

AGRICULTURAL LAND CLASSIFICATION

BASINGSTOKE LOCAL PLAN

SHERFIELD HALL

RECONNAISSANCE SURVEY



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SHERFIELD HALL, BASINGSTOKE LOCAL PLAN, HAMPSHIRE

RECONNAISSANCE SURVEY

1. BACKGROUND

- 1.1 The 35.1 hectare site lies to the north east of Basingstoke and south west of the village of Sherfield-on-Loddon, adjacent to the A33 trunk road. The site is bounded to the north by woodland and Ministry of Defence land and to the east by the A33. The south is bounded by woodland, agricultural land and housing whilst the western boundary is marked by woodland and a minor road.
- 1.2 The area was surveyed on 27 November 1991, using 110cm and 120cm Dutch soil augers, samples being taken at approximately 200m intervals on a grid basis across the site. In addition two soil pits were examined to enable more detailed soil description.

Land Use

- 1.3 At the time of survey, the site was under permanent grassland, this being grazed by sheep.

2. PHYSICAL FACTORS AFFECTING LAND QUALITY

Relief

- 2.1 The altitude of the site varies between about 65m AOD and 80m AOD, the highest land being towards the southern border of the site and falling gently towards the north west. There are no parts of the site where gradient is a limit to the agricultural land quality.

Climate

- 2.2 Estimates of climatic variables were obtained by interpolation from a 5 Km grid database (Met. Office, 1989), for representative locations in the survey area. Figures are adjusted for altitude.

Climatic Interpolation

Grid Reference	SU 661566	SU664561
Altitude (m AOD)	66	80
Accumulated Temperature (°Days, Jan-June)	1457	1441
Average Annual Rainfall (mm)	720	735
Field Capacity Days	154	156
Moisture deficit, Wheat (mm)	108	106
Moisture deficit, Potatoes (mm)	101	98

- 2.3 The important parameters in assessing an overall climatic limitation are, average annual rainfall (a measure of overall wetness) and accumulated temperature (a measure of the relative warmth of a locality). Although average annual rainfall is relatively low and accumulated temperature relatively high, in a national context, there is no overall climatic limitation affecting the land quality of this site. However, climatic factors do affect interactive limitations between soil and climate, namely wetness and droughtiness.

Geology and Soils

- 2.4 British Geological Survey, Sheet 284, Basingstoke (1981), shows the area to be entirely underlain by Tertiary London Clay. The formation consists chiefly of mottled clayey deposits.
- 2.5 The Soil Survey of England and Wales (SSEW), Sheet 6, Soils of South East England (1983), shows the site to be entirely underlain by the Wickham 4 Association. These soils are described as "seasonally waterlogged, with slowly permeable horizons, classified as typical stagno gleys or pelo-stagno gleys" (SSEW 1984).
- 2.6 Detailed field examination indicates that there is one soil type occurring at this site.
- 2.7 Profiles were found to comprise calcareous to non calcareous medium or heavy silty clay loam, or medium to heavy clay loam topsoils. Slight root mottling was occasionally observed in the topsoil. Subsoils were typically heavy silty clay loam or medium to heavy clay loams, overlying slowly permeable clay within about 46 cm, and were gleyed within 28 cm.

3. AGRICULTURAL LAND CLASSIFICATION

- 3.1 The ALC grading of this site is determined by interactions between soil and climatic factors, namely wetness and droughtiness.
- 3.2 ALC grade 3b has been mapped on the site along with areas of non agricultural use, the area and extent of which is given below:-

<u>Grade</u>	<u>Area (ha)</u>	<u>% of Total Agricultural Land</u>
3b	30.3	100
Total Agricultural Area	<u>30.3</u>	<u>100</u>
Woodland	4.3	
Land in urban use	0.3	
Farm Buildings	<u>0.2</u>	
Total area of survey	<u>35.1</u>	

- 3.3 Appendix 1 gives a generalised description of the grades and subgrades identified in this survey.

Grade 3b

- 3.4 Land of this quality occurs across the entire site. Profiles comprise soils described in section 2.7. These soils are assigned to wetness Class III and IV depending on the depth to gleyic features and slowly permeable horizons. The major limitation to this land is wetness and workability restrictions caused by clayey soil textures and imperfect drainage. As a result land cannot be graded higher than 3b.

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M LARKIN/N SHIRT
Resource Planning Group
Reading RO

SOURCES OF REFERENCE

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