



Ministry of
Agriculture
Fisheries
and Food

AGRICULTURAL LAND CLASSIFICATION
EUROSCOPE DEVELOPMENTS LTD
DEVELOPMENT WEST OF A1
APRIL 1994

ADAS
Leeds Statutory Group

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SUMMARY

A detailed Agricultural Land Classification survey of 164.9ha of land south of the English/Scottish border, to the west of the A1 in Northumberland was carried out in April 1994. The site was the subject of a reconnaissance survey by ADAS in February 1994.

163.5 ha of land on the site is in agricultural use of which 11 ha is of Grade 2 quality. Soils are deep, well drained, medium textured and slightly stony. This land is restricted to Grade 2 by a soil wetness and slight climatic limitation.

50 ha of the site falls within Subgrade 3a. Soils are deep, well drained, medium textured and slightly stony. This land is limited to Subgrade 3a by a moderate climatic limitation and topsoil stoniness.

87 ha of the site falls within Subgrade 3b. Some of this land lies above 170m AOD or is strongly sloping (8-11°). Soils are medium textured and moderately stony. This land is restricted to Subgrade 3b by climate, slope and topsoil stoniness.

Grade 4 land covers 6 ha of the site. Some of this land is moderately steeply sloping and is limited to Grade 4 by slope. The remainder is a restored former reservoir land subject to a severe pattern restriction imposed by complicated micro relief and localised poor drainage.

10 ha of the site falls within Grade 5. This consists of steeply to very steeply sloping land subject to a severe slope limitation.

0.5 hectares of new farm access road are classed as Urban.

The remaining 0.9ha of the site is occupied by New East Farm and is classed as Agricultural Buildings.

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1. AGRICULTURAL LAND CLASSIFICATION

AGRICULTURAL LAND CLASSIFICATION REPORT: LAND WEST OF A1 ON
ENGLISH/SCOTTISH BORDER: PROPOSED LEISURE COMPLEX

1. INTRODUCTION AND SITE CHARACTERISTICS

1.1 Location and Survey Methods

The site lies to the west of the A1 Trunk Road, south of the English/Scottish border, around National Grid Reference NT 969562. A reconnaissance Agricultural Land Classification (ALC) survey was initially carried out by ADAS in February 1994 when soils were examined by hand auger borings at a density of one every four hectares. This was followed up in April 1994 with a detailed ALC survey when extra land quality assessments were made giving a final survey density of one per hectare at points predetermined by the National Grid. Six profile pits were dug across the site to study the soil in more detail and topsoils were sieved wherever stoniness was likely to be limiting. 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).

1.2 Geology and Relief

Most of the site is underlain by Silurian shales, mudstones and sandstones of the Llandovery series. Devonian sandstones and Carboniferous limestones lie in the east of the site. The whole site is covered by reddish drift, mostly boulder clay and gravelly glaciofluvial deposits.

The site lies between 80m and 185m AOD. The pattern of relief is irregular and slope constitutes a limitation on land quality over parts of the site. Strongly sloping (8-11°) land in the east and west of the site is restricted to Subgrade 3b by slope. Two small areas of moderately steeply sloping land (12-15°) in the east and west of the site are limited to Grade 4 by slope. Land on the sides of the valley to the south west of New East Farm is steeply to very steeply sloping (20-30°) and limited to Grade 5 by slope.

1.3 Land Use

Much of the site is in arable use mainly growing cereals and potatoes. Outdoor pigs are kept on the extreme west of the site. The steep valley south west of New East Farm is used for rough grazing and the remaining land is either set-aside or grassland.

1.4 Climate

The relevant climatic data for the site are as follows:

Grid Reference	: NT 969562
Altitude (m)	: 140
Accumulated Temperature above 0°C (January-June)	: 1169 day°C
Average Annual Rainfall (mm)	: 720
Climatic Grade	: 3a
Field Capacity Days	: 180
Moisture Deficit (mm) Wheat	: 80
Moisture Deficit (mm) Potatoes	: 62

Climatic parameters vary significantly across the site due to the range of altitude. Climate imposes a moderate to severe limitation on land quality. The 120m contour separates level and gently sloping land restricted to Grade 2 by climate from that limited to Subgrade 3a. Land above 170m is further restricted to Subgrade 3b by climate.

Towards New East Farm the site lies only about 1 km from the sea, wind speeds are therefore likely to be above average. However evidence received from resident farmers about cropping, the lack of any sign of wind pruned trees and the shelter provided by the slightly higher land to the east, suggest the level and gently sloping land adjacent to the A1 will not merit downgrading below Grade 2 on exposure. Elsewhere exposure is not more severe than the overall climatic limitations of Subgrade 3a and above 170m 3b.

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	10.7	6.5
3a	49.9	30.3
3b	86.7	52.6
4	6.2	3.8
5	10.0	6.0
(Sub total)	(163.5)	(99.2)
Urban	0.5	0.3
Non Agricultural Woodland - Farm - Commercial		
Agricultural Buildings	0.9	0.5
Open Water		
Land not surveyed		
(Sub total)	(1.4)	(0.8)
TOTAL	164.9	100

2.1 Grade 2

Grade 2 land lies along the eastern boundary of the site. Soil profiles are deep and well drained, falling within Wetness Class I. Slightly stony (6-9% total) sandy clay loam or medium clay loam topsoils overlie similar upper subsoils and slightly stony (10-14% total stones) medium sandy loam or fine sandy loam lower subsoils. This land is restricted to Grade 2 by soil wetness and a slight climatic limitation.

2.2 Subgrade 3a

Subgrade 3a land lies to the north and south of the site. Soil profiles are deep and well drained, falling within Wetness Class I. Slightly stony (6-14% total) sandy clay loam

medium sandy loam or medium clay loam topsoils overlie similar textured very stony subsoils. This land is limited to Subgrade 3a by a moderate climatic restriction and topsoil stoniness.

2.3 Subgrade 3b

Subgrade 3b land extends from the higher altitude land in the west, through the centre of the site, to a strongly sloping area adjacent to the Grade 2 land in the east of the site. Other areas of Subgrade 3b land occur in the centre and south east of the site. Soil profiles are well drained, falling within Wetness Class I. Moderately stony (18-25% total) sandy clay loam or medium clay loam topsoils overlie similar, very stony subsoils. Land above 170m AOD is restricted to Subgrade 3b by a severe climatic limitation. The remaining land within this subgrade is limited by slope and complex micro relief or topsoil stoniness.

2.4 Grade 4

There are two areas of Grade 4 land on the site. One area to the east is moderately steeply sloping (12-14°) and limited to this grade by slope. A second area of Grade 4 land is on the site of a former reservoir which has been filled with clay, boulders and other debris. A severe soil pattern restriction limits this land to Grade 4.

2.5 Grade 5

Grade 5 land occurs in the valley which extends to the south and west of New East Farm. Most of this land is steeply to very steeply sloping (20-30°) and restricted to this grade by slope.

2.6 Agricultural Buildings

This includes New East Farm in the east of the site.

2.7 Urban

This includes a recently constructed access road to New East Farm

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MAP