

**Winwick MSA - junction 22 M6**

**Agricultural Land Classification  
ALC Map and Report  
April 1998**

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# AGRICULTURAL LAND CLASSIFICATION REPORT

## Winwick MSA - Junction 22 M6

### INTRODUCTION

1. This report presents the findings of a detailed Agricultural Land Classification (ALC) survey on 16.6 hectares of land. The results of this survey supersede any previous ALC information for this land. The land is located to west of the M6 at junction 22. The survey was in connection with a motorway service area proposal.
2. The survey was undertaken on behalf of the Ministry of Agriculture, Fisheries and Food (MAFF) in December 1994 and April 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 cereals and beans

### 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	7.5	49	45
3b	7.7	51	47
Other land	1.4	N/A	8
Total surveyed area	15.2	100	
Total site area	16.6		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. The area of good quality land is located on the northern and southern parts of the site. The soils commonly comprise medium clay loam topsoils overlying sandy clay loam or heavy clay loam upper subsoils and clays at depth.

9. The area of moderate quality land is mapped across the centre of the site. The soils in this area comprise a medium clay loam topsoil overlying clay.

**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 610 939
Altitude	m, AOD	30
Accumulated Temperature	day°C (Jan-June)	1417
Average Annual Rainfall	mm	879
Field Capacity Days	days	207
Moisture Deficit, Wheat	mm	85
Moisture Deficit, Potatoes	mm	71
Overall climatic grade	N/A	Grade 1

12. 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.

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 about 30 metres AOD. The land rises gently to the north and south of a drainage ditch across the centre of the site.

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 Bunter Pebble Beds overlain with deposits of Boulder clay - British Geological Survey (1957).

19. The soils that have developed on this geology are generally of a medium clay loam texture over sandy clay loam, 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 7.5 hectares (45%) of the site area and is found in the southern part of the site and at the northern boundary.

22. The soil has a medium clay loam texture over lying either sandy clay loam or heavy clay loam and clay with few stones within the profile. The depth 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 7.7 hectares (47%) of the site area and extends across the centre of the site in a single unit.

25. The soil has a medium clay loam texture over clay. The depth 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 1.4 hectares (8%) of the site area and includes the highway to the east of the agricultural land (Winwick Link Road and Waterworks Lane).

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## **SOURCES OF REFERENCE**

British Geological Survey (1957) Sheet 97, Runcorn Solid and Drift Edition.  
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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.  
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