LAND OFF SUMMERHOUSE LANE
NORTH SEATON, ASHINGTON

Agricultural Land Classification (ALC)
Map and Report

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LAND OFF SUMMERHOUSE LANE, NORTH SEATON, ASHINGTON AGRICULTURAL LAND CLASSIFICATION REPORT

INTRODUCTION

1. This report presents the findings of a detailed Agricultural Land Classification (ALC) survey of 52.6 ha of land at Summerhouse Lane, North Seaton, Ashington. The survey was carried out during July 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 a proposal for 1065 housing units with first and middle school, site for two local centres and associated infrastructure. No detailed ALC survey has been previously carried out on this land.

3. The current survey 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 in the northern part of the site was uncropped, with vegetation cover comprising volunteer barley and arable weeds. The southern portion of the site was under wheat. Parts of the centre of the site consist of open water and very poorly drained soils which appear to be almost permanently waterlogged.

SUMMARY

5. The findings of the survey are shown on the attached ALC map. The map has been drawn at a scale of 1:10,000. 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
3a	2.4	4.9	4.6
3b	46.7	95.1	88.8
Other land	3.5	-	6.6
Total surveyed area	49.1	100	-
Total site area	52.6	-	100

7. The fieldwork was conducted at an average density of one boring per hectare. A total of 49 borings and two soil pits were described.

8. The majority of the site (46.7 ha) is classified as Subgrade 3b, moderate quality agricultural land. The soil is medium to heavy clay loam overlying heavy clay loam or clay. The ALC grade of this land is limited by soil wetness. A small area (2.4 ha) is ALC Subgrade 3a, again with soil wetness the limiting factor, however this was less restricting than on the adjacent Subgrade 3b land.

9. Two areas of the site suffered from severely impeded drainage, giving rise to waterlogged conditions and an area of open water, the surroundings of which have been colonised by a range of native wetland vegetation species.

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

Table 2: Climatic and altitude data

Factor	Units	Values
Grid reference	N/A	NZ 292 876
Altitude	m, AOD	23
Accumulated Temperature	day°C (Jan-June)	1325
Average Annual Rainfall	mm	646
Field Capacity Days	days	162
Moisture Deficit, Wheat	mm	100
Moisture Deficit, Potatoes	mm	89
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 (ATO, January to June), as a measure of the relative warmth of a locality.

13. The combination of rainfall and temperature means that there is no climatic limitation to grade on this site.

Site

14. The land on the site is mainly level, with the northern area having a gentle south-west facing slope. However, none of the slopes are greater than 7°, therefore ALC grade is not limited by gradient.

Geology and soils

15. The geology of the area is shown as till overlying Upper Coal Measures (BGS Sheet 10, Newbiggin).

16. The soils of the site have been mapped as Brickfield 3 association by the Soil Survey of England and Wales. (Soils of England and Wales, Sheet 1).

AGRICULTURAL LAND CLASSIFICATION

17. 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

18. A small area in the north eastern corner of the site is graded as Subgrade 3a, consisting of medium clay loam topsoils overlying medium clay loam subsoil, falling into Wetness Class III. The ALC grade is limited by soil wetness.

Subgrade 3b

18. Subgrade 3b, moderate quality agricultural land, occupies the largest part of the site. The profiles are made up of medium to heavy clay loam topsoil overlying heavy clay loam and clay subsoils. Both the topsoil and subsoils are stoneless to very slightly stony, containing up to 5% total stones of medium soft sandstone. The subsoils are slowly permeable, and show evidence of gleying, giving Wetness Class IV. Soil wetness and workability limits the ALC grade of this land.

Other Land

19. Three areas were not surveyed, extending to a total of 3.5 ha.. There are two areas of waterlogging, the smaller of the two is central in the southern part of the site; the second in the east of the site comprises an area of open water surrounded by marshy land which has been colonised by a range of native wetland vegetation species. Additionally, an area included within the site boundary projects to the east of the agricultural land and now forms part of the A189 dual carrriageway.

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SOURCES OF REFERENCE

British Geological Survey (1964) *Sheet No. 10, Newbiggin (Drift).*
BGS: London.

British Geological Survey (1966) *Sheet No. 10, Newbiggin (Solid).*
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 *Northern England.*
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.