AGRICULTURAL LAND CLASSIFICATION

WHITWORTH FARM

NEWTON AYCLIFFE

PROPOSED INDUSTRIAL PARK

ADAS

Leeds Regional Office

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1. Agricultural Land Classification

AGRICULTURAL LAND CLASSIFICATION REPORT.
LAND AT WHITWORTH FARM, NEWTON AYCLIFFE

1. INTRODUCTION AND GENERAL SITE CHARACTERISTICS

The site is located at National Grid Reference NZ 268224, 3 km south west of Newton Aycliffe. It covers 46 ha, nearly all of which is in agricultural use.

Survey work was carried out in October 1990 when soils were examined by hand auger borings at 100 metre intervals at points pre-determined by the National Grid. A soil profile pit was also dug to determine the depth to slowly permeable layers in the subsoil.

All assessments of land quality were made using the methods described in "Agricultural Land Classification: Revised Guidelines and Criteria for grading the quality of agricultural land", (MAFF 1988).

1.1 Land Use

Most of the site is used for cereal production and grazing.

1.2 Climate

Average Annual Rainfall (AAR) in the area is approximately 686 mm. Accumulated temperature above 0°C between January and June is 1266 day °C and the land is at field capacity for 175 days a year. The temperature and rainfall figures indicate that there is overall climatic restriction of Grade 2 on land in this area.

Summer moisture deficits are 90 mm for wheat and 75 mm for potatoes. These figures suggest that summer droughtiness is unlikely to be a limiting factor on the medium and heavy textured soils which are widespread on this site.

1.3 Relief

Altitude varies between 90 and 100 metres above ordnance datum. Slopes do not exceed 7° and thus do not impose any restrictions on ALC grade.

1.4 Geology and Soils

The area is underlain by Permian Magnesian limestone which is covered by a thick layer of glacial drift derived from Carboniferous Coal Measures. In the southern and eastern parts of the site this material consists of a heavy textured boulder clay. Soils formed on this consist of heavy clay loam topsoils over slowly permeable heavy clay loam or clay subsoils all of which fall into Wetness Class IV. Somewhat lighter drift occurs in the northern and north western parts of the site where medium clay loam or sandy clay loam topsoils overlie similar textured subsoils. These soils are slightly better drained (Wetness Class III) being slowly permeable only at depth (>48 cm) in the profile.

2. AGRICULTURAL LAND CLASSIFICATION GRADES

The ALC grades occurring on the site are as follows:

Grade	Hectares	% total site area
3a	19.8	42.1
3b	23.0	48.9
Urban	2.1	4.5
Farm Buildings	0.3	0.7
Disturbed land	1.8	3.8
TOTAL	47.0	100.0

2.1 Subgrade 3a

Land in this subgrade occurs in the northern part of the site and corresponds largely with the slightly elevated area of somewhat lighter textured drift.

Soils consist mainly of medium clay loam topsoils over similar subsoils to depth. Sandy clay loam or sandy loam subsoils also occur in a number of places. Most soils fall within Wetness Class III thus restricting ALC grade to 3a because of topsoil wetness and workability problems.

2.2 Subgrade 3b

Land in this grade occurs in the southern and eastern parts of the site and corresponds to the lower lying areas of heavy till.

Soils consist of medium clay loam topsoils over heavy clay loam to clay subsoils. Most soils fall within Wetness Class IV, and ALC grade is restricted to 3b by topsoil wetness and workability problems which are more severe than on the adjoining subgrade 3a land.

2.3 Urban

This consists of wartime storage buildings, roadways and associated structures.

2.4 Disturbed Land

This area, on the northern edge of the site, is at present disturbed by pipeline excavations, but will be returned to agricultural use when the work is completed.

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