constitute limitations to the ALC grade.

Geology and Soils

- 2.3 The published 1:50,000 scale solid and drift geology map, sheet 157 (Geological Survey of Great Britain 1978) shows the whole of the site to comprise Jurassic Upper Lias Clay.
- 2.4 The Soil Survey of England and Wales mapped the soils of the area in 1983, at a reconnaissance scale of 1:250,000. This map indicates that the whole of the site comprises the Denchworth Association* which is derived from the Jurassic clay geology deposits. These are typically slowly permeable seasonally waterlogged clayey soils. During the recent field survey a single soil type was identified.
- 2.4.1 The soil comprises heavy textured topsoils over clay subsoils which are gleyed and slowly permeable. These profiles are assessed as poorly drained, ie. wetness IV.

3.0 **AGRICULTURAL LAND CLASSIFICATION**

- 3.1 The definition of the Agricultural Land Classification grades are included in Appendix 1.

*Denchworth Association - slowly permeable seasonally waterlogged clayey soils with similar fine loamy over clayey soils. Some fine loamy slowly permeable calcareous clayey soils.

3.2 The whole of the site (19.2 ha) has been mapped as subgrade 3b. The heavy topsoil textures, shallow depth to slowly permeable layers and a moderately high rainfall combine to significantly limit the flexibility of the land for crop cultivation. Consequently a grade of 3b has been assigned to this land.

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REFERENCES

GEOLOGICAL SURVEY OF ENGLAND AND WALES (1978). Solid and Drift edition.
Sheet 157 Stamford 1:50,000 scale.

MAFF (1972). Agricultural Land Classification Map sheet 122 Provisional
1:63,360 scale.

MAFF (1988). Agricultural Land Classification of England and Wales (Revised
Guidelines and Criteria for grading the quality of land). Alnwick.

METEOROLOGICAL OFFICE (1989). Published climatic data extracted from the
agroclimatic dataset, compiled by the Meteorological Office.

SOIL SURVEY OF ENGLAND AND WALES (1983). Sheet 4 Soils of 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 yields 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 winter 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 level of yields. It is mainly suited to grass with occasional arable crops (eg 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.