

**CREWE AND NANTWICH LOCAL
PLAN: FIRST REPLACEMENT
Site 5 - South of Shavington**

**Agricultural Land Classification
ALC Map and Report
May 1998**

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**AGRICULTURAL LAND CLASSIFICATION REPORT
CREWE AND NANTWICH LOCAL PLAN: FIRST REPLACEMENT
Site 5 - South of Shavington**

INTRODUCTION

1. This report presents the findings of a detailed Agricultural Land Classification (ALC) survey on 18.7 hectares of land. The results of this survey supersede any previous ALC information for this land. The land is located south of Shavington, centred on grid reference SJ 697 511. The site is bounded to the north by the A500(T) and to the west and east by houses adjoining Dig Lane and Stock Lane respectively. The survey was in connection with the Borough of 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 May 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 under permanent grassland, or recently ploughed. In the north east of the site the land was used for horse grazing.

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	16.3	89	87
3a	2.1	11	11
3b	-	-	-
4	-	-	-
5	-	-	-
Agricultural land not surveyed	-	N/A	-
Other land	0.3	N/A	2
Total surveyed area	18.4	100	-
Total site area	18.7	-	100

7. The agricultural land on this site has been classified as Grade 2 (very good quality) and Subgrade 3a (good quality). The key limitations to the agricultural use of this land are soil wetness and droughtiness.

8. The area of very good quality land is found over the majority of the site. The soils commonly comprise either a sandy loam, fine sandy silt loam or medium clay loam topsoil, overlying a sandy clay loam or sandy loam upper subsoil, onto a sandy loam, sandy silt loam or loamy sand and sand in the lower subsoil. Occasionally the profiles went onto clay loam and clay subsoils.

9. The area of good quality land is mapped mainly in the east of the site. The soils commonly comprise either a sandy clay loam, fine sandy loam or fine sandy silt loam topsoil, over either a fine sandy loam or fine sandy silt loam upper subsoil, onto a fine sandy loam, sandy clay loam, or heavy clay loam lower subsoil, onto silty clay at depth.

FACTORS INFLUENCING ALC GRADE

Climate

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

11. 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 697 511
Altitude	m, AOD	60
Accumulated Temperature	day°C (Jan-June)	1401
Average Annual Rainfall	mm	744
Field Capacity Days	days	172
Moisture Deficit, Wheat	mm	94
Moisture Deficit, Potatoes	mm	82
Overall climatic grade	N/A	Grade 1

12. 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.

13. 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.

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

Site

15. The site lies at an altitude of 60 metres AOD. The land form is gently rolling, with a slight depression running through the centre of the site along the course of an old drain. A number of small ponds and hollows are scattered throughout the site.

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

17. These factors do not impose any limitations on the agricultural use of this land.

Geology and Soils

18. The solid geology of the area is comprised of Keuper Marl. There is no drift geology mapped - British Geological Survey (1902).

19. The soils that have developed on this geology are generally of either a sandy loam, sandy clay loam or sandy silt loam topsoil texture, over sandy loam and sand or occasionally clay at depth.

Agricultural Land Classification

20. 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.

Grade 2

21. Land of very good quality occupies 16.3 hectares (87 %) of the site area and extends across the majority of the site.

22. In the centre of the site the soils commonly comprise a medium sandy loam or fine sandy silt loam topsoil, onto a gleyed sandy clay loam, medium clay loam or heavy clay loam subsoil, and occasionally onto gleyed and slowly permeable clay at depth. The depths to gleying and the slowly permeable layer place these soils in Wetness Class II.

23. Over the rest of the Grade 2 area the soils commonly comprise either a medium sandy loam, fine sandy loam or medium clay loam topsoil, onto a loamy medium sand loamy fine sand and sand subsoil. The moisture balance places these soils in Grade 2

24. Within the Grade 2 area are isolated borings of Grade 1 and Subgrade 3a and 3b quality. The Grade 1 profiles occur where gleying is present only lower down in the profile, usually over fine sandy loam or fine sandy silt loam subsoils to depth. The Subgrade 3a profiles comprise a medium sandy loam topsoil onto loamy medium sand and sand and are limited by soil droughtiness. The Subgrade 3b profiles are limited by soil wetness and comprise a medium clay loam topsoil onto a heavy clay loam and clay subsoil close to the

surface, occurring next the ponds. These profiles cannot be shown separately at this scale of mapping.

25. The main limitations to the agricultural use of this land are soil droughtiness and soil wetness.

Subgrade 3a

26. Land of good quality occupies 2.1 hectares (11 %) of the site area and occurs mainly in the eastern part of the site. A small area is also mapped in the west of the site adjacent to an overgrown drainage ditch.

27. The soils commonly comprise a sandy clay loam, fine sandy loam or fine sandy silt loam topsoil which is occasionally gleyed, over a strongly gleyed fine sandy loam or fine sandy silt loam upper subsoil, onto a gleyed sandy clay loam, fine sandy loam, or heavy clay loam lower subsoil, onto silty clay at depth. Where a slowly permeable layer is present within 80 cm of the surface, the depths to gleying and the slowly permeable layer place these soils in Wetness Class III. Where no slowly permeable layer occurs within 80 cm of the surface the depth to gleying places these soils in Wetness Class I or II. However, this land is affected by the presence of high groundwater levels for much of the year, indicated by the presence of a gleyed upper subsoil and signs of poaching by horses in some fields, such that Wetness Class III is appropriate.

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

Other Land

29. Other land occupies 0.3 hectares (2 %) of the site area and is found as a garden, ponds and an overgrown drainage ditch.

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SOURCES OF REFERENCE

British Geological Survey (1902) Sheet 123, Stoke-on-Trent, Solid Edition.
1:63 360 Scale.
BGS: London.

Ministry of Agriculture, Fisheries and Food (1988) Agricultural Land Classification of
England and Wales: Revised guidelines and criteria for grading the quality of agricultural
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