

**SITE AT ECKINGTON WAY
SHEFFIELD
SOUTH YORKSHIRE**

**Agricultural Land Classification
ALC Map and Report**

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**Resource Planning Team
Northern Region
FRCA, Leeds**

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AGRICULTURAL LAND CLASSIFICATION REPORT

LAND AT ECKINGTON WAY, SHEFFIELD

INTRODUCTION

1. This report presents the findings of a detailed Agricultural Land Classification (ALC) survey of 13.6 ha of land at Eckington Way, Beighton, near Sheffield. The survey was carried out during October 1997.
2. The survey was carried out by the Farming and Rural Conservation Agency (FRCA) for the Ministry of Agriculture, Fisheries and Food (MAFF), in connection with the proposal to convert the area into woodland. This ALC survey supersedes any previous ALC surveys.
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 all under winter oilseed rape.

SUMMARY

5. The findings of the survey are shown on the enclosed ALC map. The map has been drawn at a scale of 1:5,000. 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
3b	13.6	100	100
Total surveyed area	13.6	100	-
Total site area	13.6	-	100

7. The fieldwork was conducted at an average density of one boring per hectare. A total of 13 borings and one soil pit was described.
8. Subgrade 3b land covers all of the site. The soils are well drained, with slightly stony sandy loam topsoils and moderately stony sandy loam subsoils overlying weathering sandstone bedrock at between 35 cm and 50 cm depth. Moderate soil droughtiness restricts this land to Subgrade 3b.

FACTORS INFLUENCING ALC GRADE

Climate

9. Climate affects the grading of land through the assessment of an overall climatic limitation and also through interactions with soil characteristics.

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

Table 2: Climatic and altitude data

Factor	Units	Values
Grid reference	N/A	SK 432 839
Altitude	m, AOD	80
Accumulated Temperature	day°C (Jan-June)	1346
Average Annual Rainfall	mm	681
Field Capacity Days	days	156
Moisture Deficit, Wheat	mm	98
Moisture Deficit, Potatoes	mm	87
Overall climatic grade	N/A	Grade 1

11. 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.

12. 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.

13. The combination of rainfall and temperature at this site means that there is no climatic limitation on ALC grade.

Site

14. The land on this site is level to moderately sloping (0-6°) and at no point does gradient restrict the ALC grade. Equally, neither microrelief nor flood risk are grade limiting factors on this site.

Geology and soils

15. The site is underlain by Carboniferous Coal Measures consisting of interbedded sandstones and shales. There is no drift cover on the site (BGS, Sheet 100, Sheffield) and the soils are derived from weathering sandstone.

16. The soils have been mapped as Rivington 1 association by the Soil Survey of England and Wales (Soils of England and Wales, Sheet 1, Northern England).

AGRICULTURAL LAND CLASSIFICATION

17. 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.

Subgrade 3b

18. All of the site is Subgrade 3b, moderate quality agricultural land. The soils are well drained (Wetness Class I) and generally consist of medium sandy loam topsoils and subsoils overlying weathering sandstone at between 35 cm and 50 cm depth. Topsoils are slightly to moderately stony with 12-16% sandstones (5-7% >2 cm) whilst subsoils are slightly to very stony, containing 14-40% sandstones. Soil droughtiness is the grade limiting factor.

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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.

SOURCES OF REFERENCE

British Geological Survey (1974) *Sheet No. 100, Sheffield, 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.* MAFF: London.

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

Soil Survey of England and Wales (1983) *Sheet 1, Soils of Northern England, 1:250,000 scale.*
SSEW: Harpenden.

Soil Survey of England and Wales (1984) *Soils and their Use in Northern England*
SSEW: Harpenden