

REPORT OF THE MAFF AGRICULTURAL LAND CLASSIFICATION SURVEY
(1988) - GARENDON

Summary:

The land has been classified following the Agricultural Land Classification of England and Wales - revised guidelines and criteria for grading the quality of agricultural land (MAFF, 1988). Of the land surveyed 6% is classified as grade 2 and 34% as sub-grade 3a. A further 52% is classified as sub-grade 3b. The remaining area consists of land primarily in non-agricultural use.

1. Introduction

The survey work was carried out during December 1989. A free auger boring survey was completed and soil pits were dug as required.

2. Climatic Limitations:

The main parameters used in the assessment of the climatic limitations are average annual rainfall (AAR), as a measure of overall wetness, and accumulated temperature (ATO), as a measure of the relative warmth of the locality. The figures of AAR and ATO indicate that there are no climatic limitations on this site.

3. Site Limitations:

The assessment of site factors is primarily concerned at the way in which topography influences the use of agricultural machinery and hence the cropping potential of the land. There are no site limitations affecting the use of the land.

4. Soil Limitations:

The main soil properties which affect the cropping potential and management requirement of land are texture, structure, depth, stoniness and chemical fertility. These may act as limitations separately, in combination or through interactions with climate or site factors. The physical limitations which result from interactions with climate or site are soil wetness, droughtiness and erosion. Soil wetness, which expresses the extent to which excess water imposes restrictions on crop growth, is the main interactive limitation affecting the grading on this site. Soil wetness is assessed in the field by identifying the depth to any slowly permeable soil horizon, defined in terms of soil texture, structure and gleying, and relating this to the texture of the top 25 cm. Combining the soil wetness class and the field capacity days (FCD) a land classification grade is arrived at. Reference will be made to this limitation in Section 7.

5. Background information:

The underlying geology is mapped as mainly Alluvium deposits in the northern part of the site and Red Marl deposits in the southern part. (Sheet 141, Loughborough, Geological Survey).

6. Agricultural Land Use:

At the time of the survey, December 1989, the land was under cereals or grass or had been recently ploughed.

7. Agricultural Land Quality (Appendix I)

Grade 2: typically the soil has a very medium clay loam or sandy silt loam texture overlying sandy clay loam or heavy clay loam with clay present at depths of between 45 and 75 cm. Observations of the depth to the slowly permeable layer and gleying combined with a field capacity day figure of 146 indicate either wetness class III or where the slowly permeable layer is lower in the profile and the topsoil has a medium clay loam texture wetness class II. According to the topsoil texture and wetness classification of Grade 2 is indicated. The main limitation to the agricultural use of the land is soil wetness.

Sub-Grade 3a: the soil typically has either a sandy silt loam or medium clay loam texture overlying heavy clay loam between 33 and 44 cm. Where there is a medium clay loam topsoil and clay present below 40 cm, observations of gleying and the depth to the slowly permeable layer combined with a field capacity day figure of 146 indicate wetness class III and sub-grade 3a. Where sandy silt loam topsoils are present with clay at 33 cm wetness class IV is appropriate and sub-grade 3a. The main limitation to the agricultural use of this land is soil wetness.

Sub-Grade 3b: the soil typically has either a medium clay loam or heavy clay loam texture overlying clay by 30 cm. Observations of gleying and the depth to the slowly permeable layer combined with a field capacity day figure of 146 indicate wetness class IV and sub-grade 3b.

Non-Agricultural Land: This includes woodland and a cottage and associated building.

GARENDON - AGRICULTURAL LAND QUALITY

GRADE/ Sub-grade	ha	as % of total area	as % of agricultural area
2	6.76	6	7
3a	38.6	34	37
3b	58.84	52	56
Non-agricultural land	8.24	8	
TOTAL	112.44	100	100

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December 1989