CREWE AND NANTWICH LOCAL PLAN: FIRST REPLACEMENT
Land at Alvaston

Agricultural Land Classification
ALC Map and Report
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AGRICULTURAL LAND CLASSIFICATION REPORT
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INTRODUCTION

1. This report presents the findings of a detailed Agricultural Land Classification (ALC) survey on 24.7 hectares of land. The results of this survey supersede any previous ALC information for this land. The land is located to the north of the Nantwich Bypass and between Alvaston Business Park and the Sewage Works. The survey was in connection with the Crewe and Nantwich Local Plan (First Replacement 2011).

2. The survey was undertaken on behalf of the Ministry of Agriculture, Fisheries and Food (MAFF) in October 1998 by the Resource Planning Team of the Farming and Rural Conservation Agency (FRCA)- Northern region of FRCA.

3. The land has been graded in accordance with the publication "Agricultural Land Classification of England and Wales - Revised guidelines and criteria for grading the quality of agricultural land" (MAFF 1988) .

4. At the time of survey the agricultural land on this site was partly under grass, with the remainder being fallow after this years cereal and maize harvest.

SUMMARY

5. The findings of the survey are shown on the enclosed ALC map. The map has been drawn at a scale of 1:10000 with an average auger boring density of 1 per hectare. The ALC map is only accurate at this base map scale and 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
1	-	-	-
2	-	-	-
3a	14.6	70	59
3b	5.7	27	23
4	0.5	3	2
5	-	-	-
Agricultural land not surveyed	-	N/A	-
Other land	3.9	N/A	16
Total surveyed area	*20.8*	*100*	-
Total site area	24.7	-	100

7. The agricultural land on this site has been classified as Subgrade 3a (good quality), Subgrade 3b (moderate quality) and Grade 4 (poor quality). The key limitations to the agricultural use of this land are soil droughtiness, soil wetness and gradient.

8. The area of good quality land is located in the centre and west of the site. The soils have a sandy loam topsoil overlying loamy sand and sand.

9. The area of moderate quality land is mapped towards the east of the site. The soils in this area have a clay loam topsoil overlying a gleyed and slowly permeable clay subsoil. To the north of Hollows Bridge this unit is found on strongly sloping land.

10. The area of poor quality land is mapped in the centre of the site in a moderately steeply sloping valley feature.

FACTORS INFLUENCING ALC GRADE

Climate

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

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

Table 2: Climatic and altitude data

Factor	Units	Values
Grid reference	N/A	SJ 659 539
Altitude	m, AOD	38
Accumulated Temperature	day°C (Jan-June)	1425
Average Annual Rainfall	mm	733
Field Capacity Days	days	167
Moisture Deficit, Wheat	mm	97
Moisture Deficit, Potatoes	mm	86
Overall climatic grade	N/A	Grade 1

13. 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.

14. 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 (ATO, January to June), as a measure of the relative warmth of a locality.

15. The combination of rainfall and temperature at this site means that there is no overall climatic limitation. The site is climatically Grade 1.

Site

16. The site lies at an altitude of 35 to 39 metres AOD. The site is relatively flat with a valley feature to the north west of Hollows Bridge.

17. The three site factors of gradient, microrelief and flooding are considered when classifying the land.

18. To the north west of Hollows Bridge the land is strongly to moderately steeply sloping. Here the agricultural quality of the land is limited to Subgrade 3b and Grade 4.

19. The remaining factors do not impose any limitations on the agricultural use of this land.

Geology and Soils

20. The solid geology of the area is comprised of Keuper Sandstone. This is overlain with First River Terrace deposits, alluvium and boulder clay - British Geological Survey (1967).

21. The soils that have developed on this geology are generally of either a sandy loam texture over sand or a clay loam texture over clay.

Agricultural Land Classification

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

Subgrade 3a

23. Land of good quality occupies 14.6 hectares (59%) of the site area and is found in the centre and west of the site.

24. The soil has a sandy loam topsoil texture over loamy sand and sand to depth, with few stones within the profile. The moisture balance places these soils in Subgrade 3a.

25. The main limitation to the agricultural use of this land is soil droughtiness.

Subgrade 3b

26. Land of moderate quality occupies 5.7 hectares (23%) of the site area and is mapped towards the east of the site.

27. The soil has a clay loam topsoil texture which overlies clay loam and clay. The depths to gleying and the slowly permeable layer place these soils in Wetness Class IV.

28. The main limitation to the agricultural use of this land is soil wetness.

29. To the north west of Hollows Bridge there is a valley feature which has strongly sloping flanks (8°). Here gradient limits the agricultural quality of the land to Subgrade 3b.

Grade 4

30. Land of poor quality occupies 0.5 hectares (2%) of the site area and is mapped in the centre of the site in a moderately steeply sloping valley feature.

31. The soil is similar to that described for Subgrade 3b but is found on complex slopes of 12°. At the time of the survey standing water was present at the foot of these slopes.

32. The main limitation to the agricultural use of the land is gradient.

Other Land

33. Other land occupies 3.9 hectares (16%) of the site area and includes Alvaston Business Park, access roads and trackways, scrub and ponds.

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SOURCES OF REFERENCE

British Geological Survey (1967) Sheet 122, Nantwich Solid and Drift Editions.
1:63 360 Scale.
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