8FCS 6017 28/93

DORSET MINERALS AND WASTE LOCAL PLAN
SG6 LONGHAM

AGRICULTURAL LAND CLASSIFICATION

Report of Survey

1. SUMMARY

Fifty six hectares of land at Longham, Dorset were surveyed using the Agricultural Land Classification (ALC) System in July 1993. The survey was carried out on behalf of MAFF as part of its statutory role in the preparation of the Dorset Minerals and Waste Local Plan. Longham (SG6) is a preferred area for sand and gravel extraction.

The fieldwork was carried out by ADAS (Resource Planning Team, Taunton Statutory Unit) at a scale of 1:10,000. The information is correct at this scale but any enlargement would be misleading. A total of 57 auger borings and 3 soil profile pits were examined.

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

Distribution of ALC grades: Longham

Grade	Area (ha)	% of Survey Area	% of Agricultural Land
2	41.15	73.9	73.9
3a	14.50	26.1	26.1
TOTAL	55.65	100%	100% (55.65ha)

All the agricultural land surveyed was found to be best and most versatile. The main limitation to the versatility of the soils in the survey area is droughtiness, mainly caused by light textured stony soils.

2. INTRODUCTION

Fifty six hectares of land at Longham, Dorset were surveyed using the Agricultural Land Classification (ALC) System in July 1993. The survey was carried out on behalf of MAFF as part of its statutory role in the preparation of the Dorset Minerals and Waste Local Plan. Longham (SG6) is a preferred area for sand and gravel extraction.

The fieldwork was carried out by ADAS (Resource Planning Team, Taunton Statutory Unit) at a scale of 1:10,000 (approximately one sample point every hectare). The information is correct at this scale but any enlargement would be misleading. A total of 57 auger borings and 3 soil profile pits were examined.

The published Provisional 1" to the mile ALC map of this area (MAFF 1973) shows the western edge of the site as Grade 4, north of Longham House as Grade 2 and the remaining land as Grade 3. The recent survey supersedes this map having been carried out at a more detailed level and using the Revised Guidelines and Criteria for grading the quality of agricultural land (MAFF 1988).

The ALC provides a framework for classifying land according to the extent to which its physical 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 Appendix 2.

At the time of survey the majority of the site was under grass and set aside.

3. 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.

Estimates of climatic variables were obtained for the site by interpolation from the 5km grid Meteorolgical Office Database (Meteorological Office 1989) and are shown in Table 1.

The parameters used for assessing overall climatic limitation are accumulated temperature, (a measure of the relative warmth of a locality) and average annual rainfall, (a measure of overall wetness). The values shown in Table 1 reveal that there is no overall climatic limitation.

No locally limiting 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. These data are used in assessing the soil wetness and droughtiness limitations referred to in Section 6.

Table 1 Climatic Interpolations: Longham

Grid Reference	Sz 060 975
Height (m)	12
Accumulated Temperature (day deg)	1558
Average Annual Rainfall (mm)	821
Overall Climatic Grade	1
Field Capacity (Days)	170
Moisture Deficit, Wheat (mm)	114
Potatoes (mm)	109

4. RELIEF

The site is virtually flat and is at an altitude of 12m AOD. There are no microrelief limitations.

5. GEOLOGY AND SOILS

The published 1:50,000 scale drift map, sheet 329 Geological Survey of England and Wales 1976) shows the west and southern edges of the site to be underlain by alluvium, whilst the remaining areas are underlain by Valley Gravel.

The Soil Survey of England and Wales mapped the soils of the area in 1983, at a reconnaisance scale of 1:250,000. This map shows the soils to be of two associations within the survey area. The majority of the site is fnapped as the Hucklesbook Association. These soils are described as well drained coarse loamy and some sandy soils, com~nonly over gravel, some similar permeable soils affected by groundwater. The area near the River Stour is mapped as the Fladbury 1 Association: stoneless clayey soils mostly overlying peat. The soils are variably affected by groundwater.

The soils found in the recent survey are generally slightly stony in the north and stonier in the south. The soils also have a lower sand content moving south. The soils were found to be well drained. The main limitation in the soils in the survey area is droughtiness.

6. AGRICULTURAL LAND CLASSIFICATION

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

Table 2 Distribution of ALC grades: Longham

Grade	Area (ha)	% of Survey Area	% of Agricultural Land
2	41.15	73.9	73.9
3a	14.50	26.1	26.1
TOTAL	55.65	100%	100% (55.65ha)

Grade 2

Nearly three quarters of the site has been classified as Grade 2. These soils are well drained and are Wetness Class
I. In the northern part of the site the soils tend to be medium sandy loams. The sand content decreases toward the south and clay loams are more common. Likewise the soils in the north are less stony than those to the south. However all the soils in the Grade 2 unit are limited to this grade by reduced available water for crop growth. The combination of soil textures, stone contents and the Moisture Deficits for the site impose a droughtiness limitation. The stone contents of the soils were measured in soil profile pits and the structural condition of the subsoil was also observed.

Subgrade 3a

One quarter of the site is downgraded further because of a greater droughtiness limitation. These soils in the southern part of the site have much higher stone contents in the subsoil than the soils described above. This reduces the available water and so there is a lower moisture balance. These soils are also well drained and are Wetness Class I. The structural condition of these soils and the stone contents were examined and measured in a soil profile pit.

APPENDIX 1

REFERENCES

GEOLOGICAL SURVEY OF ENGLAND AND WALES (1976) Drift edition. Sheet 329 Bournemouth, 1:50,000 scale

MAFF (1973) Agricultural Land Classification Map sheet 179

Provisional 1:63,360 scale

MAFF (1988) Agricultural Land Classification of Enlgland and Wales (Revised guidelines and criteria for grading the quality of agricultural land) Alnwick

METEOROLOGICAL OFFICE (1989) Published climatic data extracted from the agroclimatic dataset, compiled by the Meteorological Office

SOIL SURVEY OF ENGLAND AND WALES (1983) Sheet 5 Soils of South West England 1:250,000