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Dorset Minerals and Waste Local Plan  
SG4 Bovington Farm  
Resource Planning Team

**Taunton Statutory Unit**

July 1993

DORSET MINERALS AND WASTE LOCAL PLAN

SG4 BOVINGTON FARM

AGRICULTURAL LAND CLASSIFICATION

Report of Survey

1. SUMMARY

Fifty one hectares of land at Bovington Farm, Bovington Camp, 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. Bovington Farm (SG4) 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 46 auger borings and 1 soil profile pit 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: Bovington Farm

Grade	Area (ha)	% of Survey Area	% of Agricultural Land
3a	12.65	25.0	26.0
3b	36.05	71.1	74.0
Non Agric	2.00	3.9	<u>100%</u> (48.7ha)
TOTAL	50.70	100%	

One quarter of the agricultural land surveyed was found to be best and most versatile. The main limitation to the versatility of the soils is droughtiness, although there are some area with poorly drained soils. The soils are mainly stony and often have light textures.

## 2. INTRODUCTION

Fifty one hectares of land at Bovington Farm, Bovington Camp, 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. Bovington Farm (SG4) 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 46 auger borings and 1 soil profile pit were examined.

The published Provisional 1" to the mile ALC map of this area (MAFF 1974) shows the entire site to be Grade 4 land. 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 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 Meteorological 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: Bovington Farm

Grid Reference	SY 820 885
Height (m)	20
Accumulated Temperature (day deg)	1558
Average Annual Rainfall (mm)	895
Overall Climatic Grade	1
Field Capacity (Days)	184
Moisture Deficit, Wheat (mm)	108
Potatoes (mm)	102

#### 4. RELIEF

The site is virtually flat with an altitude of 20m AOD. There are no microrelief limitations across the site.

#### 5. GEOLOGY AND SOILS

The published 1:50,000 scale soil and drift geology map, sheet 328 (Geological Survey of England and Wales 1981) shows the entire site to be of drift alluvial deposits.

The Soil Survey of England and Wales mapped the soils of the area in 1983, at a reconnaissance scale of 1:250,000. This map shows the soils at the site to be of a single association. Soils of the Hurst Association are described as coarse and fine loamy permeable soils mainly over gravel variably affected by groundwater.

The soils found in the recent survey are stony and some show evidence of restricted drainage. In the east of the survey area the soils have high organic matter contents.

#### 6. AGRICULTURAL LAND CLASSIFICATION

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

Table 2 Distribution of ALC grades: Bovington Farm

Grade	Area (ha)	% of Survey Area	% of Agricultural Land
3a	12.65	25.0	26.0
3b	36.05	71.1	74.0
Non Agric	2.00	3.9	100% (48.7ha)
TOTAL	50.70	100%	

### Subgrade 3a

One third of the survey area has been mapped as Subgrade 3a. These soils have virtually stone free topsoils, but the subsoils are stony. The topsoils are generally medium clay loam and medium silty clay loam in texture. The stony subsoils are lighter in texture. The soils are free draining and are Wetness Class I. The combination of texture, stone content and the moisture deficit for the area means that these soils are limited to 3a by droughtiness.

### Subgrade 3b

The majority of the site has been downgraded to Subgrade 3b. The soils in the west of the site are droughty because of high stone contents throughout the profile. The textures of the soil throughout are very light. These soils are also well drained and are Wetness Class I. A soil profile was described which is typical of these soils. At the eastern end of the site the soils have high organic matter contents and are poorly drained. Some horizons are peaty. These soils are downgraded to 3b on the basis of wetness.

## APPENDIX 1

### REFERENCES

GEOLOGICAL SURVEY OF ENGLAND AND WALES (1981) Solid and drift edition. Sheet 328 Dorchester, 1:50,000 scale

MAFF (1974) Agricultural Land Classification Map sheet 178 Provisional 1:63,360 scale

MAFF (1988) Agricultural Land Classification of England 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