

**CHESTER LOCAL PLAN  
UPTON-BY-CHESTER  
Agricultural Land Classification  
ALC Map and Report  
March 1998**

**A I Cooke  
Resource Planning Team  
Northern Region  
FRCA Wolverhampton**

**RPT Reference: 92/97 & 25/RPT/0780  
FRCA Reference: EL 06/10460  
LURET Job Number: ME1AMQY**

**AGRICULTURAL LAND CLASSIFICATION REPORT  
CHESTER LOCAL PLAN  
UPTON-BY-CHESTER**

**INTRODUCTION**

1. This report presents the findings of a detailed Agricultural Land Classification (ALC) survey on 13.3 hectares of land. The results of this survey supersede any previous ALC information for this land. The land is located north east of Chester, between the A41 and the M53 roads. 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 February 1998 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 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
3a	9.0	69	67
3b	4.1	31	31
Other land	0.2	N/A	2
Total surveyed area	13.1	100	
Total site area	13.3		100

7. The agricultural land on this site has been classified as Subgrade 3a (good quality) and Subgrade 3b (moderate quality). The key limitation to the agricultural use of this land is soil wetness.
8. Good quality land is located across the south and east of the site. The soils commonly comprise either sandy clay loam or medium sandy loam topsoils overlying sandy clay loam upper subsoils, passing to heavy clay loam and clay lower subsoils.

9. Moderate quality land is located in the north of the site. The soils commonly comprise medium clay loam topsoils overlying either medium or heavy clay loam upper subsoils passing to clay lower subsoils.

## FACTORS INFLUENCING ALC GRADE

### Climate

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

11. 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 424 691
Altitude	m, AOD	40
Accumulated Temperature	day°C (Jan-June)	1421
Average Annual Rainfall	mm	682
Field Capacity Days	days	151
Moisture Deficit, Wheat	mm	101
Moisture Deficit, Potatoes	mm	91
Overall climatic grade	N/A	Grade 1

12. 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.

13. 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.

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

### Site

15. The site lies at an altitude of 40 metres AOD and is generally level.

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

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

## **Geology and Soils**

18. The solid geology of the area is comprised of Sherwood Pebble Beds - British Geological Survey (1986). This is overlain with deposits of boulder clay - British Geological Survey (1990).

19. The soils that have developed on this geology are generally of a medium clay loam or sandy clay loam texture over heavy clay loam and clay at depth.

## **Agricultural Land Classification**

20. 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.

### *Subgrade 3a*

21. Land of good quality occupies 9.0 hectares (67 %) of the site area and is found throughout the south and east of the site in a single unit.

22. The soil has either a sandy clay loam or medium sandy loam texture over an occasionally gleyed sandy clay loam upper subsoil and a gleyed heavy clay loam lower subsoil passing to a slowly permeable clay. The depths to gleying and the slowly permeable layer place these soils in Wetness Class III.

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

### *Subgrade 3b*

24. Land of moderate quality occupies 4.1 hectares (31 %) of the site area and is found in the north of the site in a single unit.

25. The soil has either a medium clay loam or sandy clay loam texture over a gleyed heavy clay loam upper subsoil passing to a slowly permeable clay lower subsoil. The depths to gleying and the slowly permeable layer place these soils in Wetness Class IV.

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

### *Other Land*

27. Other land occupies 0.2 hectares (2 %) of the site area and is found as two small ponds.

Resource Planning Team  
Northern Region  
FRCA Wolverhampton

## **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.**