

**CREWE AND NANTWICH LOCAL PLAN  
FIRST REPLACEMENT:  
LAND AT WESTON**

**Agricultural Land Classification  
ALC Map and Report  
January 1999**

W Fearnough  
Resource Planning Team  
Northern Region  
FRCA Wolverhampton

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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 29.8 hectares of land at Weston, Cheshire. The results of this survey supersede any previous ALC information for this land. The land is located immediately to the north-east of the village of Weston, three kilometres south-east of Crewe.
2. The survey was undertaken on behalf of the Ministry of Agriculture, Fisheries and Food (MAFF) in January 1999 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, all agricultural land to the west of Main Road was under grass. East of Main Road agricultural land was under grass and cereal stubble.

**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 |
|---------------------|-----------------|-----------------|-------------|
| 2                   | 20.4            | 73              | 68          |
| 3a                  | 3.9             | 14              | 13          |
| 3b                  | 3.8             | 13              | 13          |
| Other land          | 1.7             | --              | 6           |
| Total surveyed area | 28.1            | 100             | --          |
| Total site area     | 29.8            | --              | 100         |

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

8. Land of very good quality (Grade 2) is widely distributed throughout the site, occurring predominantly on the slightly elevated ground bordering the village of Weston and surrounding Carters Green Farm. The soils typically comprise a sandy loam topsoil overlying subsoils of loamy medium sand and medium sand. These generally become sandier with depth. To the west of Main Road and along the northerly border of the site, clay loam and clay subsoils are found. Generally, topsoils are only very slightly stony, although subsoils are moderately stony.

9. Land of good quality (Subgrade 3a) occurs at a number of distinct locations throughout the site. Topsoils have a sandy loam texture, and overlie subsoils of either loamy medium sand and medium sand, or clay loam and clay. Generally topsoils are only very slightly stony, although moderate subsoil stoniness is found in the coarser textured subsoils.

10. Land of moderate quality (Subgrade 3b) occurs predominantly in a poorly drained basin near the centre of the site, but also in a small area to the north of the site. In the centre of the site, soils have either a sandy loam or organic sandy loam topsoil over peaty loam and loamy peat subsoils. Clay is found at depth in a number of these profiles. In the area to the north of the site, the soils have a clay topsoil overlying a clay subsoil to depth. The land appears to have been disturbed.

## FACTORS AFFECTING ALC GRADE

11. Climate affects the grading of the 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 5 km grid datasets using standard interpolation procedures (Meteorological Office, 1989).

Table 2: Climatic and altitude data

| Factor                     | Units           | Values     |
|----------------------------|-----------------|------------|
| Grid reference             | N/A             | SJ 735 528 |
| Altitude                   | m, AOD          | 65         |
| Accumulated Temperature    | day°C (Jan-Jun) | 1393       |
| Average Annual Rainfall    | mm              | 751        |
| Field Capacity Days        | days            | 174        |
| Moisture Deficit, Wheat    | mm              | 92         |
| Moisture deficit, Potatoes | mm              | 80         |
| Overall Climatic Grade     | N/A             | 1          |

13. 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.

### **Site**

16. The site lies at an altitude of 59 to 72 metres AOD. The land generally falls towards a topographic basin near the centre of the site.

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

18. Gradient imposes a limitation to agricultural land quality in one locality. A slope of 9° near the site's eastern boundary places land within Subgrade 3b. Microrelief and flooding do not impose any limitation on the agricultural use of this land.

### **Geology and Soils**

19. The solid geology of the area is comprised of Red (Keuper) Marl. In the lower land at the centre of the site, peat is also found (British Geological Survey 1902). No record of drift geology exists for this area.

20. The soils that have developed over this geology have sandy loam topsoils overlying sandy loam, loamy sand and sand subsoils. Occasionally clay subsoils are found. In poorly drained depressions, peaty loam and loamy peat subsoils are found.

### **Agricultural Land Classification**

21. 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*

22. Land of very good quality occupies 20.4 hectares (68%) of the site, and is found across the site, predominantly on the higher land surrounding Carters Green Farm and on the margins of Weston village. Two soil profiles were found within this area of very good quality land.

23. The first profile found to the west of Main Road, on land fringing the village of Weston and in the extreme north of the site. The soils commonly comprise a sandy loam topsoil and upper subsoil over medium or heavy clay loam and clay subsoils. The

depths to gleying and slowly permeable layer place these profiles into Wetness Class III. The main limitation to the agricultural use of this land is soil wetness.

24. Over the remainder of the very good quality land, the soil profile consist of sandy loam topsoils over medium sandy loam, loamy medium sand and medium sand subsoils. Profiles generally become sandier with depth. Although the topsoils are only very slightly stony, stoniness increases with depth, and many stones are found in the lower subsoils. These soils are well drained, and placed in Wetness Class I. The moisture balance places these soils into Grade 2. Soil droughtiness is the main limitation to the agricultural use of this land.

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

#### *Subgrade 3a*

26. Land of good quality occupies 3.9 hectares (13%) of the site area and is found at a number of locations throughout the site. Two different profiles were found within this area of good quality land.

27. A distinctive profile is found at the junction of Main Road and Jack Lane, and immediately to the south of the track in the centre of the site. In these profiles a sandy loam topsoil overlies medium sand and loamy medium sand upper subsoils, and medium sand lower subsoils. Topsoils are only slightly stony, although many stones are found in the subsoils. Soils are well drained and placed in Wetness Class I. The moisture balance places these soils into Subgrade 3a. Soil droughtiness is the main limitation to the agricultural use of this land.

28. Another profile occurs to the west of Main Road and in the south of the site. This profile consists of a sandy loam topsoil over sandy loam and medium clay loam upper subsoils, overlying clay lower subsoils. To the west of Main Road, the depths to gleying and slowly permeable layer place the land into Wetness Class IV. In the south of the site natural drainage is restricted and limits the land to Wetness Class IV. The main limitation to the agricultural use of this land is soil wetness.

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

#### *Sub-grade 3b*

30. Land of moderate quality occupies 3.8 hectares (13%) of the site area, and occurs in the topographic depression at the centre of the site, and in a small area in the north. Two different profiles were found.

31. In the area to the north of the site, the soil has a clay textured to depth. The depths to gleying and slowly permeable layer place the land into Wetness Class IV. The soils in this area appear to have been disturbed. A few stones were found throughout the profile. The main limitation to the agricultural use of this land is soil wetness.

32. In the centre of the site, the soil has either a sandy loam or organic sandy loam topsoil, overlying peaty loam and loamy peat upper subsoils. Lower subsoils comprise clay, loamy peat and peaty loam. The profiles are predominantly free of stones. Restricted drainage, as evidenced by topographic position and the presence of peat in the profile, restricts the land to Wetness Class IV. The main limitation to the agricultural use of this land is soil wetness.

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

#### *Other Land*

34. Other land occupies 1.7 hectares (6%) of the site area and consists of farm buildings associated with Carters Green Farm in the north of the site, and school playing fields to the West of Main Road.

Resource Planning Team  
Northern Region  
FRCA Wolverhampton

#### **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 land.  
MAFF: London.

Meteorological Office (1989). Climatological Data for Agricultural Land Classification.  
Meteorological Office: Bracknell.