

AGRICULTURAL LAND CLASSIFICATION

Owston Park, Owston, Doncaster  
Proposed Golf Course

March 1991

2FCS 5273

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MAP

1. Agricultural Land Classification

AGRICULTURAL LAND CLASSIFICATION. REPORT ON THE PROPOSED GOLF COURSE  
DEVELOPMENT AT OWSTON, DONCASTER

1. INTRODUCTION AND SITE CHARACTERISTICS

The site is located around grid reference SE 545109 between Carcroft and Owston, 8 km north of Doncaster. It covers 68 hectares of which 89% is in agricultural use.

Survey work was carried out in February 1991 when soils were examined by hand auger borings at 100 metre intervals pre-determined by the National Grid.

Land quality assessments were made using the methods described in the "The Revised Guidelines and Criteria for grading the quality of Agricultural Land". (MAFF 1988).

1.1 Land Use

At the time of survey all agricultural land was under arable use the principal crop being cereals.

1.2 Climate

Average annual Rainfall (AAR) is approximately 600 mm. Accumulated temperature (ATO) above 0°C between January and June is 1405 day °C and land is at field capacity for 124 days for year. These factors indicate that there is no overall climatic limitation on ALC grade.

1.3 Relief

Altitude varies between 10-22 m above ordnance datum in a gently undulating landscape. Slopes generally do not exceed 5° and thus do not restrict the use of agricultural machinery.

#### 1.4 Geology and Soils

Much of the site is underlain by Permian Magnesian Limestone and marls over which, on the lower ground, is a variable thickness of clayey and silty drift. The marls occur close to the surface on the northern edge of the site near Squirrel Wood. Here, soils consist of medium and heavy clay loam topsoils over gleyed and slowly permeable clayey subsoils. Profiles of this type are imperfectly to poorly drained and fall within Wetness Class III. On the higher ground, particularly in the central part of the site, Magnesian Limestone is closer to the surface and soils consist of well drained medium or heavy clay loams to a depth of about 40 cm over fragmented limestone bedrock. Towards the eastern edge of the site where the clayey and loamy drift is more widespread medium clay loam topsoils overlie heavy clay and sandy clay loams containing slowly permeable horizons at depths varying between 40 and 70 cm.

## 2. AGRICULTURAL LAND CLASSIFICATION

The ALC grades for the site are as follow:

Grades	Area (ha)	Percentage of Total
2	14.9	22
3a	25.9	38
3b	19.8	29
Woodland	5.5	8
Urban	<u>2.2</u>	<u>3</u>
	<u>68.3</u>	<u>100</u>

### Grade 2

Land in this grade is common in the northern and south western parts of the site. Topsoils consist of medium clay loam over similar subsoils. Soils in this grade are moderately well drained and fall into Wetness Class II. Slight soil wetness and workability problems are the main limiting factors on land in this grade.

### Subgrade 3a

The subgrade 3a land contains medium clay loam topsoils over similar subsoils with either slowly permeable heavy clay loam or weathered bedrock at depth. Heavy clay loam subsoils occur in the area north of North Park Lane where soil profiles fall within Wetness Class III. South of Windmill Hill soils are more variable, some overlying bedrock at depth.

Soil wetness and workability problems are the limiting factors where subsoils are heavy and droughtiness is limiting where bedrock occurs relatively close to the surface.

### Subgrade 3b

Land in this subgrade consists of heavy or medium clay loam topsoils over slowly permeable heavy clay loam or clay subsoils or heavy clay loam over weathered limestone.

Soil wetness is the overriding limitation where subsoils consist of heavy clay loams. Droughtiness is limiting where topsoils overlie limestone bedrock.

### Woodland

This consists of North Quarry plantation and Garden Plantation.

### Urban

Land in this category consists mainly of tracks crossing the area.

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