

**RUGELEY
Bower Farm (1)
Agricultural Land Classification
ALC Map and Report
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**M J W Wood
Resource Planning Team
Northern Region
FRCA Wolverhampton**

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**AGRICULTURAL LAND CLASSIFICATION REPORT
RUGELEY
Bower Farm (1)**

INTRODUCTION

1. This report presents the findings of a detailed Agricultural Land Classification (ALC) survey on 48.3 hectares of land. The results of this survey supersede any previous ALC information for this land. The land is located to the north west of Rugeley and south of the A51. The survey was in connection with the Staffordshire Structure Plan Development Study.
2. The survey was undertaken on behalf of the Ministry of Agriculture, Fisheries and Food (MAFF) in June 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 barley.

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	11.8	29	25
3b	26.6	66	55
4	2.1	5	4
5	-	-	-
Agricultural land not surveyed	-	N/A	-
Other land	7.8	N/A	16
Total surveyed area	40.5	100	-
Total site area	48.3	-	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 gradient, topsoil stone content and soil droughtiness.

8. The area of good quality land is located on the lower lying land next to the sewage works and the higher land next to Bower Farm in the south of the site. The soils have a medium sandy loam topsoil texture overlying medium sandy loam, loamy medium sand and sand.

9. The area of moderate quality land is mapped over a large proportion of the site. The soils in this area have either a medium sandy loam or a loamy medium sand topsoil overlying loamy medium sand and sand. Sandstone is often present at depths of between 40 and 100cm.

10. The area of poor quality land is mapped in the centre of the site. The soils have a loamy medium sand topsoil texture over loamy medium sand and sand. Sandstone is often present at depths of between 30 and 80cm.

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	SK 029 199
Altitude	m, AOD	76
Accumulated Temperature	day°C (Jan-June)	1388
Average Annual Rainfall	mm	735
Field Capacity Days	days	174
Moisture Deficit, Wheat	mm	94
Moisture Deficit, Potatoes	mm	83
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 (AT0, 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 73 to 107 metres AOD. The lowest land is found in the north of the site adjacent to the A51 road. From here the land rises southwards towards Bower Farm.

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

18. Through the centre of the site there are slopes of between 7° and 13°. The strongly sloping land is limited to Subgrade 3b and the moderately steeply sloping land is limited to Grade 4.

19. Microrelief and flooding 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 Bromsgrove Sandstone. This is overlain with deposits of boulder clay and unbedded gravelly clay - British Geological Survey (1982).

21. The soils that have developed on this geology are generally of a sandy loam topsoil texture over loamy sand, sand and sandstone.

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 11.8 hectares (25%) of the site area and is located on the lower lying land next to the sewage works and the higher land next to Bower Farm in the south of the site.

24. The soil has a medium sandy loam topsoil texture over medium sandy loam, loamy medium sand and sand to depth with few to many stones within the profile. Occasionally sandstone may be encountered at depths below 80cm. 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 26.6 hectares (55%) of the site area and is mapped over a large proportion of the site.

27. The soils in this area have either a medium sandy loam or a loamy medium sand topsoil texture overlying loamy medium sand and sand. Sandstone is often present at depths of between 40 and 100cm. There are few to many stones within the soil profile. The moisture balance places these soils in Subgrade 3b.

28. In the north west of the site, adjacent to the western side of the sewage works, the volume of topsoil stones greater than 2cm in size is between 15% and 17%. This places these soils in Subgrade 3b.

29. Through the centre of the site there are slopes of between 7° and 11°, limiting the agricultural use of this land to Subgrade 3b.

30. The main limitations to the agricultural use of this land include gradient, topsoil stone content and soil droughtiness.

Grade 4

31. Land of poor quality occupies 2.1 hectares (4%) of the site area and is located in the centre of the site.

32. The soils in this area have a loamy medium sand topsoil texture over loamy medium sand and sand, with few to many stones within the soil profile. The moisture balance places these soils in Grade 4.

33. These soils are found on moderately steeply sloping land of between 11° and 13°, placing these soils in Grade 4.

34. The main limitations to the agricultural use of this land include gradient and soil droughtiness.

Other Land

35. Other land occupies 7.8 hectares (16%) of the site area and includes Bower Farm, a house, scrub, a sewage works and woodland.

Resource Planning Team
Northern Region
FRCA Wolverhampton

SOURCES OF REFERENCE

British Geological Survey (1982) Sheet 140, Burton Upon Trent Solid and Drift Edition.
1:50 000 Scale.
BGS: London.

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