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AGRICULTURAL LAND CLASSIFICATION

Rossington Hall, Doncaster, South Yorkshire

Proposed Golf Course and Hotel Developments

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AGRICULTURAL LAND CLASSIFICATION OF LAND AFFECTED BY THE PROPOSED GOLF COURSE AND HOTEL DEVELOPMENTS AT ROSSINGTON HALL, DONCASTER, SOUTH YORKSHIRE

1. Introduction and Site characteristics.

1.1 Introduction

The site covers a total of 775 ha and lies to the east, south and west of the village of New Rossington. The centre of the area surveyed lies at National Grid Reference SK614968, 1 km south of New Rossington and 7 km south-east of Doncaster town centre.

Previous surveys covering parts of the site had been carried out in April and August 1990 for earlier development applications. The remainder was surveyed during November and December 1991 and January 1992. Soils were examined by hand auger borings to a depth of 100 cm (less where the presence of stones prevented the auger entering deeper) at 100 m intervals predetermined by the National Grid. Further borings were made, where necessary, to refine grade boundaries.

1.2 Land Use

Most of the area is in arable use but there are also significant areas of ley grassland, woodland and parkland (principally around Rossington Hall School, in the east of the site) and urban land (Rossington Hall School itself, a sand and gravel quarry at Common Lane and a number of minor roads and farm tracks).

1.3 Climate and Relief

Average Annual Rainfall is approximately 600 mm. The accumulated temperature above 0°C (January to June) is 1417 day °C and the site is at field capacity for around 120 days a year. The temperature and rainfall figures indicate that there is no overall climatic limitation on A L C grade but moisture deficits of 111 mm for wheat and 104 mm for potatoes indicate a moderate to severe droughtiness limitation on the light-textured soils in the east and centre of the site.

Site altitude varies from 5 m A O D to 30 m A O D. The west of the site is flat while the centre and east of the site contain gentle to moderate slopes.

1.4 Geology, Soils and Drainage

The entire site is underlain by the Bunter sandstone except for a small area near the western edge where Permium marls outcrop. Although soils derived from Bunter sandstone occur in parts of the centre and east, most of the site is covered by a variety of drift deposits. The most important of these are the glacial sands and gravels in the east and alluvium in the centre and west, smaller areas of peat (centre and west), and boulder clay (in centre and east) also occur. The soils occurring on the site closely reflect the drift geology and range from well-drained (Wetness Class I) light-textured droughty soils on the gravel deposits to moderately well-drained and imperfectly drained (Wetness Classes II and III) alluvial and boulder clay soils, along with areas of thin organic and peaty soils (varying from well to poorly drained) on the carrlands around Rossington Village.

2. AGRICULTURAL LAND CLASSIFICATION GRADES

The A L C grades occurring on the site are as follows:-

Grade/Subgrade	Hectares	Percentage of Agricultural Area	Percentage of Total Area
2	76.6	11.3	9.9
3a	335.0	49.6	43.2
3b	258.6	38.2	33.4
4	6.1	0.9	0.79
Non-Agricultural	66.4		8.6
Urban	30.6		3.9
Open Water	1.7		0.21
TOTAL	775.0	100	100

Grade 2

This grade occurs in a number of relatively small areas scattered across the site. The grade 2 land in the carrlands in the centre and west generally consists of deep organic mineral or peaty topsoils (greater than 40 cm in depth), overlying either light-textured (loamy sand or sand) or heavy-textured (clay or silty clay) alluvial subsoils. In places peat, loamy peat or sandy peat occurs to depths of 80 - 100 cm. Where heavy-textured subsoils occur below the peat slowly permeable layers generally begin at 45 to 50 cm depth and soil wetness is the factor which limits A L C grade. Where light-textured subsoils occur, soils are limited to Grade 2 by slight droughtiness.

In the east of the area Grade 2 soils consist of either medium sandy loam or loamy medium sand topsoils overlying medium sandy loam subsoils (in which case there is a slight droughtiness limitation on A L C grade) or, medium sandy loam or medium clay loam topsoils and upper subsoils over heavy-textured lower subsoils. In profiles of this type slowly permeable layers occur at depths of 50 to 70 cm and slight soil wetness is the main limiting factor.

Subgrade 3a

Land in this subgrade covers much of central and western parts of the development area and also occurs in patches in the east. There are three main soil types included within this subgrade. The first is the sandy soils in the central and eastern parts of the site. These are derived from glacial sand and gravel deposits or directly from Bunter Sandstone. Profiles consist of slightly to moderately stony loamy medium sand or medium sandy loam topsoils overlying loamy medium sand or medium sand subsoils. These soils have a small water holding capacity and soil droughtiness is the main factor limiting A L C grade.

The second soil type, which is widespread in the carrlands south of Rossington village, consists of peaty or organic topsoils overlying either light-textured (loamy sand or sand) or heavy-textured (heavy clay loam, clay or silty clay) subsoils. Topsoils are generally 30 to 35 cm thick and in places subsoil appears at the surface where it has been brought up by ploughing. There is a risk that intensive use of this land will result in shrinkage of the organic or peaty topsoil and for that reason this land has been placed in subgrade 3a rather than Grade 2.

The third soil type falling within Subgrade 3a occurs mainly in the centre of the site and consists of medium-textured topsoils (usually medium clay loam) overlying heavy-textured subsoils (usually heavy clay loam or clay). Slowly permeable layers occur at depths of between 30 cm and 60 cm and thus soil wetness is the main factor limiting ALC grade.

Subgrade 3b

Subgrade 3b land occurs principally in the east of the area but also in smaller patches in the west and centre. Land in this subgrade generally consists of medium sandy loam topsoils overlying loamy medium sand or medium sand subsoils. Both topsoils and subsoils are moderately stony (often with 20-30% small rounded hard stones). Soils of this type have a very small water holding capacity and soil droughtiness along with topsoil stoniness are the main factors limiting A L C grade In some parts of the east and north-west of the site are heavy-textured soils which also fall within subgrade 3b. These consist of heavy clay loam or heavy silty clay loam topsoils overlying clay or silty clay subsoils. Slowly permeable layers occur at around 30 cm depth and soil wetness is the factor limiting ALC grade.

Grade 4

Grade 4 land occurs in two areas in the east. Soils are light or very light textured and moderately to very stony. Typically they consist of medium sandy loam or loamy medium sand topsoils overlying loamy medium sand or sand subsoils. Topsoil stone content is around 15% and subsoil stone content is up to 40%. These soils are extremely droughty and restricted to Grade 4 for this reason.

Non-Agricultural

Non-Agricultural land occurs mainly in the central and eastern parts of the site. It includes farm woodland, parkland (mainly around Rossington Hall School) and playing fields.

Urban

Land in this category includes a number of minor roads and farm tracks, a sand and gravel quarry to the east of Hunster Grange Farm, and Rossington Hall School.

Open Water

This consists of a small lagoon in the north-east of the site. It probably represents the remains of an old gravel working.

Resource Planning Group
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