

**LAND SOUTH WEST OF LEOMINSTER
LEOMINSTER LOCAL PLAN
Agricultural Land Classification Survey
ALC Map and Report
February 1997**

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**AGRICULTURAL LAND CLASSIFICATION REPORT
LAND SOUTH WEST OF LEOMINSTER
LEOMINSTER LOCAL PLAN**

INTRODUCTION

1. This report presents the findings of a detailed Agricultural Land Classification (ALC) survey on 79.4 hectares of land. The land is located to the south west of Leominster, between the Hereford Road (B4361) and Barons' Cross. The survey was undertaken by the Resource Planning Team at Wolverhampton (Northern ADAS Statutory Centre) during January and February 1997. The land at Barons' Cross public house and at Southfield was surveyed in November 1996 and June 1996 respectively.

2. The survey was commissioned by the Ministry of Agriculture, Fisheries and Food (MAFF) from its Land Use Planning Unit in Crewe. The survey was in connection with the Leominster District Local Plan. The results of this survey supersede any previous ALC information for this land.

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 either fallow or under cereals and grass.

SUMMARY

5. The findings of the survey are shown on the attached ALC map. At the request of the Land Use Planning Unit this was a detailed grid survey at a scale of 1:10 000 with a minimum auger boring density of 1 per hectare. The ALC map is only accurate at the 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 below.

Table 1: Area of grades and other land

Grade/Other land	Area (hectares)	% site area	% surveyed area
1	12.6	16	19
2	32.9	31	49
3a	16.2	20	24
3b	5.3	7	8
Not Surveyed	2.3	3	-
Other Land	10.1	13	-
Total surveyed area	67.0	-	100
Total site area	79.4	100	-

7. The agricultural land on this site has been classified as Grade 1 (excellent quality), Grade 2 (very good quality), Subgrade 3a (good quality), and Subgrade 3b (moderate quality). The key limitations being soil droughtiness, soil wetness, topsoil stone content and gradient.
8. The area of excellent quality land is located in the south and east of the site. The soils consist of a sandy silt loam or silt loam texture over sandy silt loam or clay loam to depth.
9. The area of very good quality land is located in the centre and west of the site. The soils consist of a sandy silt loam or clay loam over silt loam or clay loam to depth.
10. The area of good quality land is mapped in the north of the site, north east of Cock Croft Lane and in the west of the site near Dishley Court. The soils consist either of a silty clay loam over heavy clay loam or a sandy silt loam over clay loam to depth.
11. The area of moderate quality is mapped in the north of the site, near Cock Croft Lane and Stockinghill. Here the soils are limited by the angle of the slope to Subgrade 3b.

FACTORS INFLUENCING ALC GRADE

Climate

12. Climate affects the grading of land through the assessment of an overall climatic limitation and also through interactions with soil characteristics.
13. The key climatic variables used for grading this site are given in Table 2 below and were obtained from the published 5km grid datasets using standard interpolation procedures (Met. Office, 1989).
14. 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.

Table 2: Climatic and altitude data

Factor	Units	Values
Grid reference	N/A	SP 484 583
Altitude	m, AOD	85
Accumulated Temperature	day°C	1417
Average Annual Rainfall	mm	741
Field Capacity Days	days	168
Moisture Deficit, Wheat	mm	100
Moisture Deficit, Potatoes	mm	89

15. 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.

16. The combination of rainfall and temperature at this site means that there is no overall climatic limitation. Local climatic factors, such as exposure and frost risk, do not significantly affect the site. The site is climatically Grade 1.

Site

17. The site lies at altitudes in the range 75-100m AOD. The land rises from the south of the site towards the north.

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

19. The land to the north of Cock Croft Lane and at Stockinghill has slopes of between 7° and 11°. Here gradient limits the agricultural use of the land.

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

Geology and soils

21. The solid geology of the area is comprised of Silurian Raglan Mudstone. This is overlain with alluvium, head, till and fluvio-glacial deposits - British Geological Survey (1989).

22. The soils that have developed on this geology are generally of a silty nature.

Agricultural Land Classification

23. 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.

Grade 1

24. Land of excellent quality occupies 12.6 hectares (16%) of the site area.

25. The soil has a sandy silt loam or silt loam texture over sandy silt loam or clay loam to depth, with few to common stones within the profile.

26. There are no major limitations to the agricultural use of this land.

Grade 2

27. Land of very good quality occupies 32.9 hectares (41%) of the site area.

28. The soil has a sandy silt loam or clay loam texture over sandy silt loam and clay loam to depth with few to many stones within the profile. Around Arrow Heights and the Ryelands Croft the volume of topsoil stones greater than 2cm in size limits the agricultural use of the land to Grade 2. The depth to the slowly permeable layer places these soils in Wetness Class II and III.

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

Subgrade 3a

30. Land of moderate quality occupies 16.2 hectares (20%) of the site area. The soils in this grade are of two types.

31. The soil to the north east of Cock Croft Lane has a sandy silt loam texture over clay loam and sandy silt loam to depth. The topsoils are slightly stony with the subsoils becoming extremely stony. The moisture balance places these soils in Subgrade 3a.

32. The soil in the west of the site near Dishley Court has a clay loam texture over heavy clay loam and clay to depth. Observations of gleying and the depth to the slowly permeable layer place these soils in Wetness Class III.

33. The main limitations to the agriculture use of this land are soil wetness (near Dishley Court) and soil droughtiness (near Crock Croft Lane).

Subgrade 3b

34. Land of moderate quality occupies 5.3 hectares (7%) of the site area.

35. The soil has a sandy silt loam texture over clay loam with topsoils being slightly stony and subsoils becoming extremely stony. These soils are found on slopes with gradients of between 7° and 11°. There is a small area of land to the east of Ryelands Croft which has been disturbed, this land has been graded as Subgrade 3b.

36. The main limitation to the agricultural use of this land is gradient.

Not Surveyed

37. The land which was not surveyed (due to access being denied), occupies 2.3 hectares (3%) of the site area.

Other Land

38. Other land occupies 10.1 hectares (13%) of the site area and is found as trackways, roads, housing, a supermarket, scrub and woodland.

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SOURCES OF REFERENCE

British Geological Survey (1989) *Sheet 189, Hereford 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.*

MAFF: London.

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

Met. Office: Bracknell.