SOUTH OF PROPOSED INDUSTRIAL ESTATE EXTENSION (POLICY L6) LEOMINSTER LOCAL PLAN

Agricultural Land Classification Survey
ALC Map and Report
March 1997

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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 73.3 hectares of land. The land is located to the south of the proposed extension to the industrial estate, Leominster. The survey was undertaken by the Resource Planning Team at Wolverhampton (Northern ADAS Statutory Centre) during March 1994 and January 1997. The March 1994 survey examined the area directly associated with Policy L6 whilst the January 1997 survey examined the area to the south of Policy L6 extending to the River Arrow.

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 part of agricultural land was fallow; part under cereals and grass, and part being sown with peas.

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	35.2	48	50
2	4.5	6	6
3b	31.3	43	44
Other Land	2.3	3	-
Total surveyed area	71.0	-	100
Total site area	73.3	100	-

7. The agricultural land on this site has been classified as Grade 1 (excellent quality), Grade 2 (very good quality) and Subgrade 3b (moderate quality). The key limitations being topsoil stone content and soil droughtiness for the Grade 2 land and flooding and soil wetness for the Subgrade 3b land.

8. The area of excellent quality land is located in the north of the site. The soil is commonly comprised of a sandy silt loam or silt loam topsoil overlying a sandy silt loam and silt loam subsoil. Occasionally heavy clay loam and sandy clay loam may be observed at depth.

9. The area of very good quality land is located in the north and west of the site. The soils commonly comprise of a sandy silt loam or silt loam topsoil overlying sandy silt loam and silt loam to depth, with common topsoil stones. Occasionally heavy clay loam and sandy clay loam is observed at depth.

10. The area of moderate quality land is mapped towards the south and east of the site. The soils in this area comprise a silty clay or heavy silty clay loam topsoil overlying a gleyed and slowly permeable silty clay subsoil. This land is also susceptible to flooding.

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 below and were obtained from the published 5km grid datasets using standard interpolation procedures (Met. Office, 1989).

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.

Table 2: Climatic and altitude data

Factor	Units	Values
Grid reference	N/A	SP 505 575
Altitude	m, AOD	66
Accumulated Temperature	day°C	1439
Average Annual Rainfall	mm	726
Field Capacity Days	days	165
Moisture Deficit, Wheat	mm	102
Moisture Deficit, Potatoes	mm	92

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.

15. 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

16. The site lies at altitudes in the range 65-70m AOD. The land rises from the River Arrow in the south of the site towards the north and west of the site.

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

18. Information from the Environment Agency and the tenant farmer acknowledges that flooding limits the agricultural use of the low lying land adjacent to the Rivers Arrow and Lugg in the south and east of the site. The season, duration and frequency of the flood events limits the agricultural use of this low lying land to Subgrade 3b.

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

Geology and soils

20. The solid geology of the area is overlain with alluvium, till and fluvio-glacial deposits - British Geological Survey (1989).

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

Agricultural Land Classification

22. 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

23. Land of excellent quality occupies 35.2 hectares (48%) of the site area.

24. The soil has either a sandy silt loam or silt loam texture over either sandy silt loam or silt loam to depth with few to common stones within the profile. Occasionally heavy clay loam or sandy clay loam may be observed at depth.

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

Grade 2

26. Land of very good quality occupies 4.5 hectares (6%) of the site.

27. The soil has a sandy silt loam or silt loam texture over either sandy silt loam or silt loam to depth with common to many stones within the profile. Occasionally heavy clay loam or sandy clay loam may be observed at depth. The moisture balance places these soils in Grades 1 and 2. The percentage volume of topsoil stones greater than 2 cm in size places these soils in Grade 2.

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

Subgrade 3b

29. Land of moderate quality occupies 31.3 hectares (43%) of the site area and extends across the low lying land adjacent to the Rivers Arrow and Lugg in the south and east of the site.

30. The soil has a silty clay or heavy silty clay loam texture which lies directly over silty clay. The depth to gleying and the slowly permeable layer place these soils in Wetness Class IV. The season, duration and frequency of the flood events in this area limit the agricultural use of this low lying land to Subgrade 3b.

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

Other Land

32. Other land occupies 2.3 hectares (3%) of the site area and is found at Broadward Lodge in the west, as a reservoir in the east and as a trackway through the centre of the site.

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SOURCES OF REFERENCE

British Geological Survey (1989) *Sheet 198, Hereford Solid and Drift Edition. 1:50 000 Scale.*
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