DARLINGTON LOCAL PLAN
(LAND AT ELM TREE FARM AND DARLINGTON GOLF COURSE)

Agricultural Land Classification (ALC) Map and Report

DECEMBER 1998

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Northern Region
FRCA, Leeds

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AGRICULTURAL LAND CLASSIFICATION REPORT

LAND AT ELM TREE FARM AND DARLINGTON GOLF COURSE

INTRODUCTION

1. This report presents the findings of a detailed Agricultural Land Classification (ALC) survey of 24.6 ha of land situated approximately 3 km north of Darlington town centre. The field survey was carried out in December 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 the proposal to include this land in Darlington Local Plan. This ALC map and report supersede any previous ALC information related to this 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 agricultural land on the site was principally under permanent grass, although a mature cabbage crop occurred in one field. Other land on this site consists of the farmhouse and out buildings at Elm Tree Farm (in the south) and an area of scrub (in the east).

SUMMARY

5. The findings of the survey are shown on the enclosed 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 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 3a 3b 4 5	24.1	100.0	98.0
Agricultural land not surveyed		N/A	
Other land	0.5	N/A	2.0
Total surveyed area	24.1	100	-
Total site area	24.6	-	100

7. The fieldwork was conducted at an average density of one boring per hectare. A total of 24 borings and one soil pit were described.

8. All of the agricultural land on the site has been mapped as Subgrade 3b, moderate quality agricultural land. The soils are imperfectly to poorly drained and typically consist of medium clay loam or heavy clay loam topsoils and, in many places, thin upper subsoils, overlying gleyed and slowly permeable clay at between 25cm and 45cm depth. The ALC grade of this land is restricted by soil wetness and topsoil workability limitations.

9. Other, non-agricultural, land on this site consists of the farmhouse and out buildings at Elm Tree Farm, and an area of scrub in the east of the site.

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 5 km grid datasets using the standard interpolation procedures (Met. Office, 1989).

Table 2: Climatic and altitude data

Factor	Units	Values
Grid reference	N/A	NZ 305 175
Altitude	m, AOD	65
Accumulated Temperature	day°C (Jan-June)	1307
Average Annual Rainfall	mm	647
Field Capacity Days	days	157
Moisture Deficit, Wheat	mm	96
Moisture Deficit, Potatoes	mm	84
Overall climatic grade	N/A	Grade 2

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 (ATO, 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 an overall climatic limitation of Grade 2.

Site

15. The land on the site is level to moderately sloping (0-4°) with variable aspect. As such, gradient does not restrict the ALC grade at any point. Equally, neither flood risk nor microrelief are grade-limiting factors on this site.

Geology and soils

16. The site is underlain by Upper Magnesian Limestone over which lie deep deposits of till or, in a few small areas, lake deposits (BGS Sheet 33).

17. The soils on the site have been mapped as belonging to the Dunkeswick association (Soils of England and Wales, Sheet 1, Northern England).

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.

Subgrade 3b

19. All of the agricultural land on the site falls in Subgrade 3b, moderate quality agricultural land. Most of the soils are poorly drained (Wetness Class IV) although a few imperfectly drained (Wetness Class III) profiles ere also recorded. Typically medium clay loam or heavy clay loam topsoils and, in many cases, thin upper subsoils, overlie gleyed and slowly permeable clay at between 25cm and 45cm depth. The land is limited to Subgrade 3b by soil wetness and topsoil workability restrictions. Although some profiles meet the requirements for Subgrade 3a, particularly in the east of the site, these form no apparent pattern and it is not possible to map them together as a separate unit.

Other land

20. Other, non-agricultural, land consists of the buildings at Elm Tree Farm in the south of the site, and an area of scrub in the east.

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SOURCES OF REFERENCE

British Geological Survey (1987) *Sheet No. 33, Stockton, Solid and Drift, 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.

Soil Survey of England and Wales (1983) *Sheet 1, Soils of Northern England, 1:250,000 scale.* SSEW: Harpenden.

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

[ALC Map]

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.