AGRICULTURAL LAND CLASSIFICATION

RUDDING PARK, HARROGATE, NORTH YORKSHIRE

PROPOSED GOLF COURSE

ADAS
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AGRICULTURAL LAND CLASSIFICATION REPORT ON LAND AT RUDDING PARK, HARROGATE, NORTH YORKSHIRE

1.1 INTRODUCTION

75.5 hectares of land at Rudding Park (NGR SE 335530) 4 Km South east of Harrogate, proposed for development as a golf course were surveyed in June 1989. Seventy eight per cent of the area is currently used for agricultural production. The remainder consisting mainly of woodland and open water.

Soils in agricultural areas were examined by hand auger borings at 60 points predetermined by the National Grid. In addition four profile pits were dug in order to make a more detailed examination of soil morphology and to collect samples for laboratory analysis. Land quality assessments were made using the revised guidelines published by MAFF in 1988.

1.2 CLIMATE AND RELIEF

Salient climatic parameters at Rudding Park are as follows:_

Average Annual Rainfall		**756 mm**
Median Accumulated Temperature Above $0^{o}C$		**1323 day ^{o}C**
Field Capacity Days		**189**
Moisture Deficit	Wheat	**97 mm**
Moisture Deficit	Potatoes	**78 mm**

These factors indicate that the area has an overall climatic limitation of Grade 2 and that only very light textured (sandy) soils are likely to be droughty.

The average altitude is 75 m a.o.d., ranging from 95 m a.o.d above Fox Culvert in the south west down to 50 m near Holme Lane in the east. Gradients are occasionally steep enough to limit ALC grade especially on the north facing slopes above Low Wood.

1.3 LAND USE

The majority of farmland is under grass which is either cut for silage or grazed. In addition one field is currently growing oats. All the woodland is mixed coniferous and broad leaf. There are also two areas of open water near the centre of the site.

1.4 GEOLOGY AND SOILS

Although drift covers much of the site the solid strata occurs close to the surface in a number of places. Most of the drift is a heavy textured (clayey), stony boulder clay which has weathered to produce fine loamy topsoils over stony, clayey, slowly permeable subsoils. These soils fall within wetness class IV in most cases. The remaining drift is of glaciofluvial origin and lighter in texture. Soils derived from this are freely drained and contain no slowly permeable layers. Top and upper subsoils are usually of medium sandy loam over loamy medium sand lower subsoils. These soils are occasionally light enough to be limited by droughtiness. There are also two soil types formed on solid strata. Upper carboniferous shales weather to form clayey slowly permeable soils similar to the heavy boulder clay soils. Sandstones which outcrop just north west of Follifoot village, give medium sandy loam topsoils over similar or lighter textured, slightly stony subsoils which pass into bedrock at variable depths. Profiles are shallow on steep or high lying land and deeper in footslope situations. This soil type has no wetness limitation but is droughty.

1.5 AGRICULTURAL LAND CLASSIFICATION

Grade	Area (hectares)	% of total area
2	7.1	9%
3A	5.0	7%
3B	46.1	61%
4	0.8	1%
Non Agricultural	15.6	21%
Open Water	0.9	1%
Total	75.5	100

1.5.1 Grade 2

South of Ducks Nest Farm soils are formed on coarse loamy drift which is free from any soil wetness limitation. These light textured soils, typically of deep sandy loam are, however, likely to be slightly droughty for crops such as wheat and potatoes. This and the overall climatic limitation are the main restrictions on ALC grade.

1.5.2 Subgrade 3A

3A land occurs north and south of Fox Culvert and east of the Stables. Soils are similar to those in the grade 2 areas although not as deep, and often more stony. The top and subsoils consist usually of medium sandy loam or occasionally, a loamy medium sand. Droughtiness is more limiting than on the grade 2 land. Wetness is not a limiting factor.

1.5.3 Subgrade 3B.

Soil wetness is the critical limiting factor on most of the land in this subgrade. Topsoils are usually of medium clay loam over clayey, often stony, subsoils. This soil which is widespread over both the boulder clay and weathered shale deposits falls within Wetness Class IV. In areas such as Rudding park with between 176 and 225 field capacity days soils of this type can be graded no higher than 3b. Also included within subgrade 3b is land in the southern part of the site where ALC grade is limited by slopes of between 7^{o} and 11^{o}.

1.5.4 Grade 4

A small area east of Low Wood contains heavy clay loam topsoils over clayey subsoils. These soils fall within Wetness Class IV and are limited to Grade 4 by soil wetness and workability problems.

1.5.5 Non Agricultural

All mixed woodland on the site is classified as non agricultural.

1.5.6 Open Water

Two small areas of open water occur near the centre of the site.

Reference

Revised guidelines and criterial for grading the quality of agricultural land. MAFF (1988)