

AGRICULTURAL LAND CLASSIFICATION  
SUNDERLAND UNITARY DEVELOPMENT PLAN  
LAND AT DOXFORD PARK SOUTH,  
SUNDERLAND, TYNE AND WEAR  
APRIL 1993

ADAS  
Leeds Statutory Group

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## SUMMARY

An Agricultural Land Classification survey of 62.5 ha of land at Doxford Park, Sunderland was carried out in March 1993.

Almost 42 ha of land was in agricultural use, of which 19.2 ha falls in Grade 2. Soil profiles are well to moderately well drained consisting in most cases of medium clay loam topsoils and subsoils. The ALC grade of this land is limited by overall climate and, in places, by soil wetness, topsoil stoniness or slight soil droughtiness.

Subgrade 3a land covers 14.3ha. Soil profiles are typically imperfectly drained, consisting of medium clay loam topsoils and upper subsoils overlying slowly permeable heavy clay loam lower subsoils. Soil wetness and, in places, topsoil stoniness, restrict this land to Subgrade 3a.

Subgrade 3b land covers a total of 8.4 ha. Profiles are either poorly drained (with medium clay loam topsoils overlying slowly permeable heavy clay loam subsoils) or well drained (with slightly to moderately stony medium clay loam topsoils directly overlying limestone bedrock). The former is limited to Subgrade 3b by soil wetness and the latter is limited by soil droughtiness and, in places, topsoil stoniness.

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1. AGRICULTURAL LAND CLASSIFICATION

AGRICULTURAL LAND CLASSIFICATION REPORT: SUNDERLAND UNITARY  
DEVELOPMENT PLAN, DOXFORD PARK SOUTH, SUNDERLAND

1. INTRODUCTION AND SITE CHARACTERISTICS

1.1 Location and Survey Methods

The site lies approximately 5 Km south west of Sunderland City Centre, on the east side of the A19 trunk road. It is centred on Grid Reference NZ374518. Survey work was carried out in March 1993 when soils were examined by hand auger borings at 100m intervals predetermined by the National Grid. Two soil inspection pits were dug to allow the assessment of subsoil structure and to allow samples to be taken for laboratory analysis. 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 Land Use and Relief

At the time of survey most of the site was under cereals or had been sown with ley grass. The remainder consisted of a length of disused railway (in the west of the site), a shelter belt (in the south east) and park land (in the north east). The site lies at an average altitude of approximately 120m AOD and is gently to moderately sloping (typically 1-4°) with a northerly aspect.

1.3 Climate

Grid Reference	: NZ 374518
Altitude (m)	: 120
Accumulated Temperature above 0°C (January- June)	: 1228 day°C
Average Annual Rainfall	: 670
Climatic Grade	: 2
Field Capacity Days	: 163
Moisture Deficit (mm) Wheat	: 87
Moisture Deficit (mm) Potatoes	: 72

#### 1.4 Geology, Soils and Drainage

The site is underlain by Middle Magnesian Limestone which occurs within 1.00m of the soil surface in the west of the site. The remainder of the site is covered by deposits of boulder clay.

The soils in the north of the site are generally well drained or moderately well drained (falling in Wetness Classes I or II) and typically consist of medium clay loam topsoils overlying similarly textured subsoils. The soils in the south of the site are generally imperfectly drained (Wetness Class III) but are poorly drained (Wetness Class IV) in places. Profiles in this part of the site typically consist of medium clay loam topsoils and upper subsoils overlying slowly permeable sandy clay loam or heavy clay loam lower subsoils.

Most of the soils on the site correspond to the Nercwys Series as mapped by the Soil Survey and Land Research Centre.

## 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	19.2	30.7
3a	14.3	22.9
3b	8.4	13.4
4		
5		
(Sub total)	(41.9)	(67.0)
Urban	0.6	1.0
Non Agricultural	16.6	26.6
Woodland - Farm	3.4	5.4
- Commercial		
Agricultural Buildings		
Open Water		
Land not surveyed		
(Sub total)	(20.6)	(33.0)
	_____	_____
TOTAL	62.5	100
	_____	_____

## 2.1 Grade 2

Grade 2 land occurs in a band running from the north west of the site to the south east. Profiles are well drained or moderately well drained (falling in Wetness Classes I or II) and typically consist of medium clay loam topsoils overlying similarly textured subsoils. Slowly permeable sandy clay loam or heavy clay loam lower subsoils occur in places at between 60cm and 80cm depth. Both topsoils and subsoils are very slightly to slightly stony, generally containing 3-8%, small to large hard stones, soft limestones and sandstones.

This land is limited to Grade 2 by the overall climate of the area and, in places, by topsoil stoniness, soil wetness or slight soil droughtiness.

## 2.2 Subgrade 3a

Land in this subgrade occurs in the south of the site. Profiles are generally imperfectly drained (falling in Wetness Class III) and typically consist of medium clay loam topsoils and upper subsoils overlying slowly permeable heavy clay loam lower subsoils at around 60cm depth. Topsoils and subsoils are very slightly to slightly stony, containing 4-12% small to large hard stones, soft limestones and sandstones in most cases.

This land is limited to Subgrade 3a by soil wetness limitations and, in places, by topsoil stoniness.

## 2.3 Subgrade 3b

Subgrade 3b land occurs in two separate areas, one in the east of the site and one in the west. Profiles in the east and in the south western corner are poorly drained (falling in Wetness Class IV) and generally consist of medium clay loam topsoils overlying slowly permeable heavy clay loam subsoils at around 35cm depth. Soil wetness and workability restrictions are the factors limiting the ALC grade of the land in this case.

In the north west there is an outcrop of limestone where the overlying soils are thin (typically 30-40cm) and slightly to moderately stony (containing up to 20% small to very large limestones). Profiles are well drained, falling in Wetness Class I, but soil droughtiness and topsoil stoniness restrict the land to Subgrade 3b.

2.4 Urban

This refers to a disused railway in the west of the site.

2.4 Non Agricultural

This category includes an area of parkland in the north east.

2.5 Farm Woodland

This category includes a shelter belt in the south of the site.

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MAP