



AGRICULTURAL LAND CLASSIFICATION
BERWICK UPON TWEED
BOROUGH LOCAL PLAN
LAND AT SEAHOUSES, NORTHUMBERLAND

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ADAS
Leeds Statutory Group

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SUMMARY

A detailed Agricultural Land Classification (ALC) of 31.2 ha of land at Seahouses was carried out in September 1995.

All of the site was in agricultural use. 14.3 ha of this falls within Grade 2. Three soil types occur within this Grade. The first comprises moderately well drained soils (Wetness Class II) consisting of medium textured topsoils and upper subsoils overlying heavy textured lower subsoils which are gleyed and slowly permeable at 55 to 80 cm depth. This land is limited by soil wetness and climatic exposure. The second soil type comprises well drained soils which are medium textured throughout the profile. Climatic exposure limits this land to Grade 2. The third soil type consists of medium textured topsoils and upper subsoils overlying light textured lower subsoils. This land is limited by soil droughtiness and climatic exposure.

The remaining 16.9 ha of the site falls within Subgrade 3a. Three soil types occur within this Subgrade. The first comprises imperfectly drained soils. These consist of medium textured topsoils and upper subsoils over heavy textured lower subsoils which are gleyed and slowly permeable at about 50cm to 55 cm depth. The land is restricted to Subgrade 3a by a soil wetness limitation. The second soil type comprises well drained soils (Wetness Class I) which are light textured throughout the profile and are restricted to this Subgrade by soil droughtiness. The third soil type comprises well drained soils (Wetness Class I) with medium textured topsoils and subsoils. Solid rock occurs within 100cm depth and the land is limited to Subgrade 3a by droughtiness.

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1. AGRICULTURAL LAND CLASSIFICATION

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NORTHUMBERLAND FOR BERWICK-UPON-TWEED BOROUGH LOCAL PLAN

1. INTRODUCTION AND SITE CHARACTERISTICS

1.1 Location and Survey Methods

The site lies to the west of the village of Seahouses, between the B1340 coast road (Saint Aidan's Dunes) to the east and Broad Road to the west. It is centred around National Grid Reference NU214320 and covers a total area of 31.2 ha. Survey work was carried out during September 1995. Soils were examined by hand auger borings at 100m intervals predetermined by the National Grid. Land quality was assessed using the methods described in "Agricultural Land Classification of England and Wales: *Revised guidelines and criteria for grading the quality of agricultural land*" MAFF (1988). Land adjoining the north-west of the site has been the subject of a previous survey by ADAS Leeds Statutory Group as part of Berwick Borough Wide Local Plan (Site 10; ADAS Ref. 22/95).

1.2 Land Use and Relief

At the time of the survey, all land on the site was in agricultural use. Most of this was for arable crops, but a small area in the east was under permanent grass.

Site altitude varies from 10m AOD in the north to 20m AOD on the eastern site boundary. The land is level to gently sloping (0-2°) with a variable, predominantly westerly aspect.

Parts of the site have suffered subsidence resulting from mining activity. However, this does not prevent cultivation of arable crops and does not limit ALC Grade on the site.

1.3 Climate

Grid Reference	: NU214320
Altitude (m)	: 15
Accumulated Temperature above 0°C (January - June)	: 1318 day °C
Average Annual Rainfall (mm)	: 631
Climatic Grade	: 1
Field Capacity Days	: 157
Moisture Deficit (mm) Wheat	: 99
Moisture Deficit (mm) Potatoes	: 87

The agro-meteorological data above do not exert an overriding climatic limitation on Agricultural Land Classification (ALC) grade on the site. However, the coastal location of the site exposes it to strong easterly winds which may damage crops and reduce the growing season. ALC of the site is, therefore, restricted to Grade 2 by exposure.

1.4 Geology, Soils and Drainage

The site is underlain by Lower Carboniferous Limestone. Most of the site is covered by thick drift deposits of glacial till (boulder clay), with blown sand covering a narrow strip in the east. In the south-west of the site, drift cover is thin or absent.

Two main soil types occur across the site. The first consists of stoneless or very slightly stony (up to 2% total stones) medium textured topsoils and subsoils. In places, heavy textured subsoils which are gleyed and slowly permeable occur below 45cm depth. These soils are well drained to imperfectly drained (Wetness Class I to III) depending on the depth of gleyed and slowly permeable layers. Solid rock lies at within 100cm depth in the south-west of the site. These soils correspond to the Nercwys Association as mapped by the Soil Survey and Land Research Centre.

The second soil type occurs in the east of the site where soils are formed in blown sand. Soil profiles are well drained (Wetness Class I) and generally consist of medium to light textured topsoils and upper subsoils over sandy lower subsoils.

2. AGRICULTURAL LAND CLASSIFICATION

The ALC grades occurring on this site are as follows:

<u>Grade/Subgrade</u>	<u>Hectares</u>	<u>Percentage of Total Area</u>
1		
2	14.3	45.8
3a	16.9	54.2
3b		
4		
5		
(Sub total)	(31.2)	(100)
Urban		
Non Agricultural		
Woodland - Farm		
- Commercial		
Agricultural Buildings		
Open Water		
Land not surveyed		
(Sub total)		
 TOTAL	 <u>31.2</u>	 <u>100</u>

2.1 Grade 2

Grade 2 land occurs in two areas. The largest runs in a band east to west across the centre of the site. The smaller area lies in the south-eastern corner of the site. Two main soil types occur within this grade. The first consists of medium textured topsoils and upper subsoils (medium clay loam, sandy clay loam) over gleyed, heavy textured subsoils (heavy clay loam or clay) which are slowly permeable at about 55cm to 80 cm depth. These soils are moderately well drained and the land is restricted to Grade 2 by soil wetness and climatic exposure (see 1.3 above). The second soil type consists of well drained medium textured soils (Wetness Class I) which lack slowly permeable layers within 80cm depth. This land is limited to Grade 2 by climatic exposure (see 1.3 above). Some soil profiles within the Grade 2 areas have light or very light textured lower subsoils (loamy medium sand or sand). These soils are well drained (Wetness Class I) and slightly susceptible to drought. This land is limited to Grade 2 by droughtiness and climatic exposure (see 1.3 above).

2.2 Subgrade 3a

The remainder of the site falls within Subgrade 3a. Most of the Subgrade 3a area comprises imperfectly drained soils falling within Wetness Class III. These soils consist of medium textured medium clay loam or sandy clay loam topsoils and upper subsoils over heavy textured (heavy clay loam or clay) subsoils which are slowly permeable at about 40cm to 55cm depth. This land is limited to Subgrade 3a by soil wetness. Soils in the north-east of the site are lighter textured, with loamy medium sand topsoils and upper subsoils overlying medium sand lower subsoils. These soils are well drained (Wetness Class I) and moderately susceptible to drought. This land is limited to Subgrade 3a by droughtiness. Soils in the south-west of the site are generally medium textured, with medium clay loam or sandy clay loam topsoils and subsoils. Solid rock occurs within 1 metre depth and these soils suffer a moderate susceptibility to drought. This land is also limited to Subgrade 3a by soil droughtiness.

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