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FARMING AND RURAL CONSERVATION AGENCY

An Executive Agency of the Ministry of Agriculture, Fisheries and Food and the Welsh Office

TYNEDALE DISTRICT LOCAL PLAN
(SITE 53, EASTWOOD PARK, PRUDHOE)

Agricultural Land Classification (ALC)
Map and Report

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Resource Planning Team
Northern Region
FRCA, Leeds

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AGRICULTURAL LAND CLASSIFICATION REPORT

TYNEDALE DISTRICT LOCAL PLAN
(SITE 53, EASTWOOD PARK, PRUDHOE)

INTRODUCTION

1. This report presents the findings of a detailed Agricultural Land Classification (ALC) survey of 10.1 ha of land lying to the east of Eastwood Road, Prudhoe.

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 area in the Tynedale District Local Plan. This ALC report supersedes any previous ALC information for this land

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 in ley or permanent grass. Other, non-agricultural, land occurs in the centre of the site and consists of farm buildings.

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	1.1	12.9	10.9
3b	7.4	87.1	73.3
4			
5			
Agricultural land not surveyed		N/A	
Other land	1.6	N/A	15.8
Total surveyed area	8.5	100	-
Total site area	10.1	-	100

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

8. Subgrade 3a, good quality agricultural land, occurs in the north-western corner of the site. The soils are imperfectly drained, with medium clay loam topsoils overlying medium or heavy clay loam upper subsoils and heavy clay loam or clay lower subsoils. The profiles become slowly permeable at between 45 cm and 55 cm depth and soil wetness is the grade-limiting factor.

9. Subgrade 3b, moderate quality agricultural land, covers the remainder of the agricultural area. The soils are poorly drained and consist of medium clay loam topsoils and, in places, thin upper subsoils, overlying gleyed and slowly permeable clay or heavy clay loam. Soil wetness is more severe than the adjoining Subgrade 3a land and provides a further limitation to Subgrade 3b.

10. Other, non-agricultural, land on this site occurs in the centre and consists of farm buildings.

FACTORS INFLUENCING ALC GRADE

Climate

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

12. 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 112 636
Altitude	m, AOD	50
Accumulated Temperature	day°C (Jan-June)	1308
Average Annual Rainfall	mm	678
Field Capacity Days	days	173
Moisture Deficit, Wheat	mm	92
Moisture Deficit, Potatoes	mm	79
Overall climatic grade	N/A	Grade 2

13. 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.

14. 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.

15. The combination of rainfall and temperature at this site means that there is an overall climatic limitation to Grade 2.

Site

16. The land on this site is level to moderately sloping (0-5°) with variable aspect. As such gradient does not limit ALC grade at any point and neither flood risk nor microrelief are of significance on this site.

Geology and soils

17. The site is underlain by Lower Coal Measures (BGS, Sheet 20) over which lie deposits of till.

18. The soils on the site have been mapped as Brickfield 3 association (Soils of England and Wales, Sheet 1). They are imperfectly or poorly drained and medium to heavy-textured. The soils in part of the north of the site have been restored on the site of a former landfill operation.

AGRICULTURAL LAND CLASSIFICATION

19. 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

20. A small area of Subgrade 3a, good quality agricultural land, occurs in the north-west of the site. The soils are imperfectly drained, falling in Wetness Class III. Medium clay loam topsoils overlie medium clay loam or heavy clay loam upper subsoils (which are gleyed in places within 40 cm depth) and, at between 45 cm and 55 cm depth, gleyed and slowly permeable heavy clay loam or clay lower subsoils. Soil wetness is the factor which limits this land to Subgrade 3a.

Subgrade 3b

21. The remainder of the agricultural land on the site has been mapped as Subgrade 3b, moderate quality land. The soils are poorly drained, falling in Wetness Class IV. Typically medium clay loam topsoils and, in places, thin upper subsoils, overlie gleyed and slowly permeable heavy clay loam or clay at between 25 cm and 40 cm depth. Soil wetness is a more serious problem than on the adjoining Subgrade 3a land and provides a further limitation to Subgrade 3b.

Other land

22. Other, non-agricultural, land on this site occurs in the centre and consists of farm buildings.

RPT File: 20,272
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SOURCES OF REFERENCE

British Geological Survey (1992) *Sheet No. 20, Newcastle-upon-Tyne (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

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.