

AGRICULTURAL LAND CLASSIFICATION

Kiveton Hall Farm
Kiveton Park
South Yorkshire

Proposed Golf Course
and Hotel

MAFF
Leeds Regional Office

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lds.AL4.Kvton.frm

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1. AGRICULTURAL LAND CLASSIFICATION

AGRICULTURAL LAND CLASSIFICATION REPORT

1.0 Introduction and Site Characteristics

1.1 Location

National Grid Reference:-

SK 505835.

Location Details:-

The site is located 3 km south east of Junction 31 on the M1.

Site Size:-

150 hectares.

1.2 Survey Methods

Date Surveyed:-

September 1991.

Boring Density and Spacing Basis:-

Approximately one boring per hectare at 100 m intervals predetermined by the National Grid.

Sampling Method:-

By hand auger borings to a depth of up to one metre.

Number of Borings:-

147.

All land quality assessments were made using the methods described in "Agricultural Land Classification of England and Wales: Revised Guidelines and Criteria for grading the quality of agricultural land (MAFF 1988)".

1.3 Climate and Relief

Average Annual Rainfall (AAR):-	642 mm
Accumulated Temperature above 0°C (January-June):-	1316 day °C
Field Capacity Days:-	139 days
Altitude average:-	105 m a.o.d.
maximum:-	120 m a.o.d.
minimum:-	100 m a.o.d.
Climatic limitation (based on interaction of rainfall and temperature values):-	Boundary of Grades 1 and 2.
Gradient Limitation:-	
Limiting gradient(s):-	None.

1.4 Geology and Soil

Solid Strata:-	Carboniferous Coal Measures.
Depth of solid rock from surface:-	50 cm to > 1 metre. Sandstone occurs close to the surface on the boundaries of the site.
Drift types:-	Boulder Clay and "Head".
Thickness of drift and distribution:-	50 cm to more than 1 m over most of the site.
Soil Types and Distribution:-	Poorly drained heavy soils cover most of the site. Light freely drained soils, sometimes over sandstone, occur along the margins.

Soil Textures (topsoils and subsoils):-

The soils on the higher land, especially in the east, consist of sandy loams over similar subsoils, sometimes over sandstone. The heavier areas in the central, lower parts of the site consist of heavy clay loams or heavy silty clay loams over clay or silty clay subsoils.

Soil Limitations and type:-

Heavy topsoil texture over most of the site. Soil droughtiness on the light peripheral land.

1.5 Drainage

Soil type and Wetness Class:-

Wetness Class IV (poorly drained) on the heavy soils. Wetness Class I (well drained) on the light land.

Drainage Limitations:-

On the heavy land poor drainage is caused by slowly permeable subsoil horizons.

2.0 Agricultural Land Classification Grades

The ALC grades occurring on the site are as follows:-

<u>Grade/Subgrade</u>	<u>Hectares</u>	<u>Percentage of Agricultural Area</u>	<u>Percentage of Total Area</u>
2	3.2	2.3	2.1
3a	22.5	16.0	15.0
3b	115.3	81.7	76.8
Non Agricultural	4.4	-	2.9
Agricultural Buildings	0.8	-	0.5
Urban	2.1	-	1.4
Open Water	2.0	-	-
Total	<u>150.3</u>	<u>100</u>	<u>100</u>

Grade 2

Distribution on site:-

A small area in the southern part of the site.

Soil Type(s) and Texture(s):-

Soils consist of medium sandy loams over similar or slightly heavier subsoils.

Depth to Slowly Permeable Layers:-

None present.

Wetness and Drainage Class:-

Well drained, Wetness Class I.

Stone Percentage and Type:-

Up to 10% in the topsoil.

Grade Limiting Factors:-

Slight droughtiness.

Subgrade 3a

Distribution on site:-

On the higher ground around all 4 edges of the site.

Soil Type(s) and Texture(s):-

Sandy loams over similar or lighter subsoils, sometimes passing into sandstone at depth.

Depth to Slowly Permeable Layers:-

None present.

Wetness and Drainage Class:-

Well drained, Wetness Class I.

Stone Percentage and Type:-

Up to 10% medium soft sandstone.

Grade Limiting Factors:-

Droughtiness.

Subgrade 3b

Distribution on site:-

Most of the site, especially the slightly lower lying areas, falls within this subgrade.

Soil Type(s) and Texture(s):-

- i. Mainly heavy silty clay loams over clay or silty clay subsoils.
- ii. Shallow stony sandy loams over sandstone.

Depth to Slowly Permeable Layers:-

30-45 cm in the heavy textured soils. No slowly permeable layers in the light soils.

Wetness and Drainage Class:-

Wetness Class IV in the heavy soils. Wetness Class I in the well drained light soils.

Stone Percentage and Type:-

The small areas of light shallow soil on the northern and southern edges contain up to 15% medium soft sandstones. The heavier soils tend to be stoneless.

Grade Limiting Factors:-

The heavier, central area is limited by wetness and workability problems. The lighter soils on the higher ground land tend to be shallow and stony which, combined with a relatively low rainfall figure, gives a droughtiness limitation.

Non Agricultural

Type and location of land included:- This category consists of farm woodland at Todwick and Canal Plantations.

Agricultural Buildings

Type and location of building included:- Farm buildings at Kiveton Hall Farm on the western edge of the site.

Urban

Type of land use included:- Roads crossing the site.

Open Water:- This consists of fishing ponds to the north and south of Canal Plantation.

Resource Planning Group
Leeds Regional Office
October 1991

MAP