

**COLDCOATS MOOR FARM  
PONTELAND**

**Agricultural Land Classification  
ALC Map and Report**

**July 1997**

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

**RPT Job Number: 34/97  
MAFF Reference: EL 11266  
LURET Job Number: ME2AQC**

*RPT 20, 178*

## COLDCOATS MOOR FARM, PONTELAND

### AGRICULTURAL LAND CLASSIFICATION REPORT

#### INTRODUCTION

1. This report presents the findings of a detailed Agricultural Land Classification (ALC) survey of 68.9 ha of land lying to the north-west of the village of Ponteland in Northumberland.

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 build a cattle market 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 agricultural land on the site was under permanent grass, being mainly pasture but a crop of hay had recently been cut in one field. Other land on the site covers 2.2 ha and consists of blocks of woodland, the buildings at Coldcoats Moor Farm and an access road.

#### 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	61.4	92.1	89.1
4	5.3	7.9	7.7
5			
Agricultural land not surveyed		N/A	
Other land	2.2	N/A	3.2
Total surveyed area	66.7	100	-
Total site area	68.9	-	100

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

8. Subgrade 3b, moderate quality agricultural land, covers most of the site. The soils are poorly drained, typically consisting of medium clay loam topsoils overlying gleyed and slowly permeable clay subsoils at around 25 cm depth. In some places a thin horizon of heavy clay loam lies between the topsoil and the clayey subsoil. The ALC grade of this land is limited by soil wetness.

9. Grade 4, poor quality agricultural land, occurs in the centre of the site. The soils are again poorly drained but in this case heavy clay loam topsoils overlie gleyed and slowly permeable clay subsoils. The heavier-textured topsoils give rise to a workability limitation which restricts this land to Grade 4.

10. Other land on this site consists of blocks of woodland, the buildings at Coldcoats Moor Farm, and an access road.

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

Table 2: Climatic and altitude data

Factor	Units	Values
Grid reference	N/A	NZ141737
Altitude	m, AOD	80
Accumulated Temperature	day°C (Jan-June)	1268
Average Annual Rainfall	mm	722
Field Capacity Days	days	188
Moisture Deficit, Wheat	mm	85
Moisture Deficit, Potatoes	mm	69
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 the site is generally level to gently sloping (0-3°) and only in the south of the site, adjoining Small Burn, do slopes get as high as 4°. As such there is no gradient limitation on 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 Millstone Grit over which lies a thick layer of till (BGS Sheet 14).

18. The soils on the site have been mapped as belonging to the Dunkeswick association (in the west) and the Foggathorpe 1 association (in the east). The field work suggests that most of the soils on the site are akin to the Dunkeswick series.

## 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.

### Subgrade 3b

20. Subgrade 3b, moderate quality agricultural land, covers most of the site. The soils are poorly drained (falling in Wetness Class IV) and typically stoneless to very slightly stony. In most cases medium clay loam topsoils overlie gleyed and slowly permeable clay subsoils, although in some places a thin horizon of heavy clay loam lies between the topsoil and the clayey subsoil. The slowly permeable layer generally begins at between 25 cm and 35 cm depth and soil wetness is the factor which limits this land to Subgrade 3b.

### Grade 4

21. An area of Grade 4, poor quality agricultural land, lies in the centre of the site. The soils are similar to those on the Subgrade 3b land, being poorly drained, but in this case heavy clay loam topsoils overlie gleyed and slowly permeable clay subsoils at around 25 cm depth. The increased clay content of the topsoil makes it less workable in wet conditions than on the adjoining Subgrade 3b land, and it is the combination of soil wetness and topsoil texture which limits this land to Grade 4.

### Other land

22. Other, non-agricultural, land on this site consists of blocks of woodland, the building at Coldcoats Moor Farm and an access road.

Resource Planning Team  
Northern Region  
FRCA, Leeds  
RPT File: 20,198

## SOURCES OF REFERENCE

British Geological Survey (1977) *Sheet No 14, Morpeth. 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 England and Wales, 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.