CHESTER LOCAL PLAN
ABBOT'S WELL

Agricultural Land Classification
ALC Map and Report
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AGRICULTURAL LAND CLASSIFICATION REPORT
CHESTER LOCAL PLAN - ABBOT'S WELL

INTRODUCTION

1. This report presents the findings of a detailed Agricultural Land Classification (ALC) survey on 18.8 hectares of land. The results of this survey supersede any previous ALC information for this land. The land is located to the east of Chester, to the south of the A41(T) road, and to the west of the A55(T) Chester bypass. The survey was in connection with the Chester Local Plan.

2. The survey was undertaken on behalf of the Ministry of Agriculture, Fisheries and Food (MAFF) in July 1997 by the Resource Planning Team of the Farming and Rural Conservation Agency (FRCA)- Northern region of FRCA.

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 wheat, maincrop potatoes and ley pasture.

SUMMARY

5. The findings of the survey are shown on the enclosed ALC map. The map has been drawn at a scale of 1:10000 with an average auger boring density of 1 per hectare. The ALC map is only accurate at this 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.

Table 1: Area of grades and other land

Grade/Other land	Area (hectares)	% surveyed area	% site area
1	-	-	-
2	1.9	14	10
3a	10.4	75	55
3b	1.5	11	8
4	-	-	-
5	-	-	-
Agricultural land not surveyed	0.3	N/A	2
Other land	4.7	N/A	25
Total surveyed area	13.8	100	-
Total site area	18.8	-	100

7. The agricultural land on this site has been classified as Grade 2 (very good quality), Subgrade 3a (good quality) and Subgrade 3b (moderate quality). The key limitations to the agricultural use of this land are soil droughtiness and soil wetness.

8. The area of very good quality land is located to the north of the site. The soils commonly comprise medium sandy loam topsoil overlying a medium sandy loam upper subsoil passing to a loamy medium sand and, occasionally, medium sand at depth.

9. The area of good quality land is mapped towards the south and east of the site. The soils in this area comprise a medium clay loam topsoil overlying a gleyed medium clay loam upper subsoil passing to a gleyed and slowly permeable heavy clay loam lower subsoil with clay present at depth.

10. The area of moderate quality land is found in the south west of the site. The soils in this area comprise a medium clay loam topsoil overlying a gleyed and slowly permeable heavy clay loam upper subsoil, passing to a clay lower subsoil.

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 standard interpolation procedures (Meteorological Office, 1989).

Table 2: Climatic and altitude data

Factor	Units	Values
Grid reference	N/A	SJ 431652
Altitude	m, AOD	20
Accumulated Temperature	day°C (Jan-June)	1445
Average Annual Rainfall	mm	675
Field Capacity Days	days	149
Moisture Deficit, Wheat	mm	103
Moisture Deficit, Potatoes	mm	93
Overall climatic grade	N/A	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 (ATO, 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. The site is climatically Grade 1.

Site

16. The site lies at altitudes of 20 to 30 metres AOD. The land rises gradually from the south of the site towards the north.

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

18. These 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 Pebble Beds - British Geological Survey (1986). This is overlain with deposits of Boulder Clay - British Geological Survey (1965).

20. The soils that have developed on this geology are generally of a clay loam texture over clay at depth.

Agricultural Land Classification

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

Grade 2

22. Land of very good quality occupies 1.9 hectares (10%) of the site area and is found in the north of the site in a single unit.

23. The soil has a medium sandy loam texture over medium sandy loam, loamy medium sand and sand to depth with few or no stones within the profile. The moisture balance places these soils in Grade 2.

24. The main limitation to the agricultural use of this land is soil droughtiness.

Subgrade 3a

25. Land of good quality occupies 10.4 hectares (55%) of the site area and extends across the south and east of the site in a single unit.

26. The soil has a medium clay loam texture which overlies medium clay loam, heavy clay loam and clay. The depths to gleying and the slowly permeable layer place these soils in Wetness Class III.

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

Subgrade 3b

28. Land of moderate quality occupies 1.5 hectares (8%) of the site area and is found in the south of the site in a single unit.

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

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

Other Land

31. Other land occupies 4.7 hectares (25%) of the site area and is found as a park-and-ride and allotments in the north west of the site, and ponds and trackways towards the centre and south of the site.

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SOURCES OF REFERENCE

British Geological Survey (1986) Sheet 109, Chester Solid Edition.
1:50 000 Scale.
BGS: London.

British Geological Survey (1965) Sheet 109, Chester Drift Edition.
1:63 360 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.
Meteorological Office: Bracknell.