11/90a+b

# SALISBURY URBAN AREA LOCAL PLAN: 1990 FIELDWORK
# AGRICULTURAL LAND CLASSIFICATION

## Report of Survey

### 1. Introduction

In July 1989 MAFF surveyed 12 separate sites around Salisbury and Wilton, totalling 250 hectares, in connection with the Salisbury Urban Area Local Plan. A further request for information on land quality was received for two additional sites: Old Sarum Airfield and land south of Netherhampton Road. This report provides details of the Agricultural Land Classification (ALC) survey for this March 1990 fieldwork. A separate report deals with the 12 sites surveyed in 1989.

### 2. Old Sarum Airfield

**Table 1: Distribution of ALC Grades**

| Grade | Area (ha) | % of Survey Area | % of Agricultural Land |
|---|---|---|---|
| 3A | 30.7 | 19.3 | 23.5 |
| 3B | 99.7 | 62.7 | 76.5 |
| Non-Agric | 24.9 | 15.7 | |
| Urban | 3.1 | 2.0 | 100% (130.4ha) |
| Farm Bldgs | 0.5 | 0.3 | |
| | 158.9 ha | 100% | |

**Table 2: Climatic Interpolations**

| Grid Reference | SU 150332 | SU 158335 |
|---|---|---|
| Altitude (m) | 80 | 65 |
| Accumulated temperature (° days) | 1462 | 1479 |
| Average Annual Rainfall (mm) | 760 | 751 |
| Field Capacity (days) | 169 | 168 |
| Moisture Deficit, Wheat (mm) | 107 | 109 |
| Moisture Deficit, Potatoes (mm) | 99 | 102 |
| Climatic Grade | 1 | 1 |

A total of 122 soil borings and 4 soil pits were examined.

The whole of the survey area is underlain by Chalk and the land quality responds to the depth at which the Chalk occurs and its degree of weathering.

The **Sub-grade 3A** map units define those areas of deeper soil profiles, usually located in surface depressions, where the parent material is significantly weathered and which as a result, allows deep rooting and increases the available water for extraction. Pit IV is typical of these soils which exhibit Medium Silty Clay Loam topsoils which grade into subsoils with a higher clay and chalk content (a transitional weathering zone). The soils are downgraded to 3A on the basis of a droughtiness limitation caused largely by the inability of crop roots to penetrate the compact Chalk to any great extent; some areas may also have high topsoil stone contents which preclude them from Grade 2.

Over the majority of the site the soils fall into **Sub-Grade 3B.** These soils suffer from a significant droughtiness limitation (pits I-III are typical) caused by the presence of compact Chalk at quite shallow depths. Some areas within these 3B map units have high surface stone contents (flint and chalk) which preclude them from Sub-grade 3A.

**Non Agricultural:** the survey area includes an active grass airstrip and glider path which have been classified as non-agricultural. The grass parking areas for both planes and cars are similarly designated non-agricultural.

3. **Netherhampton Road, South**

**Table 3: Distribution of ALC Grades**

| Grade | Area (ha) | % Agricultural Area |
|---|---|---|
| 2 | 14.3 | 55.0 |
| 3A | 11.5 | 44.2 |
| 3B | 0.2 | 0.8 |
| Urban | 0.2 | |
| | 26.2 ha | 100% (26.0 ha) |

**Table 4: Climatic Interpolation**

| | |
|---|---|
| Grid reference | SU114291 |
| Height (m) | 65 |
| Accumulated Temperature (° days) | 1482 |
| Average Annual Rainfall (mm) | 838 |
| Field Capacity (days) | 185 |
| Moisture deficit, Wheat (mm) | 104 |
| Moisture deficit, Potatoes (mm) | 96 |
| Climatic Grade | 1 |

The site is underlain by valley gravels and Upper Chalk with flints. The two parent materials give rise to different soil profiles which are reflected in the grading. The site has varied topography but only in a small area in the South West is the gradient limiting. This area is graded as **Subgrade 3B.**

The **Grade 2** land has two typical profiles. Soils overlying the valley gravels tend to have deep profiles with some flinty stones present but the soil pit dug in this area revealed that these were not limiting either in terms of topsoil stone content or droughtiness. These wetness Class I soils were limited to Grade 2 by workability since the topsoil textures are medium clay loams and medium silty clay loams. The second typical profile in the Grade 2 areas has weathered Chalk at depth, but at sufficient depth to allow adequate moisture to be retained in the overlying soil to prevent a droughtiness problem. Chalk typically enters the profile from 55cm-90cm. A soil pit dug in the area with much shallower topsoils revealed root penetration stopping at 80 cm. Droughtiness calculations therefore also stop at this depth.

The **Subgrade 3A** areas have chalk entering the profile at shallower depths than in the grade 2 areas, typically 25-55cm. This created a droughtiness limitation even with root penetration to at least 80cm.

In three areas in the western part of the site which had surface stone contents around 10%, stoniness assessments using the sieve method were made of the topsoil stone content but it was found that these did not exceed 5% by volume.