

## AGRICULTURAL LAND CLASSIFICATION

### BARROWBY LOW ROAD, LINCOLNSHIRE

#### 1. BACKGROUND

- 1.1 The site, an area of 9.64 hectares, forms part of the South Kesteven Local Plan south of Barrowby village, Lincolnshire. MAFF surveyed the site in October 1990 to assess the agricultural land quality using the 1988 Revised Agricultural Land Classification system.
- 1.2 On the published small scale Agricultural Land Classification map sheet number 113 (Provisional, Scale 1:63360 (MAFF, 1974)), the area is shown as grade 1 to the north and grade 2 to the south.
- 1.3 More recently, in 1982, the abandoned allotment gardens area of the site was surveyed in detail. This survey confirmed that this area was mainly Grade 1 with a small area of Grade 2 outcropping at the eastern edge. Land adjacent to the housing area was surveyed in detail in 1980. This survey shows the area to comprise grade 1 land.
- 1.4 The whole of the site was resurveyed in 1990 to acquire the necessary information to grade the area using the 1988 Revised ALC system. This current survey confirms the grades identified in the overlap areas in the early nineteen eighties.

#### 2. PHYSICAL FACTORS AFFECTING LAND QUALITY

##### Climate

- 2.1 Climate data for the site was obtained from the published agricultural climatic database. (Met Office, 1989). This indicates that for the site altitude (of 90 m AOD) the annual

average rainfall is 621 mm (24.5"). This data also indicates that field capacity days are 130 and moisture deficits are 103 mm for wheat and 93 mm for potatoes. These climatic characteristics do not impose any climatic limitation on the ALC grading of the survey site.

#### Altitude and Relief

- 2.2 The land falls gently southwards towards Low Road, the site altitude is approximately 90 m AOD. Gradient and altitude do not constitute limitations to the ALC grade.

#### Geology and Soils

- 2.3 The published 1:50,000 scale solid and drift edition geology map sheet 127 (Geological Survey of Great Britain, 1972) shows the survey area to comprise Marlstone Rock (ferruginous oolitic limestone, ironstone and calcareous sandstone).
- 2.4 The Soil Survey of England and Wales have mapped the soils in the Barrowby area at a reconnaissance scale of 1:250,000. This map entitled "The Soils of Eastern England", shows the occurrence of the Banbury Association (\*1) within the survey area. During the current survey a detailed inspection of the soils was carried out.

Two main soil types occur over the site.

- 2.4.1 The majority of the survey area typically comprises very slightly stony medium clay loam or sandy clay loam topsoils over very slightly stony (sandy) clay loam or sandy clay loam subsoils which often become slightly stony at depth 75/80 cm<sup>+</sup>. Stones generally comprise small and very small ironstone fragments.

(\*1) Banbury Association: Well drained brashy fine and coarse loamy ferruginous soils over ironstone. Some deep fine loamy over clay soils with slowly permeable subsoils and slight seasonal waterlogging.

2.4.2 At the eastern edge of the abandoned allotment gardens area stonier soil variants outcrop. The topsoils are slightly stony and profiles overlie ferruginous gravelly material at depth, namely 95/100 cm<sup>+</sup>. Subsoils are typically very slightly stony although slightly stony horizons can occur. Textures are similar to those described above in paragraph 2.4.1.

### 3. AGRICULTURAL LAND CLASSIFICATION

3.1 The definition of the agricultural land classification grades are included in Appendix 1.

3.2 The table below shows the ALC grades for the survey area.

#### AGRICULTURAL LAND CLASSIFICATION

Grade	ha	%
1	9.1	94.4
2	0.5	5.2
Urban	0.04	0.4
	——	——
TOTAL	9.64	100
	——	——

#### 3.3 Grade 1

The majority of the site has been graded 1. The land is associated with the soils described in paragraph 2.4.1. Profiles are freely draining and hold high reserves of available water. This land has only very minor limitations so it is capable of sustaining a very wide range of agricultural and horticultural crops. Yields are high and less variable than on land of lower quality.

#### 3.4 Grade 2

A small area of the site has been graded 2 where the stonier soils described in paragraph 2.4.2 predominate. The soils are well

drained and hold high reserves of available water. Topsoil stone exceeds 5%; as a result these stones slightly impede root development and cultivation operations. The level of yield is generally high but may be lower or more variable than grade 1.

### 3.5 Urban

The Barrowby scout hut has been mapped as urban.

FEBRUARY 1991

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## 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 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 of 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 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 levels of yields. It is mainly suited to grass with occasional arable crops (eg cereals and forage crops) the yield of which are very 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 the occasional pioneer forage crops.

## References

GEOLOGICAL SURVEY OF GREAT BRITAIN 1972 Solid and Drift edition Geology  
Sheet No 127 1:50,000.

MAFF 1974 Agricultural Land Classification Map Sheet 113 Scale 1:63360  
(Provisional).

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 ALC  
agroclimatic dataset.

SOIL SURVEY OF ENGLAND AND WALES 1983. "The Soils of Eastern England" Sheet  
4, 1:250,000 scale.