

**LAND AT KIRBY CROSS,
FRINTON-ON-SEA, ESSEX**

**Agricultural Land Classification
ALC Map and Report**

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**Resource Planning Team
Eastern Region
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AGRICULTURAL LAND CLASSIFICATION REPORT

Land at Kirby Cross, Frinton-on-Sea, Essex.

INTRODUCTION

1. This report presents the findings of a detailed, Agricultural Land Classification (ALC) survey of 1.4 ha of land at Kirby Cross, Frinton-on-Sea, Essex. The survey was carried out during November 1997.
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 application for retail development. This survey supersedes previous ALC information for this land.
3. The work was conducted by members of the Resource Planning Team in the Eastern 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 ploughed prior to drilling.

SUMMARY

5. The findings of the survey are shown on the enclosed ALC map. The map has been drawn at a scale of 1:10 000; and is accurate at this scale but 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

Grade/Other land	Area (hectares)
2	1.4
Total site area	1.4

7. The fieldwork was conducted at an average density of 4 borings per hectare. A total of 5 borings and 2 soil pits was described.
8. The whole site has been assigned to grade 2 (very good quality agricultural land) with minor wetness and workability, and minor droughtiness constraints being the limiting factors.

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	TM 215 209
Altitude	m, AOD	24
Accumulated Temperature	day°C (Jan-June)	1440
Average Annual Rainfall	mm	551
Field Capacity Days	days	95
Moisture Deficit, Wheat	mm	128
Moisture Deficit, Potatoes	mm	125
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 impose no overall limitation to land quality and hence the site has a climatic grade of 1.

Site

14. The site is level at approximately 25m AOD. It is bounded in the south by commercial and residential properties and all other sides by farmland.

Geology and soils

15. The published 1:253 440 scale geology map (Geol. Survey, 1907) shows the site to comprise glacial loam.

16. The 1:250 000 scale reconnaissance soil map of the area (SSEW, 1983) shows the site to comprise soils of the Tendring Association. These are briefly described as, deep often

stoneless coarse loamy soils with some slowly permeable seasonally waterlogged coarse and fine loamy over clayey soils.

17. During the current survey one main soil type was encountered. Profiles typically comprise non-calcareous, very slightly stony medium clay loam topsoil over non-calcareous, stoneless heavy clay loam/heavy silty clay loam upper subsoil. Lower subsoil comprises non-calcareous stone free slowly permeable clay occurring at 75/80cm depth. In a small area in the centre of the site the top and upper subsoil is underlain by loamy medium sand merging into medium sand.

AGRICULTURAL LAND CLASSIFICATION

18. 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.

19. The location of the auger borings and pits is shown on the attached sample location map.

Grade 2

20. The whole site is mapped as grade 2 (very good quality agricultural land). The fine loamy over clay soils (Wetness Class II) described in paragraph 17 are subject to a minor wetness and workability limitation restricting the land to this grade. Equally, the combination of profile textures and subsoil structures together with a relatively low rainfall limit the land to this grade due to a minor droughtiness limitation..

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SOURCES OF REFERENCE

British Geological Survey (1907) *Sheet No. 16, Drift Edition. Scale 1:253 440*
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.

Soil Survey of England and Wales (1983) *Sheet 4 Soils of Eastern England Scale 1:250 000.*
SSEW: Harpenden.

Soil Survey of England and Wales (1984) *Soils and their Use in Eastern England*
SSEW: Harpenden

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.