SHREWSBURY AND ATCHAM BOROUGH LOCAL PLAN
LAND SOUTH OF HANWOOD ROAD

Agricultural Land Classification Survey
ALC Map and Report
April 1997

Resource Planning Team
ADAS Statutory Group
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AGRICULTURAL LAND CLASSIFICATION REPORT
SHREWSBURY AND ATCHAM BOROUGH LOCAL PLAN
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INTRODUCTION

1. This report presents the findings of a detailed Agricultural Land Classification (ALC) survey on 184.5 hectares of land. The land is located on the south western edge of the town of Shrewsbury. The survey was undertaken by the Resource Planning Team at Wolverhampton (Northern ADAS Statutory Centre) in June 1993 and in March 1997.

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 Shrewsbury and Atcham Borough 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 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	7.6	4	5
2	35.8	19	23
3a	70.0	38	46
3b	30.1	16	20
4	5.1	3	3
5	5.0	3	3
Not Surveyed	5.0	3	-
Other Land	25.9	14	-
Total surveyed area	153.6	-	100
Total site area	184.5	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), Subgrade 3b (moderate quality), Grade 4 (poor quality) and Grade 5 (very poor quality).

8. The area of excellent quality land is found in the south east of the site near Nobold Hall Farm. The soils have a sandy silt loam texture over heavy clay loam.

9. The area of very good quality land is located in the east and west of the site. The soil has a clay loam topsoil overlying clay loam subsoils.

10. The area of good quality land is located in the centre of the site. The soil has a clay loam texture over clay loam and occasionally clay.

11. The area of moderate quality land is mapped towards the east of the site. Here soils have a medium clay loam texture overlying a gleyed and slowly permeable heavy clay loam and clay subsoil.

12. The area of poor quality land is located in the north and east of the site. Here the soils consist of a clay loam texture over waterlogged clay loam and clay. Occasionally the soils may be peaty.

13. The very poor quality land is mapped in the north east of the site, where a previous mineral workings has been restored to agricultural use.

FACTORS INFLUENCING ALC GRADE

Climate

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

15. 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).

16. 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 464 107
Altitude	m, AOD	90
Accumulated Temperature	day°C	1389
Average Annual Rainfall	mm	709
Field Capacity Days	days	155
Moisture Deficit, Wheat	mm	99
Moisture Deficit, Potatoes	mm	89

17. 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.

18. The combination of rainfall and temperature at this site means that there is no overall climatic limitation. The site is climatically Grade 1.

Site

19. The site lies at altitudes of 70-90m AOD. The land rises from the east of the site towards the west.

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

21. These factors do not impose any limitations on the agricultural use of this land.

Geology and soils

22. The solid geology of the area is comprised of Keele Beds and Coed-Yr-Allt Coal Measures. This is overlain with deposits of alluvium, boulder clay and sand and gravel - British Geological Survey (1974).

23. The soils that have developed on this geology are generally of a clay loam topsoil texture with some smaller areas of lighter textured sandy loam and sandy silt loams.

Agricultural Land Classification

24. 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

25. Land of excellent quality occupies 7.6 hectares (4%) of the site area.

26. The soil has a sandy silt loam topsoil texture over sandy clay loam or heavy clay loam to depth.

Grade 2

27. Land of very good quality occupies 35.8 hectares (19%) of the site area.

28. The soil in the north and east of the site has a clay loam texture over clay loam to depth. South of Mousecroft Lane the lower subsoil becomes moderately stony. The moisture balance places these soils in Grade 2. The soils to the east and west of Day House have either a sandy silt loam, clay loam or silty clay loam topsoil texture over clay loam, sandy clay loam and clay subsoils. The depth to gleying and the slowly permeable layer place these soils in either Wetness Class II or III.

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

Subgrade 3a

30. Land of good quality occupies 70.0 hectares (38%) of the site area.

31. The soil has a clay loam texture over clay loam, heavy clay loam and occasionally clay. The depth to gleying and the slowly permeable layer place these soils in Wetness Class III.

32. The main limitation to the agricultural use of this land is soil wetness or soil droughtiness.

33. North and south west of Nobold the soil has a clay loam texture over clay loam to depth. The topsoil is slightly stony with the subsoil becoming moderately stony with depth. The volume of topsoil stones greater than 2 cm in size and the moisture balance place these soils in Subgrade 3a.

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

Subgrade 3b

35. Land of moderate quality occupies 30.1 hectares (16%) of the site area.

36. The soil has a clay loam texture which lies over heavy clay loam and clay. The depth to gleying and the slowly permeable layer place these soils in Wetness Class IV.

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

38. North east of Nobold the soils are stonier, where the soils have a clay loam texture over clay loam and with many stones throughout the profile. The volume of topsoil stones greater than 2 cm in size and the moisture balance place these soils in Subgrade 3b.

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

40. North of Rose Cottage there are small patches of "foreign material" which has been incorporated into the soil profile. These areas cannot be shown separately at this scale of mapping.

Grade 4

41. Land of poor quality occupies 5.1 hectares (3%) of the site area.

42. The soil has either a clay loam or a silty clay loam texture over heavy clay loam or heavy silty clay loam. Occasionally there may be peaty horizons within the profile. The soil is saturated throughout the profile and has been assessed as Wetness Class V.

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

Grade 5

44. Land of very poor quality occupies 5.0 hectares (3%) of the site area.

45. These soils have been restored on a previous mineral workings. The soil profile has a compacted heavy clay loam texture from the surface to a depth of approximately 30 cm. The stone content within this horizon varies in quantity and lithology with bricks and tarmac often present. Below a depth of 30 cm the severely compacted soil forming material is impenetrable to plant roots. A large proportion of this land is found on slopes of between 11° and 18°.

46. The main limitations to the agriculture use of this land include gradient and stone content.

Not Surveyed

47. The area of land north east of the Council Depot and Visitor centre and the land near Nobold Hall Farm has not been surveyed. This land occupies 5.0 hectares (3%) of the site area.

Other Land

48. Other land occupies 25.9 hectares (14%) of the site area and is found as a trackway and allotments in the south east of the site.

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SOURCES OF REFERENCE

British Geological Survey (1974) *Sheet 152, Shrewsbury Solid and Drift Edition. 1:63 360 Scale.*
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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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