Dorset Minerals and Waste Local Plan
SG3 Hurst Farm
Resource Planning Team
Taunton Statutory Unit

June 1993

DORSET MINERALS AND WASTE LOCAL PLAN
SG3 HURST FARM

AGRICULTURAL LAND CLASSIFICATION

Report of Survey

1. SUMMARY

Sixty hectares of land at Hurst Farm, Moreton, Dorset were surveyed using the Agricultural Land Classification (ALC) System in June 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. Hurst Farm (SG3) 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 60 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: Hurst Farm

Grade	Area (ha)	% of Survey Area	% of Agricultural Land
2	51.35	85.9	88.5
3a	6.65	11.1	11.5
Non Agric	0.50	0.8	100% (58.8 ha)
Agric Bdgs	1.30	2.2	
TOTAL	59.80	100%	

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, caused by light textured stony soils.

2. INTRODUCTION

Sixty hectares of land at Hurst Farm, Moreton, Dorset were surveyed using the Agricultural Land Classification (ALC) System in June 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. Hurst Farm (SG3) 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 60 auger borings and 3 soil profile pits were examined.

The published Provisional 1" to the mile ALC map of this area (MAFF 1974) shows the site to be predominantly Grade 3 with a small area of Grade 4 land west of Hurst Copse. The recent survey supersedes this map and the 1980 Dorset Gravels ALC survey at 1:25,000 of this area, 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. The central southern field had a crop of maize.

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. 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.

No locally limiting climatic factors such as exposure were noted in the survey area.

Table 1 Climatic Interpolations: Hurst Farm

Grid Reference	SY 782 903	SY 792 902
Height (m)	35	30
Accumulated Temperature (day deg)	1541	1547
Average Annual Rainfall (mm)	916	895
Overall Climatic Grade	1	1
Field Capacity (Days)	187	184
Moisture Deficit, Wheat (mm)	104	106
Potatoes (mm)	98	100

4. RELIEF

The site is virtually flat with a slight increase in altitude to the southwest which is at 35m AOD. There are no microrelief limitations.

5. GEOLOGY AND SOILS

The published 1:50,000 scale soild and drift geology map, Sheet 328 (Geological Survey of England and Wales 1981) shows the site to be underlain by Valley Gravel with a small area of Alluvium in the Western part of the site.

The Soil Survey of England and Wales mapped the soils of this area in 1983, at a reconnaisance scale of 1:250,000. This map shows the site to be mostly of the Hurst Association, which is a coarse and fine loamy permeable soil mainly over gravel and variably affected by groundwater. There is a tongue of the Efford 1 Association across the middle of the middle of the site from the east. This is described as a well drained fine loamy soil often over gravel, associated with similar permeable soils variably affected by groundwater.

The soils found in the recent survey are stony and sornetines show evidence of high groundwater for part of the year. The combination of the stony and light textured soils in this area restricts the available water across the site. The main limitation in these soils is therefore droughtiness.

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 sjown but any enlargement would be misleading.

Table 2 Distribution of ALC Grades: Hurst Farm

Grade	Area (ha)	% of Survey Area	% of Agricultural Land
2	51.35	85.9	88.5
3a	6.65	11.1	11.5
Non Agric	0.50	0.8	100% (58.8ha)
Agric Bdgs	1.30	2.2	
TOTAL	59.80	100%	

Grade 2

The majority of the site has been classified as Grade 2. These soils are limited by available water. The soils are stony. The actual stone content of the various horizons varies around the site as measured in soil profile pits. Some profiles in this unit were marginally Grade 1 but it is felt that Grade 2 is more representative of the agricultural versatility of this land. The soils sometimes show evidence of high groundwater for part of the year, but they are still Wetness Class I because of the coarse textured subsoils. These are medium sandy loams.

Subgrade 3a

A small area has been downgraded because the soils are more droughty than those described above. These soils are well drained but have high stone contents in the subsoil. These were measured in a soil profile pit and found to be 56% from 20cm and 63% from 45cm in coarse sandy loams with good structural conditions. This restricts the available water to the crops. The extent of this droughtiness limits these soils to Subgrade 3a.

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 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