9/91

Clevedon, Nailsea, Portishead Local Plan: South of Clevedon

Agricultural Land Classification

Report of Survey

1. Introduction

In March and April 1991 a detailed Agricultural Land Classification (ALC) was carried out to the South of Clevedon, in connection with the Clevedon, Nailsea, Portishead Local Plan. The area was covered by objection number 873, which objected to the non-inclusion of the land is the new Local Plan; it had been included in previous plans. The total area of objection covered 354 ha.

The fieldwork was conducted by the Resource Planning Group at an approximate observation density of 1 auger boring per hectare which corresponds to a mapping scale of 1:10,000. A total of 220 borings and 4 soil pits were examined.

2. Agricultural Land Classification

2.1 The ALC* provides a framework for classifying land according to the extent to which its physical or chemical characteristics impose long-term limitations on its use for agriculture. The distribution of grades is detailed below and illustrated on the accompanying ALC map. The information is accurate at the scale of mapping but any enlargement would be misleading.

Table 1: Distribution of ALC grades

Grade	Area (ha)	% of Survey Area	% of Agricultural Land
4	314.8 ha	90.4	100
Urban	15.5	4.4	
Non Agric	13.7	3.9	
Ag Bdgs	4.3	1.2	
Water	0.5	0.1	
	348.8 ha	100%	

* Revised Guidelines and Criteria for grading the quality of agricultural land MAFF 1989

2.2 Climate

Estimates of Important Climatic variables were obtained for the site by interpolation from a 5 km grid Met Office/MAFF database* in order to assess any overall climatic limitation. The indicative parameters for assessing such a limitation are accumulated temperature (a measure of the relative warmth of a locality) and average annual rainfall (a measure of overall wetness). The results (shown in Table 2) reveal that there is no overall climatic limitation across the survey area. However exposure was found to be

locally limiting particularly at the western edge of the area.

Table 2: Climatic Interpolation

Grid reference	ST 400690
Height	5
Accumulated Temperature (° days)	1550
Average Annual Rainfall (mm)	829
Field Capacity (Days)	186
Moisture Deficit, Wheat (mm)	102
Potatoes (mm)	94
Overall Climatic grade	1

2.3 Grade 4

The whole of the survey area has been classified as Grade 4. This uniformity reflects the geology which is Esturine Alluvium, throughout. Textures of the top 25 cm were heavy clay loams and silty clays confirmed by particle size distribution analysis, often gleyed from the surface. The soil pits confirmed that there are slowly permeable layers (SPL) beginning between 20 cm and 38 cm. The soils are placed into Wetness Class 4 (gleyed less than 40 cm, SPL starting less than 51 cm; Figure 7 Revised guidelines). Some of the profiles examined had a thin topsoil horizon of medium silty clay loam or medium clay loam, but the texture of the top 25 cm fell into the heavier textural classes. Combining the prevailing FCD of 186, topsoil texture and wetness class assigns the soils to Grade 4 (Table 6 Revised Guidelines). The soils in the south western part of the survey area were better drained, in particular along the River Kenn where gleying was not present within 40 cm but between 40 and 70 cm, so these soils were placed into Wetness Class III but with silty clay topsoils, these profiles were still assigned to Grade 4. The limitation across the survey area is thus wetness which affects the plant growth and imposes restrictions on the nature and timing of cultivations, or grazing by livestock. Field drainage is already in use in the area. Evidence of exposure in the form of wind pruned trees and bushes particularly in the west of the survey area reveals dominant winds from the south west which may be frequently strong and salt-laden in this coastal location. The limitation imposed by exposure however is no more severe than that imposed by the soil water regime.

* Climatological Data for Agricultural Land Classification Met Office/MAFF/SSLRC 1989