

AGRICULTURAL LAND CLASSIFICATION
DARLINGTON LOCAL PLAN
SITE 6, GREAT BURDON
APRIL 1993

ADAS
Leeds Statutory Group

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SUMMARY

An Agricultural Land Classification survey of 106 ha of land at Great Burdon near Darlington was carried out in April 1993.

101.0 ha of this land was in agricultural use of which 4.7 ha falls within Grade 2. Soils in this grade are imperfectly drained (Wetness Class III) and consist of medium sandy loam and loamy medium sand topsoils over gleyed medium sandy loam upper subsoils and heavy clay loam lower subsoils. They are limited to Grade 2 by slight wetness.

Subgrade 3a land covers 34.3ha. Soils in this subgrade are either well drained (Wetness Class I_ or imperfectly drained (Wetness Class III). Well drained profiles consist of medium sandy loam and loamy medium sand topsoils overlying loamy medium sand and medium sand subsoils. These soils are limited to Subgrade 3a by droughtiness. Imperfectly drained profiles consist of medium clay loam topsoils over gleyed permeable sandy clay loam and heavy clay loam upper subsoils which pass into slowly permeable heavy clay loam and clay subsoils. These soils are limited to Subgrade 3b by wetness.

Subgrade 3b land covers 62.0 ha. Soils in this subgrade consist of medium and heavy clay loam or silty clay loam topsoils over poorly drained (Wetness Class IV) slowly permeable heavy clay loam, silty clay loam or clay subsoils. These soils are limited to Subgrade 3b by wetness and workability problems.

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1. AGRICULTURAL LAND CLASSIFICATION

AGRICULTURAL LAND CLASSIFICATION REPORT: DARLINGTON LOCAL PLAN,
SITE 6, GREAT BURDON

1. INTRODUCTION AND SITE CHARACTERISTICS

1.1 Location and Survey Methods

The site is located 3 km north east of Darlington town centre around National Grid Reference NZ 321159. Survey work was carried out in April 1993 when soils were examined by hand auger borings at a density of one per hectare at points predetermined by the National Grid. Land quality was assessed using the methods described in "Agricultural Land Classification of England and Wales: Revised criteria for grading the quality of agricultural land". (MAFF 1988).

1.2 Land Use and Relief

At the time of the survey 95% of the site was in agricultural production consisting of a mixture of cereals and permanent pasture. The remainder of the site consisted of Non-Agricultural land (scrubland) and Urban land (hard road). Site altitude varies from 45m AOD to 65m AOD and the area is level to moderately sloping.

1.3 Climate

Grid Reference	: NZ 321159
Altitude (m)	: 50
Accumulated Temperature above 0°C (January-June)	: 1324 day°C
Average Annual Rainfall (mm)	: 625
Climatic Grade	: 1
Field Capacity Days	: 150
Moisture Deficit (mm) Wheat	: 99
Moisture Deficit (mm) Potatoes	: 87

1.4 Geology, Soils and Drainage

The site is underlain by Permian Upper Marl. Drift cover is varied, consisting of till, glacial sand and gravel, river terrace alluvium and lake deposits. Soil drainage varies from well drained (Wetness Class I) through imperfectly drained (Wetness Class III) to poorly drained (Wetness Class IV). Well drained soils consist of medium sandy loam or loamy medium sand topsoils over medium sandy loam, loamy medium sand and medium sand subsoils.

Imperfectly drained soils consist of medium sandy loam and medium clay loam topsoils and sandy clay loam, heavy clay loam and slowly permeable clay subsoils. Poorly drained profiles are formed of medium and heavy clay loam topsoils over heavy clay loam and clay subsoils which are slowly permeable at less than 40cm from the surface.

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	4.7	4.4
3a	34.3	32.4
3b	62.0	58.5
4		
5		
(Sub Total)	(101.0)	(95.3)
Urban	0.6	0.6
Non Agricultural	4.4	4.1
Woodland - Farm		
- Commercial		
Agricultural Buildings		
Open Water		
Land not surveyed		
(Sub total)	(5.0)	(4.7)
	<hr/>	<hr/>
TOTAL	106.0	100
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2.1 Grade 2

Grade 2 land occurs in the northern part of the site. Soils consist of stoneless, imperfectly drained medium sandy loam and loamy medium sand topsoils over permeable gleyed medium sandy loam upper subsoils and gleyed slowly permeable heavy clay loam lower subsoils. They are limited to Grade 2 by slight soil wetness.

2.2 Subgrade 3a

Subgrade 3a land occurs in the central northern and south western parts of the site. Soils consist of stoneless to very slightly stony well drained (Wetness Class I) and imperfectly drained (Wetness Class III) profiles. Well drained profiles are formed of stoneless to very slightly stony loamy medium sand and medium sandy loam topsoils overlying loamy medium sand and medium sand subsoils with occasionally sandy clay loam at depth. These soils are limited to Grade 3a by droughtiness. Imperfectly drained profiles consist of stoneless to very slightly stony medium clay loam topsoils over very slightly stony permeable gleyed sandy clay loam and heavy clay loam upper subsoils and gleyed slowly permeable heavy clay loam and clay lower subsoils. They are limited to Subgrade 3a by wetness.

2.3 Subgrade 3b

Subgrade 3b land occurs widely in the eastern part of the site and on a small area of alluvial soils in the west. Soils in the east consist of stoneless to very slightly stony poorly drained (Wetness Class IV) medium and heavy clay loam topsoils over gleyed slowly permeable heavy clay loam and clay subsoils. Soils of this type are limited to Subgrade 3b by wetness. Soils in the western alluvial area consist of stoneless medium and heavy silty clay loam topsoils over poorly drained (Wetness Class IV) slowly permeable heavy silty clay loam and silty clay subsoils. They are limited to Subgrade 3b by wetness and workability problems.

2.4 Non Agricultural

Non-agricultural land occurs in the south and consists of scrubland.

2.5 Urban

This consists of a hard surface road leading south from the Great Burdon Farm buildings.

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MAP