

**CREWE AND NANTWICH LOCAL
PLAN : FIRST REPLACEMENT
Site 6 - East Shavington**

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

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**AGRICULTURAL LAND CLASSIFICATION REPORT
CREWE AND NANTWICH LOCAL PLAN : FIRST REPLACEMENT
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INTRODUCTION

1. This report presents the findings of a detailed Agricultural Land Classification (ALC) survey on 32.2 hectares of land. The results of this survey supersede any previous ALC information for this land. The land is located to the east of Shavington, near Crewe. 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 July 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 grass and cereals (wheat). The grass was being grazed by cattle, horses and sheep.

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	20.6	67	64
3a	-	-	-
3b	9.3	30	29
4	1.0	3	3
5	-	-	-
Agricultural land not surveyed	-	N/A	-
Other land	1.3	N/A	4
Total surveyed area	30.9	100	-
Total site area	32.2	-	100

7. The agricultural land on this site has been classified as Grade 2 (very good quality), Subgrade 3b (moderate quality) and Grade 4 (poor quality). The key limitations to the agricultural use of this land include gradient, microrelief, soil wetness and soil droughtiness.

8. The area of very good quality land is located on the higher ground to the south of the Swill Brook. The soils within this grade of land have a sandy loam topsoil texture overlying sandy loam, loamy sand and sand to depth. Occasionally sandy clay loam and clay may be present in the subsoil.

9. The area of moderate quality land is mapped near the Swill Brook and to the north of Green Bank. The soils within this grade of land are of two types. In the immediate valley of the Swill Brook the low lying land has a clay loam topsoil texture over clay loam, sandy clay loam and clay. The soils are waterlogged. On the higher ground the soil has a sandy loam topsoil texture over loamy sand and sand. Occasionally loamy sand and clay may be found in the soil profile. On the higher land slopes of 8° are found and in places microrelief is a limitation.

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 705 517
Altitude	m, AOD	60
Accumulated Temperature	day°C (Jan-June)	1400
Average Annual Rainfall	mm	746
Field Capacity Days	days	173
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 54 to 65 metres AOD. The undulating land rises to the north and south of the Swill Brook.

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

17. On the valley sides of the Swill Brook the land is strongly sloping (8°). Here gradient limits the agricultural use of the land to Subgrade 3b.

18. In the valley of the Swill Brook and to the north of Green Bank there are complex changes of slope angle and direction over short distances, limiting the agricultural use of this land to Subgrade 3b.

19. Flooding does not impose any known limitations on the agricultural use of this land.

Geology and Soils

20. The solid geology of the area is comprised of Keuper Red Marl. This is overlain with deposits of alluvium and glacial sands and gravel - British Geological Survey (1902).

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.

Grade 2

23. Land of very good quality occupies 20.6 hectares (64%) of the site area and is located on the higher ground to the south of the Swill Brook.

24. The soil has a sandy loam topsoil texture over sandy loam, loamy sand and sand to depth with few stones within the profile. Occasionally sandy clay loam topsoils and sandy clay loam and clay may be present in the subsoil. The moisture balance places these soils in Grade 2. The depths to gleying and the slowly permeable layer place sandy clay loam topsoils in Wetness Class II and sandy loam topsoils in Wetness Class III.

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

Subgrade 3b

26. Land of moderate quality occupies 9.3 hectares (29%) of the site area and is mapped near the Swill Brook and to the north of Green Bank.

27. In the immediate valley of the Swill Brook the soil has a clay loam topsoil texture overlying clay loam, sandy clay loam and clay. The depth to gleying and the slowly permeable layer place these soils in Wetness Class IV. In places these soils were waterlogged at the time of the survey.

28. On the higher ground the soil has a sandy loam topsoil texture over loamy sand and sand. Occasionally loamy sand and clay may be present in the soil profile. These soils are found on land where gradient and microrelief limits the land to Subgrade 3b.

29. The immediate valley of the Swill Brook contains a number of man-hole covers, resulting in difficulties in cultivation and tillage.

30. The main limitations to the agricultural use of this land include gradient, microrelief and soil wetness.

Grade 4

31. Land of poor quality occupies 1.0 hectares (3%) of the site area and is mapped to the east of Green Bank.

32. The soil in this area is disturbed, with rubble and a variety of textures within the soil profile, making it impossible to cultivate satisfactorily.

33. The main limitation to the agricultural use of this land is microrelief.

Other Land

34. Other land occupies 1.3 hectares (4%) of the site area and includes Shavington Farm, a garden and scrub.

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SOURCES OF REFERENCE

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

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England and Wales: Revised guidelines and criteria for grading the quality of agricultural
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