

PROPOSED GOLF COURSE AT SUMMERHILL FARM, HAY-ON-WYE

AGRICULTURAL LAND CLASSIFICATION

Report of Survey

1. Summary

Twenty eight hectares of land around Summerhill Farm, Hay-on-Wye, were graded under the Agricultural Land Classification System in May 1992. Over 90% of the agricultural land was found to be grade 2, with a small area classified as sub-grade 3b.

2. Introduction

The site is located to the north of Hay-on-Wye and is bounded by Hardwicke Brook in the north, the B4350 in the west and agricultural land in the south and east. The site was surveyed in May 1992 using the MAFF Revised Agricultural Land Classification System, with soils being augered to a depth of 100cm at 100m grid intersections. Additional profiles were described as necessary to determine land quality boundaries and several soil pits were dug to examine soil structure.

3. Climate

The grade of the land is determined by the most limiting factor present. The overall climate is considered first because it can have an overriding influence on restricting land to lower grades, despite other favourable conditions. The main parameters in the assessment of the climatic limitations are the Average Annual Rainfall (AAR), as a measure of overall wetness, and the Accumulated Temperature above 0°C for the period January to June (ATO), as a measure of warmth. The figures for AAR and ATO indicate that there is no climatic limitation on this site.

4. Site Limitations

The assessment of site factors is primarily concerned with the way topography influences the use of agricultural machinery and hence the cropping potential of the land. The land lies at a maximum altitude of 125m in the south east falling to a minimum of 80m in the north west. Most of the site is gently undulating, but gradient is a limiting factor where slopes exceed 7 degrees.

5. Soil Limitations

The solid geology of the site is dominated by Lower Old Red Sandstone. The soils found in the survey area reflect the uniformity of the geology and include medium silty clay loam topsoils overlying medium silty clay loam or fine/medium sandy silt loams, with fine/medium sandy silt loams at depth.

6. Interactive limitations

The interactions between climate, site and soil determines whether a soil will be prone to wetness, droughtiness or erosion.

A soil's susceptibility to drought is measured by the amount of water the profile can hold (Ap) in comparison to the potential soil moisture deficit for the area (MD). In this area the moisture deficit for wheat is 91mm and for potatoes is 77mm.

The majority of soils on this site are restricted by a slight wetness limitation. Seasonal waterlogging affects the soil workability and crop yields, hence wetness is an important parameter in the classification of land. It is measured by reference to climate, particularly field capacity days, soil water and topsoil texture. This site is at field capacity for 196 days. The soils on this site fall into Wetness Class I. These soils are not gleyed within 40cms and do not have a slowly permeable layer within 80cms.

7. Land Use

At the time of survey the majority of land was under grass.

8. Agricultural Land Classification

Land quality ranges from grade 2 to sub-grade 3b.

8.1 Grade 2

This grade is mapped extensively to include 23.0ha and 81% of the site. These soils are characterised by medium silty clay loam topsoils overlying medium silty clay loam or fine/medium sandy silt loams, with fine/medium sandy silt loams at depth. The soils fall into Wetness Class I, with no evidence of gleying in the profile to at least 55 cms and the absence of a slowly permeable layer within 80cms. Thus with the prevailing field capacity days value of 196 and medium silty clay loam topsoils these soils have a slight wetness limitation.

Isolated profiles of sub-grade 3a occur within the land mapped as grade 2, but these areas were too small to map separately at this scale.

8.2 Sub Grade 3b

This sub-grade occupies 1.8ha and 6% of the site. This sub-grade has been mapped where gradient is the limiting factor.

8.3 Woodland, Urban Land and Farm Buildings

The remaining 3.6 ha and 13% of the survey area include woodland, a track, the farmhouse and agricultural buildings.

Breakdown of ALC grades

Grade	Area (ha)	% of survey area	% of agricultural land
2	23.0	81	93
3b	1.8	6	7
Woodland	2.5	9	
Farm Buildings	0.3	1	
Urban Land	0.8	3	
Total	<u>28.4</u>	<u>100</u>	<u>100</u>

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