AGRICULTURAL LAND CLASSIFICATION DRAFT CITY OF NOTTINGHAM LOCAL PLAN - (SITE 4)

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1.0 BACKGROUND

1.1 The site, area of 33.1 hectares, forms part of the Draft City of Nottingham Local Plan. A detailed survey was carried out in January 1995 by the ADAS Statutory Resource Planning Team in order to assess the agricultural land quality. 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 from auger borings, spaced at 100 m intervals, to a depth of 100 cm or an impenetrable layer if closer to the surface. Subsoil conditions were assessed from an inspection pit.

1.3 At the time of the survey the fields were either under autumn sown cereals or permanent grass.

1.4 On the provisional 1:63 360 scale ALC map, Sheet 112 (MAFF, 1970) the site has been mapped as grade 2. This map is of a provisional nature, 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 data published in the Agricultural Climatic Dataset (Meteorological Office, 1989). This indicated that for an average site altitude of 100 m AOD the average annual rainfall is 684 mm (26.9"), the accumulated temperature (ATO) is 1339 day °C, the field

and 86 mm respectively. These climatic characteristics do not impose any limitation on the ALC grade for the site.

Altitude and Relief

2.2 The site is bounded on the western side by the M1 motorway, on the northern side by the A610 and on the eastern side by the A6002 roadway. The southern boundary adjoins site 1 (see separate report). The land is gently undulating ranging between 95 m AOD and 115 m AOD. Altitude and slopes do not impose any limitation on the ALC grading.

Geology and Soils

2.3 The published 1:50 000 scale solid and drift edition geology map Sheet No 125 shows the site to comprise Permo-Triassic Lower Magnesian Limestone.

2.4 The Soil Survey of England and Wales have mapped the soils in the area at a reconnaissance scale of 1:250 000 (Soil Survey Sheet 3, 1983). The site is mapped as Aberford Association (*1). The current survey identified two soil types although one type only occupied a very small fraction of the site and was probably a result of road building works.

2.5 The main soil type comprises well drained (wetness class I) medium/heavy clay loam or occasionally sandy clay loam topsoils over heavy clay loam or occasionally sandy clay loam upper subsoil, overlying medium sandy loam. This is underlain with brashy loamy sand before sandstone bedrock is encountered at varying depths (minimum 50 cms - maximum 110 cm). The

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(*1) Aberford Association: Shallow, locally brashy, well drained calcareous fine loamy soils over limestone. Some deeper calcareous soils in colluvium.

soils are non-calcareous slightly stony, becoming moderately stony within the sandy lower subsoils. A variant exists on part of the southern boundary where the topsoils are moderately stony with medium and large tabular sandstone fragments lying on the surface.

2.6 The second soil type, a very small area, comprises non calcareous, very slightly stony clayey topsoil over slowly permeable clay subsoil to depth. These soils are assessed as wetness class III.

3.0 AGRICULTURAL LAND CLASSIFICATION

3.1 The distribution of Agricultural Land Classification (ALC) grades is shown below.

Grade	ha	%
2	8.7	26.3
3a	19.6	59.2
3b	2.5	7.6
Woodland	2.1	6.3
Non Agricultural	0.2	0.6
TOTAL	33.1	100.0

The definitions of the ALC grades are shown in Appendix 1.

Grade 2

3.2 Land of this grade occurs on part of the northern and western boundary and also around the woodland in the southern part of the site. The soils correspond to the well drained (wetness class I) fine loamy over coarse loamy soils as described in paragraph 2.5. In these areas the profile was quite deep (>85 cms) before impenetrable sandstone was met. Rooting is not evident into the sandstone and therefore a slight droughtiness limitation restricts these areas to grade 2.

Subgrade 3a

3.3 This grade predominates on the site and soils comprise well drained (wetness class I) fine loamy over coarse loamy soils as described in paragraph 2.5. In this area depth to sandstone was variable but in all cases was quite shallow (50-70 cm) restricting rooting depth. A moderate droughtiness limitation restricts the area to subgrade 3a.

Subgrade 3b

3.4 Two areas have been mapped as subgrade 3b.

3.5 The area in the north of the site corresponds to the soils described in paragraph 2.6. These soils are imperfectly drained (wetness class III) and comprise clayey over slowly permeable clay subsoils. The major limitation in the area is a wetness and workability restriction which limits the land to subgrade 3b.

3.6 The other area is adjacent to part of the southern boundary. The soils are as described in paragraph 2.5 but have a very shallow depth to sandstone. In addition the area has moderately stony topsoil containing medium and large tabular sandstone fragments, thus restricting it to subgrade 3b.

Woodland

3.7 There are two areas of woodland. One towards the southwest part of the site and another in the extreme northeast part.

Non Agricultural

3.8 The non agricultural area, in the north central part of the site consists of an apparent spoil head approximately 3 m in height.

M WOOD

ADAS Huntingdon Statutory Centre

January 1995

REFERENCES

GEOLOGICAL SURVEY OF GREAT BRITAIN 1972. Solid and Drift Edition, Sheet 125, Derby. Scale 1:50 000.

MAFF, 1970. Agricultural Land Classification Map, Sheet 112. Scale 1:63 360.

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 agricultural dataset, compiled by the Meteorological Office.

SOIL SURVEY OF ENGLAND AND WALES 1983. Sheet 3, Midland and Western England Scale 1:250 000.

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 (e.g. 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.