

**SHROPSHIRE STRUCTURE PLAN
BROSELEY, DARK LANE (east)**

**Agricultural Land Classification
ALC Map and Report**

June 1999

**Resource Planning Team
Northern Region
FRCA Wolverhampton**

**RPT Reference: 25/RPT/0954 & 088\98
MAFF Reference: EL 35/11859**

**AGRICULTURAL LAND CLASSIFICATION REPORT
SHROPSHIRE STRUCTURE PLAN
BROSELEY, DARK LANE (east)**

INTRODUCTION

1. This report presents the findings of a detailed Agricultural Land Classification (ALC) survey of 11.6 ha of land at Broseley. The site is situated to the north east of Broseley between Dark Lane and Ironbridge Road. The survey was carried out during April 1999.
2. The survey was undertaken by the Farming and Rural Conservation Agency (FRCA)¹ on behalf of the Ministry of Agriculture, Fisheries and Food (MAFF). The survey was carried out in connection with MAFF's statutory input to the Shropshire Structure Plan. This survey supersedes any previous ALC information for this land.
3. The work was conducted by members of the Resource Planning Team in the Northern Region of FRCA. The land has been graded in accordance with the published MAFF ALC guidelines and criteria (MAFF, 1988). A description of the ALC grades and subgrades is given in Appendix I.
4. At the time of survey the land on the site was under grass, with small areas of scrub associated with hedgerow margins on the steeper slopes. Land mapped as 'Other Land' includes denser areas of scrub adjacent to Ironbridge Road.

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. It is accurate at this scale but 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	7.7	69	67
4	3.4	31	29
5	-	-	-
Agricultural land not surveyed	-	N/A	-
Other land	0.5	N/A	4
Total surveyed area	11.1	100	-
Total site area	11.6	-	100

¹ FRCA is an executive agency of MAFF and the Welsh Office

7. The fieldwork was conducted at an average density of 1 boring per hectare of agricultural land. In total one soil pit and eleven borings were described on the site.
8. 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 are gradient and soil wetness.
9. The moderate quality land is located on the higher plateau area in the west of the site, adjoining Dark Lane. The soils have a clay loam topsoil texture overlying clay loam and clay to depth, with few stones within the soil profile.
10. The area of poor quality land is mapped on the moderately steeply and steeply sloping land in the east of the site. The soils have a clay loam texture over heavy clay loam and clay.

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 the standard interpolation procedures (Met. Office, 1989).

Table 2: Climatic and altitude data

Factor	Units	Values	
Grid reference	N/A	SJ 678 019	SJ 679 021
Altitude	m, AOD	145	135
Accumulated Temperature	day°C (Jan-June)	1325	1337
Average Annual Rainfall	Mm	761	759
Field Capacity Days	Days	180	180
Moisture Deficit, Wheat	Mm	84	85
Moisture Deficit, Potatoes	Mm	69	70
Overall climatic grade	N/A	Grade 2	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. Above approximately 145 metres AOD the site is climatically limited to Grade 2, below this altitude the site is climatically Grade 1.

Site

15. The site ranges in altitude from 105 to 148 metres AOD. The highest land adjoins Dark Lane in the west of the site and the lowest land is in the east of the site.
16. The three site factors of gradient, microrelief and flooding are considered when classifying the land.
17. In the centre, south and east of the site strongly, moderately steep and steep slopes of between 8° and 17° are found. Here gradient limits the agricultural use of the land to Subgrade 3b and Grade 4.
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 Coalport Formation mudstones, siltstones and sandstones. This is overlain with deposits of boulder clay - British Geological Survey (1978).
20. The soils that have developed on this geology are generally of clay loam texture overlying clay (SSEW 1984).

AGRICULTURAL LAND CLASSIFICATION

21. The details of the classification of the site are shown on the attached ALC map and the area statistics of each grade are given in Table 1, page 1.

Subgrade 3b

22. Land of moderate quality occupies 7.7 hectares (67%) of the site area and is found on the higher plateau area in the west of the site, adjoining Dark Lane.
23. The main limitations to the agricultural use of this land include gradient and soil wetness.
24. The soils have a clay loam topsoil texture over clay loam and clay to depth, with few stones within the soil profile. Occasionally the topsoils may have a silty clay loam texture. The depths to gleying and the slowly permeable layer place these soils in Wetness Class IV.
25. Across this unit there are places where the land is strongly sloping (between 7° and 11°). Here gradient limits the agricultural use of the land to Subgrade 3b.

Grade 4

26. Land of poor quality occupies 3.4 hectares (29%) of the site area and is mapped in the east of the site.
27. The main limitation to the agricultural use of this land is gradient.
28. The soils have a clay loam topsoil texture over heavy clay loam and clay to depth. These soils are found on slopes of between 11° and 17°. Here gradient limits the agricultural use of the land to Grade 4.

Martin Wood
Resource Planning Team
Northern Region
FRCA Wolverhampton

SOURCES OF REFERENCE

British Geological Survey (1978) *Sheet No. SJ 60, 61, 70, 71 Telford Solid and Drift Edition Scale 1: 25 000.*

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.

Met. Office (1989) *Climatological Data for Agricultural Land Classification.*

Met. Office: Bracknell.

Soil Survey of England and Wales (1984) *Sheet 3, Map of Midland and Western England.*

SSEW: Harpenden.

Soil Survey of England and Wales (1984) *Soils and their Use in Midland and Western England*

SSEW: Harpenden

APPENDIX I

DESCRIPTIONS OF THE GRADES AND SUBGRADES

Grade 1: Excellent Quality Agricultural Land

Land with no or very minor limitations to agricultural use. A very wide range of agricultural and horticultural crops can be grown and commonly includes top fruit, soft fruit, salad crops and winter harvested vegetables. Yields are high and less variable than on land of lower quality.

Grade 2: Very Good Quality Agricultural Land

Land with minor limitations which affect crop yield, cultivations or harvesting. A wide range of agricultural or horticultural crops can usually be grown but on some land of this grade there may be reduced flexibility due to difficulties with the production of the more demanding crops such as winter harvested vegetables and arable root crops. The level of yield is generally high but may be lower or more variable than Grade 1 land.

Grade 3: Good to Moderate Quality Land

Land with moderate limitations which affect the choice of crops, the timing and type of cultivation, harvesting or the level of yield. When more demanding crops are grown, yields are generally lower or more variable than on land in Grades 1 and 2.

Subgrade 3a: Good Quality Agricultural Land

Land capable of consistently producing moderate to high yields of a narrow range of arable crops, especially cereals, or moderate yields of a wide range of crops including cereals, grass, oilseed rape, potatoes, sugar beet and the less demanding horticultural crops.

Subgrade 3b: Moderate Quality Agricultural Land

Land capable of producing moderate yields of a narrow range of crops, principally cereals and grass, or lower yields of a wider range of crops or high yields of grass which can be grazed or harvested over most of the year.

Grade 4: Poor Quality Agricultural Land

Land with severe limitations which significantly restrict the range of crops and/or the level of yields. It is mainly suited to grass with occasional arable crops (e.g. cereals and forage crops) the yields of which are variable. In moist climates, yields of grass may be moderate to high but there may be difficulties in utilisation. The grade also includes very droughty arable land.

Grade 5: Very Poor Quality Agricultural Land

Land with severe limitations which restrict use to permanent pasture or rough grazing, except for occasional pioneer forage crops.