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**HAVANT BOROUGH LOCAL PLAN  
Objector sites Area 6 Stoke, Hayling Island  
Hampshire**

**Agricultural Land Classification  
ALC Map and Report**

**June 1998**

**Resource Planning Team  
Eastern Region  
FRCA Reading**

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# AGRICULTURAL LAND CLASSIFICATION REPORT

## HAVANT BOROUGH LOCAL PLAN OBJECTOR SITES AREA 6 STOKE HAYLING ISLAND HAMPSHIRE

### INTRODUCTION

1 This report presents the findings of a detailed Agricultural Land Classification (ALC) survey of 20 hectares of land south of Victoria Road Stoke on Hayling Island in Hampshire. The survey was carried out during June 1998.

2 The survey was undertaken by the Farming and Rural Conservation Agency (FRCA)<sup>1</sup> on behalf of the Ministry of Agriculture Fisheries and Food (MAFF) in connection with MAFF's statutory input to the Havant Borough local plan. This survey supersedes any previous ALC information for this land. The field immediately south of Victoria Road is the objector site and totals 3.3 hectares. An additional area has been surveyed to the east to help determine the land quality around the objector site.

3 The work was conducted by members of the Resource Planning Team in the Eastern Region of FRCA. The land has been graded in accordance with the published MAFF ALC guidelines and criteria (MAFF 1988). A description of the ALC grades and subgrades is given in Appendix I.

4 At the time of survey the agricultural land use on the site was a mixture of predominantly permanent grassland (grazed in part by horses and cattle) with the remainder comprising wheat, maize, potatoes and an orchard. The areas mapped as 'Other land' include a small waste treatment works with its associated access road.

### SUMMARY

5 The findings of the survey are shown on the enclosed ALC map. The map has been drawn at a scale of 1:10,000. It is accurate at this scale but any enlargement would be misleading.

6 The area and proportions of the ALC grades and subgrades on the surveyed land are summarised in Table 1.

Table 1 Area of grades and other land

Grade/Other land	Area (hectares)	% surveyed area	% site area
3a	19.7	100.0	98.5
Other land	0.3	N/A	1.5
Total surveyed area	19.7	100.0	98.5
Total site area	20.0		100.0

<sup>1</sup> FRCA is an executive agency of MAFF and the Welsh Office

7 The fieldwork was conducted at an average density of 1 boring per hectare of agricultural land. In total 18 borings and 1 soil pit were described.

8 All the agricultural land on this site has been classified as Subgrade 3a (good quality) with soil wetness as the main limitation to land quality. The land comprises medium silty clay loam topsoils over similar or heavy silty clay loam upper subsoils and clay lower subsoils. The clay subsoils are poorly structured and impede drainage through the soil profile which gives rise to a soil wetness limitation. This limitation will affect the range and yield of crops that can be grown on this land as well as restricting the number of days when the land is in a suitable condition for cultivation, trafficking by machinery or grazing by livestock.

## FACTORS INFLUENCING ALC GRADE

### Climate

9 Climate affects the grading of land through the assessment of an overall climatic limitation and also through interactions with soil characteristics.

10 The key climatic variables used for grading this site are given in Table 2 and were obtained from the published 5km grid datasets using the standard interpolation procedures (Met Office 1989).

Table 2 Climatic and altitude data

Factor	Units	Values	
Grid reference	N/A	SU 720 029	SU 723 030
Altitude	m AOD	3	4
Accumulated Temperature	day°C (Jan June)	1551	1549
Average Annual Rainfall	mm	725	728
Field Capacity Days	days	149	150
Moisture Deficit Wheat	mm	119	119
Moisture Deficit Potatoes	mm	116	116
Overall climatic grade	N/A	Grade 1	Grade 1

11 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.

12 The main parameters used in the assessment of an overall climatic limitation are average annual rainfall (AAR) as a measure of overall wetness and accumulated temperature (AT0 January to June) as a measure of the relative warmth of a locality.

13 The combination of rainfall and temperature at this site mean that there is no overall climatic limitation. The site is in close proximity to the sea and is shown as in an area which is recorded as rather exposed by the Met Office (Met Office unpublished data 1968). However, no physical evidence of significant exposure was detected at a low level at the time of the survey. The site is therefore climatically Grade 1.

## Site

14 The site lies at an altitude of approximately 5m AOD and is level or very gently sloping. The site is not affected by any site restrictions such as gradient, microrelief or flooding.

## Geology and soils

15 The most detailed published geology information for the site (BGS 1970) shows the majority of it to be underlain by Brickearth with alluvium to the west.

16 The most detailed published soils information covering the area (SSEW 1983) shows it to comprise entirely soils of the Park Gate association. These soils are described as deep stoneless silty soils variably affected by groundwater (SSEW 1983). Soils consistent with this description but with the addition of a slowly permeable clay subsoil were observed across the site.

## AGRICULTURAL LAND CLASSIFICATION

17 The details of the classification of the site are shown on the attached ALC map and the area statistics of each grade are given in Table 1 page 1.

18 The location of the auger borings and pits is shown on the attached sample location map and the details of the soils data are presented in Appendix II.

## Subgrade 3a

19 All of the agricultural land on the site has been mapped as this grade (good quality) and is limited by soil wetness.

20 Soils typically comprise non-calcareous medium silty clay loam topsoils which may contain up to 3% total flints by volume (1% > 2 cm in size). Topsoils overlie similar or heavy silty clay loam upper subsoils which may contain up to 12% total flints by volume. These pass to slowly permeable clay lower subsoils which commence from 42–67 cm. Pit 1 in the objector site is typical of these soils (see Appendix II). The pit confirmed the existence of these poorly structured clay subsoils which are slowly permeable and which impede the movement of water through the soil profile. The depth to gleying and the slowly permeable layer assigns these soils to Wetness Class III and this combination of imperfect drainage, topsoil texture and the local climate gives rise to a land classification of Subgrade 3a. This degree of soil wetness may adversely affect crop growth and development as well as limiting the flexibility of the land due to a reduction in the number of days when the soil is in a suitable condition for cultivation, trafficking by machinery or grazing by livestock.

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## SOURCES OF REFERENCE

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Met Office (1989) *Climatological Data for Agricultural Land Classification*  
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