

RUGELEY
Pumping Station (20)
Agricultural Land Classification
ALC Map and Report
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AGRICULTURAL LAND CLASSIFICATION REPORT
RUGELEY
Pumping Station (20)

INTRODUCTION

1. This report presents the findings of a detailed Agricultural Land Classification (ALC) survey on 43.6 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 between the River Trent and the A51 Wolseley Road.
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 and grass.

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	-	-	-
3b	24.2	63	56
4	14.0	37	32
5	-	-	-
Agricultural land not surveyed	-	N/A	-
Other land	5.4	N/A	12
Total surveyed area	38.2	100	-
Total site area	43.6	-	100

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

8. The area of moderate quality land is mapped over a large proportion of the site. The soils have a sandy loam topsoil texture over loamy sand and sand

9. The area of poor quality land is mapped within the River Trent floodplain and on the moderately steeply sloping land near Bower Lane. In the floodplain the soils have a heavy clay loam topsoil texture over clay. The soil profiles are waterlogged at the surface. On the sloping land the soils have a loamy sand topsoil texture over sand to between 30 and 40cm where sandstone is encountered.

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	SK 034 202
Altitude	m, AOD	69
Accumulated Temperature	day°C (Jan-June)	1395
Average Annual Rainfall	mm	731
Field Capacity Days	days	173
Moisture Deficit, Wheat	mm	96
Moisture Deficit, Potatoes	mm	85
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 69 to 76 metres AOD. The lowest land is found in the immediate River Trent floodplain in the north of the site. From here, the land rises very gently to the south and west of the site.

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

17. In the west of the site and to the north of Bower Lane there are slopes of between 7° - 11° and 11°-18°. Here gradient limits the agricultural use of the land and the land is classified as Subgrade 3b and Grade 4.

18. In the immediate floodplain of the River Trent, the duration, frequency and season of flooding limit the agricultural use of the land to Grade 4.

19. Microrelief does 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. In places this is overlain with Alluvium and First River Terrace Deposits. - British Geological Survey (1982).

21. The soils that have developed on this geology are generally of a sandy loam texture over the First River Terrace deposits and a clay loam texture over the Alluvium.

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 3b

23. Land of moderate quality occupies 24.2 hectares (56%) of the site area and extends across a large proportion of the site.

24. The soil has a sandy loam topsoil texture over loamy sand and sand with common to abundant stones within the profile. The moisture balance places these soils in Subgrade 3b. In the centre of the site there is a slight depression (which adjoins the main floodplain) where the soils are less stony. Here the duration, frequency and season of the flooding limits the land to Subgrade 3b.

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

Grade 4

26. Land of poor quality occupies 14.0 hectares (32%) of the site area and is found within the River Trent Floodplain and on the moderately steeply sloping land near Bower Lane.

27. In the floodplain the soils have a heavy clay loam topsoil texture over heavy clay loam and clay. The depths to gleying and the slowly permeable layer place these soils in Wetness Classes III and IV.

28. To the north of the woodland by the Pumping Station, the soils are found on the lowest lying ground and were waterlogged at the time of the survey. Here the soils have been assessed as in Wetness Class V.

29. In the floodplain of the River Trent the duration, frequency and season of the flooding limits the land described in paragraphs 27 and 28 to Grade 4.

30. On the moderately steeply sloping land (11° - 18°) the soil profile has either a sandy loam or a loamy sand topsoil texture over sand to a depth of between 30 and 40cm where sandstone is encountered. The moisture balance places these soils in Grade 4. Gradient limits these soils to Grade 4.

31. The main limitations to the agricultural use of this land are gradient, flooding, soil droughtiness and soil wetness.

Other Land

32. Other land occupies 5.4 hectares (12%) of the site area and includes a pumping station, woodland, a pond, stables and trackways.

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