

AGRICULTURAL LAND CLASSIFICATION

ELDOHOUSE FARM, BURY ST EDMUNDS, SUFFOLK

1. BACKGROUND

1.1 The site, an area of 19.5 hectares, is the subject of an application for industrial development near Bury St Edmunds, Suffolk. MAFF surveyed the site in May 1989 to assess the agricultural land quality.

1.2 On the published Agricultural Land Classification map sheet Number 136 (Provisional, scale 1:63360 (MAFF, 1972)) the survey area is shown as grade 2. The current survey was undertaken to provide a more detailed ALC of the area. A total of 23 soil inspections were made on site supplemented by observations from 2 soil profile pits.

2. PHYSICAL FACTORS AFFECTING LAND QUALITY

Climate

2.1 Climate data for the site was obtained from the published agricultural climatic dataset (Met Office 1989). This indicates that for the site's mid range altitude the annual average rainfall is 613 mm (24.1"). This also indicates that field capacity days are 114 and moisture deficits are 112 mm for wheat and 105 mm for potatoes. These climatic characteristics do not impose any climatic limitation on the ALC grading of the survey area.

Altitude and Relief

2.2 The land surveyed falls gently south-eastwards from 67m AOD, adjacent to the Eldohouse Farm buildings to 61 m AOD, west of Spinney Cottages. Gradient and altitude do not constitute limitations to the ALC grade.

## Geology

- 2.3 The published 1:50,000 scale geology map sheet 189 shows the survey area to comprise mainly cover sand with smaller deposits of boulder clay, sand and gravel and Head outcropping with fall in slope, in the vicinity of Spinney Cottages.

## Soils

- 2.4 The Soil Survey of England and Wales have mapped the "Soils of Eastern England" at a reconnaissance scale of 1:250,000, this map shows the occurrence of the Melford Association (\*1) over the site. During the current survey a more detailed inspection of the soils identified two main soil types.

- 2.4.1 Over the majority of the site deep loamy soils predominate. These profiles typically comprise sandy loam topsoils over sandy loam subsoils which may overlie loamy medium sand at depth 50/60 cm+. Below depths of 50/90 cms profiles often became better bodied and merge into clay loams, sandy clay loams or clays. Profiles are freely draining (ie wetness class I) and very slightly or slightly stony. Depth to and density of flints within horizons varies across the site.

- 2.4.2 Smaller areas of coarser and stonier soils outcrop west of Spinney Cottages and towards the southeastern edge of the main site where aerodrome building removal has taken place. These soils typically comprise slightly to moderately stony medium sandy loam topsoils over slightly stony loamy medium sand upper subsoils. Below 40/65 cm depth profiles merge into slightly stony medium sands which variably overlie clays or clay loams at depth 65/75 cm+.

(\*1) Melford Association: Deep well drained fine loamy over clayey, coarse loamy over clayey and fine loamy soils, some with calcareous clayey subsoils.

### 3. AGRICULTURAL LAND CLASSIFICATION

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

3.2 The table overleaf shows the breakdown of the ALC grades in hectares and percentage terms for the survey area.

#### AGRICULTURAL LAND CLASSIFICATION

Grade	ha	%
2	12.4	63.6
3a	0.8	4.1
3b	2.0	10.3
Non Agricultural	0.8	4.1
Urban	3.2	16.4
Agricultural Buildings	<u>0.3</u>	<u>1.5</u>
TOTAL	<u>19.5</u>	<u>100</u>

#### 4. Grade 2

The majority of the survey area has been graded 2. This land is associated with the freely draining soils described in paragraph 2.4.1. These light soil textures, and the presence of flints where they occur combine to, have a slight limiting effect on the available water capacity of these soil profiles. As a result, this minor droughtiness limitation restricts the land to grade 2. (Very good quality agricultural land).

#### 5. Subgrade 3a

A small area of land to the west of Spinney Cottages has been graded 3a. This land is associated with the less stony variant of the soils described in paragraph 2.4.2. Profiles are typically slightly stony throughout until the better bodied horizons are encountered at depth. Coarse soil textures and profile stone combine to impose a moderate

limitation on the potential available water reserves of these soils. Consequently moderate droughtiness excludes this land from grade 2.

6 Subgrade 3b

A small area of land adjacent to the eastern edge of the site has been mapped as subgrade 3b. This land is associated with the stonier soils described in paragraph 2.4.2. In this area an aerodrome building has been removed and as a result the topsoils are "mixed looking" and moderately stony. The stony upper horizons typically comprise mainly medium and small flints, with only a small proportion of rubble fragments. Common profile stone and coarse textures act to significantly reduce the water holding capacity of this land. This droughtiness combines with topsoil stone to reduce the cropping flexibility of this land. Thus the land is graded 3b. (moderate quality agricultural land).

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## References

GEOLOGICAL SURVEY OF ENGLAND & WALES, 1982 Drift edition geology sheet 189.  
Scale 1:50,000

MAFF 1972, Agricultural Land Classification Map No 136 Provisional 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. Climate data extracted from the published  
agricultural climatic dataset.

SOIL SURVEY OF ENGLAND & WALES, 1983. Soils of Eastern England - Sheet No  
4, Scale 1:250000.

## 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 which affect the choice of crops, 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 levels 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.