

AGRICULTURAL LAND CLASSIFICATION

FLAXBY MOOR, KNARESBOROUGH
NORTH YORKSHIRE

PROPOSED GOLF COURSE

MAFF
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CONTENTS

1. INTRODUCTION AND SITE CHARACTERISTICS
2. AGRICULTURAL LAND CLASSIFICATION

MAP

1. AGRICULTURAL LAND CLASSIFICATION

AGRICULTURAL LAND CLASSIFICATION REPORT: LAND NEAR
FLAXBY MOOR, FLAXBY, KNARESBOROUGH, NORTH YORKSHIRE

1. INTRODUCTION AND SITE CHARACTERISTICS

This site is located around grid reference SE 405580 approximately 5½ km east of Knaresborough. It covers 129 hectares, 88% of which is in agricultural use.

Survey work was carried out in August and September 1990 when soils were examined by hand auger borings at 100 metre intervals at points pre-determined by the National Grid. Soil profile pits were also dug at representative locations to assess soil structural characteristics and stone content.

All 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).

LAND USE

All agricultural land was in arable use at the time of survey.

CLIMATE

Average Annual Rainfall (AAR) is approximately 644 mm. Accumulated temperature above 0°C between January and June (ATO) is 1359°C, and the land is at field capacity for 147 days a year. The rainfall and temperature figures indicate that there is no overall climatic restriction on ALC grade. Moisture deficits of 102 for wheat and 92 for potatoes, however, indicate that light textured soils will suffer from droughtiness due to their small water holding capacity.

RELIEF

Altitude varies between 30 and 62 m above Ordnance Datum. North of the 'old' York road there is an overall gentle or moderate slope from north to south. South of this road the site slopes gently towards Flaxby Moor Woods located in the lowest central part of the site. Slopes do not restrict the use of agricultural machinery in any part of the site and thus do not impose a limitation on ALC grade.

GEOLOGY AND SOILS

Solid strata do not occur within 1 metre of the surface and soils are developed on drift deposits consisting of light textured till, glacial lake deposits of silt and clay and glaciofluvial sand and gravel.

Light drift covers much of the site and soils formed on this are predominantly coarse loamy in texture. Topsoils are usually of medium sandy loam or occasionally sandy clay loam. Subsoils are generally similar, but can be lighter with loamy medium sand or more rarely sand occurring to depth. Although most profiles are now freely drained and fall into Wetness Class I, the distinctly mottled subsoils occurring in some places indicate that in the past drainage was imperfect especially on the lower lying parts of the site. Topsoils are often slightly stony whilst in places subsoils contain many or even abundant stones of various lithologies.

In a few places towards the southern edge of the site near Moor Lane and Flaxby Wood soils are formed on glaciolacustrine clay deposits. Topsoils on this material consist of medium or heavy clay loam over subsoils of slowly permeable heavy clay loam or clay. Soils of this type are poorly drained and fall into Wetness Class IV.

2. AGRICULTURAL LAND CLASSIFICATION

The ALC grades on the site are as follows:-

Grade	Hectares	Percentage of total area
2	44.9	34.8%
3a	65.3	50.6%
3b	3.4	2.6%
Non Agricultural	<u>15.4</u>	<u>12.0%</u>
Total	129.0	100%

Grade 2

Land in this grade occurs in four parts of the site. Although topsoils range in texture from sandy loam to sandy clay loam and medium clay loam, they are predominantly of medium sandy loam. Subsoils are usually similar, but can be lighter in places and may also be mottled. Profiles are generally stoneless or only very slightly stony and fall into Wetness Class I. These soils are easy to work and are restricted to Grade 2 only by droughtiness which is slightly limiting for most crops.

Grade 3a

This subgrade accounts for the majority of land on the site. Soils are usually similar to those described in the Grade 2 land above, but are much stonier, probably because of the presence of the underlying gravel deposit relatively close to the surface. Topsoils are slightly stony and upper subsoils slightly to very stony. The lower subsoils commonly contain 50% to 60% of stones. Profiles of this type which are common in many parts of the site have a small water holding capacity and as a result are droughty. Topsoil stone contents (stones larger than 2 cm) of up to 15% are also limiting. These two factors are the overriding limitations restricting this land to subgrade 3a.

Subgrade 3b

Four small areas of land are restricted to subgrade 3b. In the south western corner of the site these consists of medium clay loam topsoils over slowly permeable heavy clay loam or clay subsoils. Such profiles fall into Wetness Class IV, and are restricted to subgrade 3b by wetness and workability problems.

The remaining area of subgrade 3b land is located around the woodland, just south of the 'old' York to Harrogate Road. Soils here consist of medium sandy loam topsoils overlying moderately stony, sandy upper subsoils over gravelly material. Topsoils stone content ranges from 20% to 30%. Droughtiness and topsoil stoniness are the overriding restrictions on ALC grade in this area.

Non Agricultural

This consists of the woodlands in the central part of the site.

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