

SOMERTON AND LANGPORT LOCAL PLAN: LANGPORT

AGRICULTURAL LAND CLASSIFICATION

Report of Survey

1. INTRODUCTION

Over three hundred hectares of land around Langport, Somerset were graded under the Agricultural Land Classification (ALC) System in July 1992. The survey was carried out for MAFF as part of its statutory contribution to the preparation of the Somerton and Langport Local Plan. Part of the survey area falls within the Somerset Levels and Moors Environmentally Sensitive Area.

The fieldwork was carried out by ADAS's Resource Planning Team (Wessex Region) at a scale of 1:10,000 (approximately one sample point every hectare). The information is correct at the scale shown but any enlargement would be misleading. This survey supercedes the previous survey of this area carried out in 1986 being at a more detailed level and carried out under the Revised Guidelines and Criteria for grading the quality of agricultural land (MAFF 1989). A reduced boring density was carried out over areas that had been surveyed previously to assess those gradings. A total of 72 borings and 4 soil pits were examined.

The ALC provides a framework for classifying land according to the extent to which its physical or chemical characteristics impose long-term limitations on agricultural use. The grading takes account of the top 120cm of the soil profile. A description of the grades used in the ALC System can be found in the appendix.

The distribution of ALC grades identified in the survey area is detailed below and illustrated on the accompanying map.

Table 1 Distribution of ALC grades: Langport

Grade	Area (ha)	% of Survey Area	% of Agricultural Land
2	36.3	12.0	16.1
3A	38.0	12.6	16.8
3B	150.6	49.7	66.7
4	0.8	0.3	0.4
Non Agric	21.8	7.2	100% (225.7)
Urban	52.7	17.4	
Farm Buidings	2.3	0.8	
TOTAL	302.5	100%	

2. 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.

To assess any overall climatic limitation, estimates of important climatic variables were obtained for the site by interpolation from the 5km grid Met Office/Maff Database (Met Office/MAFF/SSLRC 1989). The parameters used for assessing climate 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 climatic limitation across the survey area.

No local climatic factors such as exposure were noted in the survey area. Climatic data on Field Capacity Days (FCD) and Moisture Deficits for wheat (MDW) and potatoes (MDP) are also shown. This data is used in assessing the soil wetness and droughtiness limitations referred to in Section 5.

Table 2 Climatic Interpolations: Langport

Grid Reference	ST 433 263	ST 433 275
Height (m)	10	35
Accumulated Temperature (days)	1562	1533
Average Annual Rainfall (mm)	715	738
Overall Climatic Grade	1	1
Field Capacity (Days)	154	158
Moisture Deficit, Wheat (mm)	115	112
Potatoes (mm)	110	106

3. RELIEF

Langport is higher than the land to the south and west. The survey area to the west and south is therefore low lying and forms part of the Somerset Moors and Levels. The area to the north and east is higher and slightly undulating. The lowest land does not rise above 10m, but the higher land reaches 35m around Pict's Hill.

4. GEOLOGY AND SOILS

The low lying moors are underlain by alluvial deposits. The land around Huish Episcopi is underlain by clays with limestone. The remaining areas have clays except for some terrace deposits at Newtown and Portway and small areas of Keuper Marls, as shown on BGS sheet 296.

The soils across the survey area become heavier with depth, usually being a heavy clay loam topsoil with clay subsoils. Occasionally there were medium clay loam topsoils, but these

did not form a coherent block except a small area in the south. Where the soils are underlain by the clay with limestone and the terrace deposits then the soils were stoney but well drained. The soils over the alluvial deposits were poorly drained.

5. AGRICULTURAL LAND CLASSIFICATION

The distribution of ALC grades identified in the survey area is detailed in Section 1 and shown on the accompanying ALC map. The information is correct at the scale shown but any enlargement would be misleading.

Grade 2

Three areas of Grade 2 were identified in the survey. The northern areas have well drained soils with low stone contents. The main limitation of these soils is droughtiness. In addition with a heavy clay loam topsoil they cannot be graded any higher as a result of a workability limitation. The southern area has a lighter topsoil, medium clay loam. These soils could therefore qualify for Grade 1 in terms of workability but they have much higher stone contents at depth with better subsoil structural condition and so are limited to Grade 2 on droughtiness. These soils become heavier with depth but show no sign of wetness in the profile, confirmed by soil pits.

Subgrade 3a

Three areas of Subgrade 3a have been identified. In the south west around Huish Episcopi borings and a soil pit showed that the soils had slightly impeded drainage. Gleying was evident within 40cm but no slowly permeable layers were present in the profile. The profile was slightly stoney but this did not impose a greater limitation. This pit also represented the Subgrade 3a land near Barry Moor. The area of 3a in the north was graded so on the basis of droughtiness and a workability limitation with some clay topsoils.

Subgrade 3b

The majority of the survey area has been classified as Subgrade 3b. These areas have heavy clay loam topsoils and experience restricted drainage. The profiles are gleyed within 40cm and have slowly permeable layers at shallow depths. The soils are assigned to Wetness Classes III and IV. None of the topsoils were organic so the soils can be graded as 3b for the local FCD level. A soil pit dug in these areas showed strongly developed prismatic structures in the subsoils.

Grade 4

A small area of Grade 4 has been mapped where the slopes are locally limiting and the versatility of the land is reduced. This is because the types of machinery that can be safely used is limited, and cultivation runs the risk of soil erosion.

DESCRIPTION OF THE GRADES AND SUB-GRADES

Grade 1 - excellent quality agricultural land

Land with no or very minor limitations to agricultural use. A very wide range of agricultural and horticultural crops can be grown and commonly include top fruit, soft fruit, salad crops and winter harvested vegetables. Yields are high and less variable than on land of lower quality.

Grade 2 - very good quality agricultural land

Land with minor limitations which affect crop yield, cultivations or harvesting. A wide range of agricultural and horticultural crops can usually be grown but on some land in the grade there may be reduced flexibility due to difficulties with the production of the more demanding crops such as winter harvested vegetables and arable root crops. The level of yield is generally high but may be lower or more variable than Grade 1.

Grade 3 - good to moderate quality agricultural land

Land with moderate limitations which affect the choice of crops, timing and type of cultivation, harvesting or the level of yield. Where more demanding crops are grown yields are generally lower or more variable than on land in Grades 1 and 2.

Subgrade 3a - good quality agricultural land

Land capable of consistently producing moderate to high yields of a narrow range of arable crops, especially cereals, or moderate yields of a wide range of crops including cereals, grass, oilseed rape, potatoes, sugar beet and the less demanding horticultural crops.

Subgrade 3b - moderate quality agricultural land

Land capable of producing moderate yields of a narrow range of crops, principally cereals and grass or lower yields of a wider range of crops or high yields of grass which can be grazed or harvested over most of the year.

Grade 4 - poor quality agricultural land

Land with severe limitations which significantly restrict the range of crops and/or level of yields. It is mainly suited to grass with occasional arable crops (eg cereals and forage crops) the yields of which are variable. In moist climates, yields of grass may be moderate to high but there may be difficulties in utilisation. The grade also includes very droughty arable land.

Grade 5 - very poor quality agricultural land

Land with very severe limitations which restrict use to permanent pasture or rough grazing, except for occasional pioneer forage crops.

Descriptions of other land categories used on ALC maps

Urban

Built-up or 'hard' uses with relatively little potential for a return to agriculture including: housing, industry, commerce, education, transport, religious buildings, cemeteries. Also, hard-surfaced sports facilities, permanent caravan sites and vacant land; all types of derelict land, including mineral workings which are only likely to be reclaimed using derelict land grants.

Non-agricultural

'Soft' uses where most of the land could be returned relatively easily to agriculture, including: private parkland, public open spaces, sports fields, allotments and soft-surfaced areas on airports/airfields. Also active mineral workings and refuse tips where restoration conditions to 'soft' after-uses may apply.

Agricultural buildings

Includes the normal range of agricultural buildings as well as other relatively permanent structures such as glasshouses. Temporary structures (eg polythene tunnels erected for lambing) may be ignored.

Open water

Includes lakes, ponds and rivers as map scale permits.

Land not surveyed

Agricultural land which has not been surveyed.

Where the land use includes more than one of the above land cover types, eg buildings in large grounds, and where map scale permits, the cover types may be shown separately. Otherwise, the most extensive cover type will usually be shown.