

**AGRICULTURAL LAND  
CLASSIFICATION  
DRAFT CITY OF NOTTINGHAM  
LOCAL PLAN  
RECONNAISSANCE SURVEY  
PART OF SITE 2**

## **AGRICULTURAL LAND CLASSIFICATION**

### **DRAFT CITY OF NOTTINGHAM LOCAL PLAN RECONNAISSANCE SURVEY PART OF SITE 2**

#### **1.0 BACKGROUND**

- 1.1 The site, a total area of approximately 217 hectares, forms part of the Draft City of Nottingham Local Plan. A reconnaissance survey was carried out in January 1995 by the ADAS Statutory Resource Planning Team in order to confirm the presence of lower quality (i.e. 3b) land on part of the site measuring approximately 85 hectares, (See Map in Appendix 2). Assessment was made following the guidelines in MAFF publication: "Revised Guidelines and Criteria for Grading the Quality of Agricultural Land" (MAFF, 1988).
- 1.2 Information was collected using a hand held dutch auger and soils were sampled at a density of approximately 1 per 3 ha to a depth of 120 cm. Subsoil conditions were assessed from two inspection pits.
- 1.3 At the time of the survey most of the land was either under cereals or left as stubble. Some of the land to the south of the site was under permanent pasture.
- 1.4 The provisional 1:63 360 scale ALC map, Sheet 112 (MAFF, 1970) shows the whole area to be mapped as grade 3. This map is of a provisional nature, *designed primarily for strategic planning purposes, therefore the survey was undertaken to provide more detailed information on land quality within the survey area.*

## 2.0 **PHYSICAL FACTORS AFFECTING LAND QUALITY**

### Climate

- 2.1 Climatic data for the site was extrapolated from the data published in the Agricultural Climatic Dataset (Meteorological Office, 1989). This indicates that for an average site altitude of 74 m AOD, the average annual rainfall is 661 mm (25.92"). Accumulated temperature (ATO) is given as 1370 day °C. It also indicates that field capacity days are 144 and that moisture deficits for wheat and potatoes are 102 mm and 92 mm respectively. These climatic characteristics do not impose any climatic limitation on the ALC grade of the site.

### Altitude and Relief

- 2.2 The altitude varies from 92 m AOD in the north to 60 m AOD in the south. The site lies on a gentle south east slope, with the land to the south of the A609 being more undulating than the land to the north. Slopes have been estimated at 2° or less and therefore do not impose any limitations on the ALC grade for the site.

### Geology and Soils

- 2.3 The published 1:50 000 solid and drift edition geology map (Sheet 125, Geological Survey of England and Wales 1972) shows the whole site to be underlain by Carboniferous Coal Measures.
- 2.4 The Soil Survey of England and Wales have mapped the soils in the Trowell area at a reconnaissance scale of 1:250 000 (Soil Survey, 1983). This map

shows the whole of the site to comprise Dale Association Soils (\*1).

- 2.5 The current more detailed survey also identified a single soil type across the site with a typical profile of non-calcareous very slightly stony heavy clay loam or heavy silty clay loam topsoil 25-30 cm deep. Upper subsoils comprise stoneless, strongly gleyed clay or heavy silty clay loam over a strongly gleyed clay lower subsoil. The soils are poorly drained and generally slowly permeable directly below the topsoil horizon and have been assessed as wetness class IV.
- 2.6 A small area where the slowly permeable horizon was encountered at a lower depth or not at all were assessed as wetness class II or III.
- 2.7 Occasionally a 5 cm band of gravels was encountered immediately below the topsoil horizon. Small localised pockets of disturbed soil were noted across the site. Land immediately south of the nursery showed signs of recent disturbance.

### 3.0 **AGRICULTURAL LAND CLASSIFICATION**

- 3.1 The definitions of the ALC grades are included in Appendix 1.
- 3.2 The distribution of Agricultural Land Classification (ALC) grades is given overleaf.

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(\*1) Dale Association: Slowly permeable seasonally waterlogged clayey, fine loamy over clayey and fine silty soils on soft rock. Often stoneless.

## AGRICULTURAL LAND CLASSIFICATION

Grade	Hectares	%
3a	1.2	1.4
3b	72.3	84.8
Urban	11.2	13.1
Non Agricultural	0.2	0.2
Woodland	0.4	0.5
TOTAL	<u>85.3</u>	<u>100.00</u>

### Subgrade 3a

- 3.3 Land of this grade occurs in a small area on the northern most boundary of the site. It is associated with the better drained soils described in paragraph 2.6. These soils are generally assessed as wetness class II and the land is limited by moderate wetness and workability constraints restricting land to subgrade 3a.

### Subgrade 3b

- 3.4 Land of this grade covers the majority of the site and is associated with the soils described in paragraph 2.6. These soils are heavy textured and the presence of a slowly permeable layer at a shallow depth, typically 30 cm, combine to impose a significant wetness and workability restriction. This limits the land to subgrade 3b.

### Woodland

- 3.5 There are two small areas of woodland, both on the eastern side of the site adjacent to the A609.

### Non agricultural land

- 3.6 There is a small area used for storage to the south of the site which has been mapped as non agricultural.

Urban

- 3.7 A number of residential, business and farm properties have been mapped as urban.

C PACKER  
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## REFERENCES

GEOLOGICAL SURVEY OF ENGLAND AND WALES 1963. Drift Edition Sheet 125, Derby 1:63 360 scale.

MAFF, 1970. Agricultural Land Classification Map, Sheet 162 1:63 360 scale.

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

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

SOIL SURVEY OF ENGLAND AND WALES 1983. Soils of Midland and Western England Sheet 3 1:250 000 scale.

SOIL SURVEY OF ENGLAND AND WALES 1984. Soils and their use in Midland and Western England by J M Ragg *et al* 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 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 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. 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 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.

## **APPENDIX 2**