CHESTER LOCAL PLAN
PEARL LANE
Agricultural Land Classification
ALC Map and Report
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AGRICULTURAL LAND CLASSIFICATION REPORT
CHESTER LOCAL PLAN
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INTRODUCTION

1. This report presents the findings of a detailed Agricultural Land Classification (ALC) survey on 24.2 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, north of the Crewe-Chester railway and south of the A51 Tarvin Road. 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 August 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, potatoes or pasture for grazing dairy cattle.

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	9.3	39	38
3a	12.2	52	51
3b	2.1	9	9
4	-	-	-
5	-	-	-
Agricultural land not surveyed	-	N/A	N/A
Other land	0.6	N/A	2
Total surveyed area	23.6	100	
Total site area	24.2		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 limitation to the agricultural use of this land is soil wetness.

8. The area of very good quality land is located in a band through the south and north east of the site. The soils commonly comprise either a medium clay loam or sandy clay loam topsoil overlying sandy clay loam upper subsoil passing to a gleyed heavy clay loam and occasionally clay at depth. At some borings sandy loams and loamy sands were found within the profiles.

9. The area of good quality land is mapped in a band through the centre, and in the south of the site. The soils in this area comprise either a medium clay loam or a sandy clay loam topsoil overlying a gleyed sandy clay loam upper subsoil, passing to either a gleyed and slowly permeable heavy clay loam or a clay lower subsoil.

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

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 434 662
Altitude	m, AOD	30
Accumulated Temperature	day°C (Jan-June)	1434
Average Annual Rainfall	mm	679
Field Capacity Days	days	149
Moisture Deficit, Wheat	mm	101
Moisture Deficit, Potatoes	mm	91
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 an altitude of 29 to 35 metres AOD. The land rises slightly from the west of the site towards the east.

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 (1990).

20. The soils that have developed on this geology are generally of a medium clay loam texture over heavy clay loam with 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 9.3 hectares (38 %) of the site area and is found in the south and north east of the site as a single unit.

23. The soil has either a medium clay loam or sandy clay loam texture over sandy clay loam and a permeable heavy clay loam, with clay occasionally found at depth. The depths to gleying and the slowly permeable layer place these soils into Wetness Class II.

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

Subgrade 3a

25. Land of good quality occupies 12.2 hectares (51 %) of the site area and is found across the centre and in the south of the site.

26. The soil has either a medium clay loam or sandy clay loam texture over a gleyed sandy clay loam passing to a heavy clay loam or 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

29. Land of moderate quality occupies 2.1 hectares (9%) of the site area and is found in the west of the site as a single unit.

30. The soil has a medium clay loam texture overlying either a heavy clay loam or clay. The depth to gleying and the slowly permeable layer place these soils in Wetness Class IV.

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

Other Land

32. Other land occupies 0.6 hectares (2%) of the site area and is found as a road and a small area of woodland in the east of the site.

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SOURCES OF REFERENCE

British Geological Survey Sheet 109, Chester Solid (1986) and Drift (1990) Editions. 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.
Meteorological Office: Bracknell.