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SHEPWAY LOCAL PLAN
SITE 50: RHODES MINNIS, KENT
AGRICULTURAL LAND CLASSIFICATION
ALC MAP & REPORT
SEPTEMBER 1993

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AGRICULTURAL LAND CLASSIFICATION REPORT

1.0 Summary

1.1 In September, 1993, a detailed Agricultural Land Classification (ALC) was made on 0.5 hectares of land at Rhodes Minnis in Kent.

1.2 The work was conducted under ADAS sub-contracting arrangements by Nick Duncan and Associates and was in response to a commission by MAFF's Land Use Planning Unit to provide information on the quality of agricultural land affected by the potential inclusion of this land in the Shepway District Local Plan.

1.3 The classification has been made using MAFF's revised guidelines and criteria for grading the quality of agricultural land. These guidelines provide a framework for classifying land according to the extent to which its physical or chemical characteristics impose long-term limitations on its use for agriculture.

1.4 Two soil borings and one soil pit were examined.

1.5 All of the agricultural area (0.4 ha) has been classified as Grade 2 due to a minor climatic limitation. The soils are deep and free-draining, but the combination of prevailing rainfall and temperature give rise to a cool, moist climatic regime which may restrict the use of the land for agriculture. The rest of the site (0.1 ha) is classified as Urban.

1.6 The ALC information is shown on the attached map. The information is presented at a scale of 1:5,000; it is accurate at this level but any enlargement would be misleading. This map supercedes any previous ALC information for this site.

1.7 A general description of the grades and sub-grades is provided as an appendix. The main classes are described in terms of the type of limitation that can occur, the typical cropping range and the expected level and consistency of yield.

2.0 Climate

2.1 The climatic criteria are considered first when classifying land as climate can be overriding in the sense that severe limitations will restrict land to low grades irrespective of favourable site or soil conditions.

2.2 The main parameters used in the assessment of an overall climatic limitation are average annual rainfall, as a measure of overall wetness, and accumulated temperature (degree days Jan-June), as a measure of the relative warmth of a locality.

2.3 A detailed assessment of the prevailing climate was made by interpolation from a 5km gridpoint dataset (Met. Office 1989). The details are given in the table below and these show that there is an overall climatic limitation affecting the site and limiting the land to Grade 2. Other climatic factors also interact with soil properties to influence soil wetness and droughtiness limitations. At this locality the Field Capacity Days are relatively high and the Moisture Deficits correspondingly low thus increasing the likelihood of soil wetness.

2.4 No local climatic factors such as exposure or frost risk affect the site.

Climatic Interpolation

Grid Reference :	TR 152 429
Altitude (m) :	160
Accumulated Temperature (days) :	1321
Average Annual Rainfall (mm) :	823
Field Capacity (days) :	174
Moisture Deficit, Wheat (mm) :	95
Moisture Deficit, Potatoes (mm) :	85
Overall Climatic Grade :	2

3.0 Relief

3.1 The site lies at an altitude of 160m AOD and slopes gently to the south.

4.0 Geology and Soil

4.1 British Geological Survey (1982), sheet 289, Canterbury shows the site to be underlain by Clay-with-Flints.

4.2 The soil type for this site is entirely the Batcombe Association as shown on the Soil Survey map of South East England (SSEW, 1983, 1:25,000). The soil is described as 'Variably flinty, fine silty and fine loamy over clayey, stagnogleyic paleo-argillic brown earths, having red mottled subsoils.' (SSEW, 1983).

5.0 Agricultural Land Classification

5.1 The attached ALC map provides details of the area measurements and distribution of each grade.

5.2 The location of the soil observation points are shown on the attached sample point map.

5.3 Grade 2

The current survey correlated well with the soil map revealing a medium clay loam topsoil over a strong brown heavy clay loam upper subsoil with few reddish patches. Below approximately 50cm depth the soil becomes a reddish brown clay with common manganiferous nodules and stains. These soils are assessed as Wetness Class I. The site as a whole, however, has been assessed as Grade 2 due to the climatic limitation. Other site and soil conditions are good as the soils are well drained, not susceptible to drought and the land is relatively level.

5.4 At the northern end of the site, alongside the road, there is an area of hardstanding, which would appear to have been used as a car park in the past. This has been classified as urban.

ADAS REFERENCE : 2010/192/93
MAFF REFERENCE : EL 20/109

Resource Planning Team
Guildford Statutory Group
ADAS Reading

REFERENCES

* British Geological Survey (1982), Sheet No.289, Canterbury, 1:50,000

* MAFF (1988), Agricultural Land Classification of England And Wales : revised guidelines and criteria for grading the quality of agricultural land.

* Meteorological Office (1989), Climatological Data for Agricultural Land Classification.

* Soil Survey of England and Wales (1983), Sheet No.6, Soils of South East England, 1:250,000. And accompanying legend.

APPENDIX II

FIELD ASSESSMENT OF SOIL WETNESS CLASS

SOIL WETNESS CLASSIFICATION

Soil wetness is classified according to the depth and duration of waterlogging in the soil profile. Six soil wetness classes are identified and are defined in the table below.

Definition of Soil Wetness Classes

Wetness Class	Duration of Waterlogging[1]
I	The soil profile is not wet within 70 cm depth for more than 30 days in most years.[2]
II	The soil profile is wet within 70 cm depth for 31-90 days in most years **or**, if there is no slowly permeable layer within 80 cm depth, it is wet within 70 cm for more than 90 days, but only wet within 40 cm depth for 30 days in most years.
III	The soil profile is wet within 70 cm depth for 91-180 days in most years **or**, if there is no slowly permeable layer present within 80 cm depth, it is wet within 70 cm for more than 180 days, but only wet within 40 cm depth for between 31-90 days in most years.
IV	The soil profile is wet within 70 cm depth for more than 180 days but not wet within 40 cm depth for more than 210 days in most years **or**, if there is no slowly permeable layer present within 80 cm depth, it is wet within 40 cm depth for 91-210 days in most years.
V	The soil profile is wet within 40 cm depth for 211-335 days in most years.
VI	The soil profile is wet within 40 cm depth for more than 335 days in most years.

Soils can be allocated to a wetness class on the basis of quantitative data recorded over a period of many years or by the interpretation of soil profile characteristics, site and climatic factors. Adequate quantitative data will rarely be available for ALC surveys and therefore the interpretative method of field assessment is used to identify soil wetness class in the field. The method adopted here is common to ADAS and the SSLRC.

[1]The number of days specified is not necessarily a continuous period.

[2]'In most years' is defined as more than 10 out of 20 years.