

**Poplar Farm, Louth Road  
New Waltham, Grimsby**

**Agricultural Land Classification (ALC)  
Map and Report**

**September 1998**

**Resource Planning Team  
Northern Region  
FRCA, Leeds**

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**AGRICULTURAL LAND CLASSIFICATION REPORT**  
**Poplar Farm, Louth Road**  
**New Waltham, Grimsby**

**INTRODUCTION**

1. This report presents the findings of a detailed Agricultural Land Classification (ALC) survey of 15.7 ha of land at Poplar Farm, Louth Road, New Waltham, Grimsby. The survey was carried out during September 1998.
2. The survey was carried out by the Farming and Rural Conservation Agency (FRCA) for the Ministry of Agriculture, Fisheries and Food (MAFF), in connection with an ad hoc proposal to build houses on the site.
3. The work was conducted by members of the Resource Planning Team in the Northern Region of FRCA. The land has been graded in accordance with the published MAFF ALC guidelines and criteria (MAFF, 1988). A description of the ALC grades and subgrades is given in Appendix I.
4. At the time of survey the land was in an arable rotation, having grown wheat in 1998.

**SUMMARY**

5. The findings of the survey are shown on the attached ALC map. The map has been drawn at a scale of 1:5,000; it is accurate at this scale but any enlargement would be misleading.
6. The areas 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	1.3	8.3	8.3
3b	14.4	91.7	91.7
Total surveyed area	15.7	100	-
Total site area	15.7	100	100

7. The fieldwork was conducted at an average density of 1 boring per hectare. A total of 18 borings and 2 soil pits were described.
8. Most of the site was Subgrade 3b, moderate quality land. Soil wetness and workability limit the ALC grade of this land. Remaining land was Subgrade 3a, good quality land. A less severe soil wetness and workability problem limited the ALC grade of this land.

## FACTORS INFLUENCING ALC GRADE

### Climate

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

10. The key climatic variables used for grading this site are given in Table 2 and were obtained from the published 5km grid datasets using the standard interpolation procedures (Met. Office, 1989).

Table 2: Climatic and altitude data

Factor	Units	Values
Grid reference	N/A	TA 282 042
Altitude	m, AOD	15
Accumulated Temperature	day°C (Jan-June)	1391
Average Annual Rainfall	mm	642
Field Capacity Days	days	142
Moisture Deficit, Wheat	mm	109
Moisture Deficit, Potatoes	mm	101
Overall climatic grade	N/A	Grade 1

11. 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.

12. 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.

13. The combination of rainfall and temperature at this site mean there is no overall climatic limitation.

## Site

14. The site is level (0° to 1°) at an altitude of 15m A.O.D.

## Geology and soils

15. Published geology information indicates that the site is underlain with solid deposits of Burnham Chalk over which are thick deposits of till (BGS Sheet 90/91, Grimsby). Soils are typical of those derived from boulder clay. Topsoils are medium clay loam, generally over clayey subsoils, mottled and slowly permeable within 40cm depth. These soils are Wetness Class IV. Occasionally profiles are medium textured throughout and not slowly permeable until about 50cm depth. These soils, which are generally Wetness Class III, tend to occur where the boulder clay parent material is noticeably chalky. However these better drained soils are not widespread on the site and were only found in a mappable unit in the west of the site.

## AGRICULTURAL LAND CLASSIFICATION

16. 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, page 1.

### Subgrade 3a

A small area of land was classed as Subgrade 3a. Profiles are medium textured throughout and not slowly permeable until about 50cm depth. These soils, which are generally Wetness Class III, were found where the boulder clay parent material is noticeably chalky. Generally these soils did not occur in mappable areas except in the west of the site where some 3a land was mapped. Soil wetness and workability limit the ALC grade of this land.

### Subgrade 3b

Most of the site was classed as Subgrade 3b. Topsoils are medium clay loam generally over clayey subsoils, mottled and slowly permeable within 40cm depth. These soils are Wetness Class IV. A more severe soil wetness problem than on the adjacent 3a land limits the ALC grade of this land.

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## SOURCES OF REFERENCE

British Geological Survey ( 1990 ) *Sheet No.90/91*, Grimsby, solid and drift geology 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.

Met. Office (1989) *Climatological Data for Agricultural Land Classification*.  
Met. Office: Bracknell.

## APPENDIX I

### DESCRIPTIONS OF THE GRADES AND SUBGRADES

#### **Grade 1: Excellent Quality Agricultural Land**

Land with no or very minor limitations to agricultural use. A very wide range of agricultural and horticultural crops can be grown and commonly includes top fruit, soft fruit, salad crops and winter harvested vegetables. Yields are high and less variable than on land of lower quality.

#### **Grade 2: Very Good Quality Agricultural Land**

Land with minor limitations which affect crop yield, cultivations or harvesting. A wide range of agricultural or horticultural crops can usually be grown but on some land of this grade there may be reduced flexibility due to difficulties with the production of the more demanding crops such as winter harvested vegetables and arable root crops. The level of yield is generally high but may be lower or more variable than Grade 1 land.

#### **Grade 3: Good to Moderate Quality Land**

Land with moderate limitations which affect the choice of crops, the timing and type of cultivation, harvesting or the level of yield. When more demanding crops are grown, yields are generally lower or more variable than on land in Grades 1 and 2.

#### **Subgrade 3a: Good Quality Agricultural Land**

Land capable of consistently producing moderate to high yields of a narrow range of arable crops, especially cereals, or moderate yields of a wide range of crops including cereals, grass, oilseed rape, potatoes, sugar beet and the less demanding horticultural crops.

#### **Subgrade 3b: Moderate Quality Agricultural Land**

Land capable of producing moderate yields of a narrow range of crops, principally cereals and grass, or lower yields of a wider range of crops or high yields of grass which can be grazed or harvested over most of the year.

#### **Grade 4: Poor Quality Agricultural Land**

Land with severe limitations which significantly restrict the range of crops and/or the level of yields. It is mainly suited to grass with occasional arable crops (e.g. cereals and forage crops) the yields of which are variable. In moist climates, yields of grass may be moderate to high but there may be difficulties in utilisation. The grade also includes very droughty arable land.

#### **Grade 5: Very Poor Quality Agricultural Land**

Land with severe limitations which restrict use to permanent pasture or rough grazing, except for occasional pioneer forage crops.