Shropshire Minerals Local Plan
Objection 25/5093
Agricultural Land Classification
ALC Map and Report
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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 54.1 hectares of land. The results of this survey supersede any previous ALC information for this land. The land is located to the south west of Bridgnorth. the survey was in connection with the Shropshire Minerals Local Plan.

2. The survey was undertaken in February and March 1993 and March and April 1997 by the Farming and Rural Conservation Agency (FRCA) on behalf of the Ministry of Agriculture, Fisheries and Food (MAFF). The work was conducted by members of the Resource Planning Team (RPT) in the 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 cereals, grass and potatoes.

SUMMARY

5. The findings of the survey are shown on the enclosed ALC map. The map has been drawn at a scale of 1:10 000 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	9.4	18	17
3a	23.5	46	43
3b	18.7	36	35
4	-	-	-
5	-	-	-
Agricultural land not surveyed	-	N/A	-
Other land	2.5	N/A	5
Total surveyed area	51.6	100	-
Total site area	54.1	-	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 include gradient, topsoil stone content, soil droughtiness and soil wetness.

8. The area of very good quality land is located in the north west of the site. The soils have either a sandy clay loam or sandy loam texture over sandy silt loam, sandy loam, loamy sand and sand to depth.

9. The area of good quality land is located in the north and south west of the site. The soils either have a sandy clay loam topsoil overlying sandy clay loam and heavy clay loam to depth or a sandy loam topsoil over sandy loam, loamy sand and sand to 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	SO 686 929
Altitude	m, AOD	84
Accumulated Temperature	day°C (Jan-June)	1398
Average Annual Rainfall	mm	710
Field Capacity Days	days	170
Moisture Deficit, Wheat	mm	96
Moisture Deficit, Potatoes	mm	84
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 (ATO, 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 approximately 74-90m AOD. The land rises from the Mor Brook in the south west of the site towards Bridgwalton in the north.

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

17. Along the Mor Brook valley, where the river terrace adjoins the valley floor the angle of slope is between 7° and 11°. Here gradient limits the agricultural use of the land to Subgrade 3b.

18. The remaining factors do not impose any limitations on the agricultural use of this land.

Geology and soils

19. The solid geology of the area is comprised of Purple Green Marl with Micaceous Sandstone. This is overlain with deposits of alluvium, boulder clay and sand and gravel - British Geological Survey (1975).

20. The soils that have developed on this geology are generally of a sandy loam and silty clay loam texture.

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 9.4 hectares (17%) in the north west of the site.

23. The soil has either a sandy clay loam or sandy loam topsoil texture over sandy silt loam, sandy loam, and sand to depth. In places the sand fraction of these soil textures may be coarse in size. The topsoils are slightly stony, with the subsoils becoming moderately to very stony in places. Where the volume of topsoil stones greater than 2 cm in size exceeds 5% these soils are classified as Grade 2. The moisture balance places these soils in Grade 2.

24. The main limitation to the agricultural use of this land are topsoil stone content and soil droughtiness.

Subgrade 3a

25. Land of good quality occupies 23.5 hectares (43%) in the north and south east of the site.

26. South and west of Bridgwalton the soil has a sandy loam topsoil texture over sandy loam, loamy sand and sand to depth. In places the sand fraction of these soil textures may be coarse in size. The topsoils are slightly stony with the subsoils becoming moderately stony in places. Where the volume of topsoil stones greater than 2 cm in size exceeds 10% these soils are classified as Subgrade 3a. The moisture balance places these soils in Subgrade 3a.

27. The main limitations to the agricultural use of this land are topsoil stone content and soil droughtiness.

28. North west of Bridgwalton the soil has a sandy clay loam texture over sandy clay loam with heavy clay loam to depth, with few to common stones within the profile. Observations of gleying and the depth to the slowly permeable layer place these soils in Wetness Class III.

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

Subgrade 3b

30. Land of moderate quality occupies 18.7 hectares (35%) along the Mor Brook and in the north of the site.

31. The soils along the Mor Brook have a medium or heavy silty clay loam topsoil over a subsoil of heavy silty clay loam and silty clay. Occasionally there may be sandy silt loam lenses in the subsoil. There are few stones within the profile. The depth to gleying and the slowly permeable layer place these soils in Wetness Class III and IV.

32. The soils at the northern edge of the site have a heavy clay loam texture over heavy clay loam and clay to depth, with few stones throughout the profile. These soils have possibly been disturbed in the past. The depth to gleying and the slowly permeable layer places these soils in Wetness Class IV.

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

34. In the south east of the site, near Harpsford Mill, the soil has a sandy loam texture over sandy loam, loamy sand and sand. Occasionally sandy clay loam may be present in the lower subsoil. In places the sand fraction of these soil textures may be coarse in size. The topsoils are moderately stony, with the subsoils becoming very stony in places. Where the volume of topsoil stones greater than 2 cm in size exceeds 15% these soils are classified as Subgrade 3b. The moisture balance places these soils in Subgrade 3b.

35. The main limitations to the agricultural use of this land are topsoil stone content and soil droughtiness.

36. Along the Mor Brook valley, where the river terrace adjoins the valley floor, the angle of slope is between 7° and 11°. Here gradient limits the agricultural use of the land to Subgrade 3b.

Other Land

37. Other land occupies 2.5 hectares (5%) of the site area and consists of buildings, open water, scrub and woodland.

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SOURCES OF REFERENCE

British Geological Survey (1975) *Sheet 167, Dudley Solid and Drift Edition. 1:50 000 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.*
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