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ADAS

FOOD, FARMING, LAND & LEISURE

[redacted]

AGRICULTURAL LAND CLASSIFICATION

LAND AT RED HOUSE FARM

NORTH OF IPSWICH

SUFFOLK

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1.0 INTRODUCTION

1.1 This 15.7 ha site was inspected on behalf of MAFF, by ADAS Statutory Resource Planning Team, during October 1992 in connection with residential development proposals. A total of 15 auger borings were made on site at 100 m intervals and this data was supplemented by information collected from one soil pit.

1.2 On the provisional 1:63,360 scale Agricultural Land Classification Map, sheet no 150 (MAFF 1972) the whole site is mapped as grade 2. The current survey was undertaken to provide more detailed information on agricultural land quality.

2.0 PHYSICAL FACTORS AFFECTING LAND QUALITY

2.1 Climate data for the site was interpolated from data contained in the published agricultural climatic dataset (Met Office 1989). This indicates that for the sites average altitude of 45m AOD the average annual rainfall is 589mm (23.2"). This data also indicates that the field capacity days are 106 and moisture deficits for wheat and potatoes are 124mm and 120mm respectively. These climatic characteristics do not impose any climatic limitation on the site.

2.2 Altitude and Relief

The maximum height of 48m AOD occurs in the south west of the site. The land falls very gently over gradients of approximately 2° to a minimum altitude of 38m AOD in a shallow valley feature in the north east corner of the site.

2.3 Geology and Soils

The published 1:63360 scale, drift edition geology map, sheet 207 (Geological Survey of England & Wales 1965) shows the majority of the site is overlain with Recent and Pleistocene boulder clays. Glacial

sand and gravel deposits are mapped along the eastern edge of the site as well as a small area approximately north west of the centre. The underlying solid geology consists of Eocene London Clay and Oldhaven Beds.

2.4 No detailed soil map is available of the area but the reconnaissance 1:250,000 scale soil map "Soils of Eastern England" published by the Soil Survey of England & Wales in 1983, shows the whole site to be covered by the Melford (571o) Association. The legend describes these soils as deep well drained fine loamy over clayey, coarse loamy over clayey and fine loamy soils, some with calcareous clayey subsoils.

2.4.1 The soils encountered during the ADAS survey correspond well with the above description, but with slight variations within the site.

In the north, most of the soil profiles were well drained and consisted of sandy clay loam to 60-85cm over clay or sandy clay, which may overlie chalky boulder clay below 95cm. These horizons were typically non calcareous above 95cm and slightly or very slightly stony throughout.

2.4.2 In the southern part of the site the profiles typically are slightly heavier in the upper horizons, predominantly comprising medium clay loams to 50-70cm over calcareous clay and sandy clay. Again the profiles were slightly and very slightly stony throughout.

2.4.3 In the centre of the site is a small patch of much lighter medium sandy loam (to a depth of 55cm) over a loamy medium sand (to 70cm) over clay. This corresponds well with the geological map.

2.4.4 A small area on the eastern fringe of the site has disturbed soils where an old pond has been infilled.

3.0 AGRICULTURAL LAND CLASSIFICATION

3.1 The definitions of the Agricultural Land Classification (ALC) grades are included in Appendix 1.

3.2 The northern and eastern parts of the site have been graded 3a, with the southern part grade 2. A small area of subgrade 3b is found on the eastern fringe coinciding with the disturbed land.

The table below shows the precise breakdown of the ALC grades of the site.

AGRICULTURAL LAND CLASSIFICATION

Grade	ha	%
2	5.7	36.3
3a	9.5	60.5
3b	0.3	1.9
Non Agricultural	0.2	1.3
TOTAL	15.7	100.0

3.3 Grade 2

The grade 2 land is associated with the slightly heavier clay loam soils as described in paragraph 2.4.2. These soils are generally well drained (Wetness Class I) and hold moderately good reserves of available water for crop growth. However the very dry climate in this area results in a slight droughtiness limitation which excludes this land from grade 1. Some profiles also show slight evidence of profile wetness which would also restrict the land to grade 2 (very good quality agricultural land).

3.4 Subgrade 3a

This land is associated with the slightly lighter sandy clay loams and sandy loam soils as described in paragraphs 2.4.1 and 2.4.3. The soils are well drained (Wetness Class I) but hold lower reserves of available water for crop growth. With the dry climate this results in an increased droughtiness limitation, thus the land has been assigned to ALC subgrade 3a.

3.5 Subgrade 3b

To the east of the site a small area of land has been graded 3b. This was on the site of an infilled pond where slightly to moderately stony medium clay loam soils predominate.

R ORPIN
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Cambridge
October 1992

REFERENCES

GEOLOGICAL SURVEY OF ENGLAND & WALES 1965. Drift edition, sheet 207, Scale 1:63,360.

MAFF 1972. Agricultural Land Classification Map, Provisional sheet 150, Scale 1:63,360.

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

METEOROLOGICAL OFFICE 1989. Data extracted from the published agroclimatic dataset.

SOIL SURVEY OF ENGLAND & WALES 1983. Soils of Eastern England, Sheet 4, 1:250,000.

SOIL SURVEY OF ENGLAND & WALES 1984. Soils and their use in Eastern England by C.A.H. Hodge, R.G.O. Burton, W.M. Corbett, R. Evans and R.S. Seale. Harpenden.

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 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 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 root 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 with affect the choice of crops, timing and type of cultivation, harvesting or the level of yield. When more demanding crops and 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 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.

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MAP 1: AGRICULTURAL LAND CLASSIFICATION