



AGRICULTURAL LAND CLASSIFICATION
DARLINGTON BC LOCAL PLAN
ALC OF OBJECTORS' SITES
JULY 1995

ADAS
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SUMMARY

Detailed Agricultural Land Classification surveys of five sites around Darlington ("Darlington BC Local Plan - ALC of Objectors' Sites") were carried out in July 1995. The following table summarises the grades for each site.

Site	Grade Areas (ha)			Other Land (ha)	Total (ha)
	Grade 2	Subgrade 3a	Subgrade 3b		
2			2.1		2.1
10			10.4		10.4
11			4.4		4.4
15	6.7	8.4	70.0	1.2	86.3
16	3.6			0.4	4.0

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AGRICULTURAL LAND CLASSIFICATION REPORT FOR DARLINGTON BC LOCAL
PLAN - ALC OF OBJECTORS' SITES

1. INTRODUCTION

1.1 Location and Survey Methods

Seven sites around Darlington were surveyed in detail in July 1995. Soils were examined by hand auger at 100m intervals predetermined by the National Grid. Soil profile pits were dug to examine the soil in greater detail. All land quality assessments were made 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).

2.1 SITE 2, MIDDLETON LANE, MIDDLETON ST GEORGE

2.1.1 Location

This site lies about ½km south-west of Dinsdale Station and covers 2.1ha.

2.1.2 Land Use and Relief

At the time of survey all of the land was under recently cut hay.

Site altitude varies from 45m AOD in the west to 39m AOD in the east, and the land is gently sloping (2°) with an easterly aspect.

2.1.3 Climate

Grid Reference	: NZ 344 130
Altitude (m)	: 40
Accumulated Temperature above 0°C (January - June)	: 1337 day °C
Average Annual Rainfall (mm)	: 600
Climatic Grade	: 1
Field Capacity Days	: 142
Moisture Deficit (mm) Wheat	: 100
Moisture Deficit (mm) Potatoes	: 90

2.1.4 Geology, Soils and Drainage

This site is underlain by Permian Upper Marls over which lie deposits of till.

The soils are poorly drained, falling in Wetness Class IV, with medium clay loam or heavy clay loam topsoils overlying gleyed and slowly permeable heavy clay loam or clay subsoils at around 30cm depth.

The soils on the site correspond to the Crewe Association as mapped by the Soil Survey and Land Research Centre.

2.1.5 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		
3a		
3b	2.1	100.0
4		
5		
(Sub total)	(2.1)	(100.0)
Urban		
Non Agricultural		
Woodland - Farm		
- Commercial		
Agricultural Buildings		
Open Water		
Land not surveyed		
(Sub total)	_____	_____
TOTAL	2.1	100
	_____	_____

2.1.6 Subgrade 3b

All of the site falls in Subgrade 3b. The soils are poorly drained (Wetness Class IV) with medium clay loam or heavy clay loam topsoils overlying gleyed and slowly permeable heavy clay loam or clay subsoils at around 30cm depth. Soil wetness and topsoil workability limitations restrict this land to Subgrade 3b.

2.2 SITE 10, SOUTH OF BYPASS, MIDDLETON ST GEORGE

2.2.1 Location

Site 10 lies approximately 1km north of Dinsdale Station, between the bypass and the disused railway line. It covers 10.4ha.

2.2.2 Land Use and Relief

At the time of survey all of the site was under grass, with a small area in the north-west having been recently reseeded.

Site altitude varies from 50m AOD in the north-west to 40m AOD in the south-east, and the land is level to gently sloping (1-2°) with a south-easterly aspect.

2.2.3 Climate

Grid Reference	: NZ 344 142
Altitude (m)	: 46
Accumulated Temperature above 0°C (January - June)	: 1329 day °C
Average Annual Rainfall (mm)	: 595
Climatic Grade	: 1
Field Capacity Days	: 140
Moisture Deficit (mm) Wheat	: 100
Moisture Deficit (mm) Potatoes	: 89

2.2.4 Geology, Soils and Drainage

Deposits of till on this site overlie Upper Permian Marls. The soils are poorly drained, falling in Wetness Class IV, with medium or heavy clay loam topsoils overlying gleyed and slowly permeable heavy clay loam or clay subsoils.

The soils on the site correspond to the Crewe Association as mapped by the Soil Survey and Land Research Centre.

2.2.5 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		
3a		
3b	10.4	100.0
4		
5		
(Sub total)	(10.4)	(100.0)
Urban		
Non Agricultural		
Woodland - Farm		
- Commercial		
Agricultural Buildings		
Open Water		
Land not surveyed		
(Sub total)	_____	_____
TOTAL	10.4	100
	_____	_____

2.2.6 Subgrade 3b

All of this site falls in Subgrade 3b. The soils are poorly drained, falling in Wetness Class IV, with medium or heavy clay loam topsoils overlying gleyed and slowly permeable clay subsoils at between 20cm and 30cm depth. Soil wetness is the factor which limits the land to Subgrade 3b.

2.3 SITE 11, PALM BRIDGE, MIDDLETON ST GEORGE

2.3.1 Location

Site 11 lies approximately 1½km north of Dinsdale station and covers 4.4ha.

2.3.2 Land Use and Relief

At the time of survey most of the site was under wheat while the remainder, in the east, was under ley grass.

Site altitude varies from 53m AOD in the west to 43m AOD in the east, and the land is gently sloping (2-3°) with an easterly aspect.

2.3.3 Climate

Grid Reference	: NZ 337 144
Altitude (m)	: 50
Accumulated Temperature above 0°C (January - June)	: 1325day °C
Average Annual Rainfall (mm)	: 604
Climatic Grade	: 1
Field Capacity Days	: 142
Moisture Deficit (mm) Wheat	: 99
Moisture Deficit (mm) Potatoes	: 88

2.3.4 Geology, Soils and Drainage

Upper Permian Marls are overlain by deep deposits of till on this site.

The soils are generally poorly drained, falling into Wetness Class IV, with medium or heavy clay loam topsoils overlying gleyed and slowly permeable heavy clay loam or clay subsoils.

The soils on this site correspond to the Crewe Association as mapped by the Soil Survey and Land Research Centre.

2.3.5 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		
3a		
3b	4.4	100.0
4		
5		
(Sub total)	(4.4)	(100.0)
Urban		
Non Agricultural		
Woodland - Farm		
- Commercial		
Agricultural Buildings		
Open Water		
Land not surveyed		
(Sub total)	_____	_____
TOTAL	4.4	100
	_____	_____

2.3.6 Subgrade 3b

All of Site 11 has been mapped as Subgrade 3b. The soils are poorly drained, falling in Wetness Class IV, and consist of medium or heavy clay loam topsoils overlying gleyed and slowly permeable heavy clay loam or clay subsoils at between 20cm and 35cm depth. Soil wetness is the factor limiting this land to Subgrade 3b.

2.4 SITE 15, MOUNT PLEASANT/BOTTOM HOUSE, FAVERDALE

2.4.1 Location

The centre of this site lies approximately 4km north-west of Darlington town centre and it covers a total area of 86.3ha.

2.4.2 Land Use and Relief

Over 98% of this site was in agricultural use at the time of survey, mostly under cereals, but with smaller areas of grassland, oilseed rape and set-aside. The remaining area consists of a small area of Non Agricultural land and Agricultural Buildings at Mount Pleasant Farm.

Site altitude varies between 69m AOD in the north and 61m AOD in the centre and south. The land is level to gently sloping (0-3°) with variable aspect.

2.4.3 Climate

Grid Reference	: NZ 263 171
Altitude (m)	: 65
Accumulated Temperature above 0°C (January - June)	: 1308 day °C
Average Annual Rainfall (mm)	: 650
Climatic Grade	: 2
Field Capacity Days	: 161
Moisture Deficit (mm) Wheat	: 97
Moisture Deficit (mm) Potatoes	: 84

2.4.4 Geology, Soils and Drainage

The area is underlain by Middle Magnesian Limestone which is overlain by till deposits.

The soils on the site are very variable, and most profiles fall in Wetness Classes II to IV (moderately well to poorly drained). In most cases medium clay loam topsoils overlie medium clay loam, sandy clay loam, heavy clay loam or clay subsoils.

The soils on the site correspond to the Dunkeswick Association as mapped by the Soil Survey and Land Research Centre.

2.4.5 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	6.7	7.8
3a	8.4	9.7
3b	70.0	81.1
4		
5		
(Sub total)	(85.1)	(98.6)
Urban		
Non Agricultural	0.7	0.8
Woodland - Farm		
- Commercial		
Agricultural Buildings	0.5	0.6
Open Water		
Land not surveyed		
(Sub total)	<u>(1.2)</u>	<u>(1.4)</u>
TOTAL	<u>86.3</u>	<u>100.0</u>

2.4.6 Grade 2

Two areas of Grade 2 land are found in the north-west of the site. The soils in these areas are typically well or moderately well drained, falling in Wetness Classes I and II. Medium clay loam topsoils overlie medium or heavy clay loam upper subsoils and sandy clay loam, heavy clay loam or clay lower subsoils. Where they occur, slowly permeable layers typically begin at around 60cm depth. The ALC grade of this land is limited by slight soil wetness and by the overall climate of the area.

2.4.7 Subgrade 3a

Three areas of Subgrade 3a land have been mapped in the south of the site. The soils are typically imperfectly drained (Wetness Class III), with medium clay loam topsoils over medium clay loam or sandy clay loam upper subsoils and heavy clay loam or clay lower subsoils. Most profiles are gleyed within 40cm depth, with slowly permeable layers beginning at around 50cm depth. Soil wetness is the factor restricting this land to Subgrade 3a.

2.4.8 Subgrade 3b

Most of the land falls in this subgrade. The soils are generally poorly drained (Wetness Class IV), with medium clay loam or heavy clay loam topsoils overlying gleyed and slowly

permeable heavy clay loam or clay subsoils at between 30cm and 45cm depth. Although lighter-textured subsoil horizons (sandy loam or sandy clay loam) occur in some places, it is soil wetness which restricts this land to Subgrade 3b.

2.4.9 Non Agricultural

A small area of poorly drained Non Agricultural land occurs in the south.

2.4.10 Agricultural Buildings

Agricultural Buildings occur at Mount Pleasant Farm, in the south of the site.

2.5 SITE 16, CONISCLIFFE ROAD, DARLINGTON

2.5.1 Location

This site lies about 4km west-south-west of Darlington town centre, on the north bank of the River Tees. It covers a total area of 4ha.

2.5.2 Land Use and Relief

At the time of survey, 90% of this site was under permanent grass and 10% consisted of woodland alongside the River Tees.

The site varies from 49m AOD in the north-west to 40m AOD in the south-east, and the land is gently sloping (approximately 2°) with a south-easterly aspect.

2.5.3 Climate

Grid Reference	: NZ 252 140
Altitude (m)	: 43
Accumulated Temperature above 0°C (January - June)	: 1335 day °C
Average Annual Rainfall (mm)	: 626
Climatic Grade	: I
Field Capacity Days	: 156
Moisture Deficit (mm) Wheat	: 101
Moisture Deficit (mm) Potatoes	: 90

2.5.4 Geology, Soils and Drainage

Site 16 is underlain by Middle Magnesian Limestone over which lie river terrace deposits.

The soils are well drained (Wetness Class I) and consist of medium clay loam or medium sandy loam topsoils overlying medium sandy loam subsoils. The topsoils are slightly stony with around 10% total hard stones, while the subsoils are moderately stony, with around 30% total hard stones.

The soils on this site correspond to the Alun Association as mapped by the Soil Survey and Land Research Centre.

2.5.5 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	3.6	90.0
3a		
3b		
4		
5		
(Sub total)	(3.6)	(90.0)
Urban		
Non Agricultural		
Woodland	0.4	10.0
Agricultural Buildings		
Open Water		
Land not surveyed		
(Sub total)	<u>(0.4)</u>	<u>(10.0)</u>
TOTAL	<u>4.0</u>	<u>100.0</u>

2.5.6 Grade 2

All of the agricultural land on this site falls in Grade 2. The soils are formed in river terrace deposits and are well drained, falling in Wetness Class I, with medium sandy loam or medium clay loam topsoils overlying medium sandy loam subsoils. The topsoils are slightly stony, with around 8% hard stones greater than 2cm in size. The subsoils are moderately stony, with around 30% hard stones greater than 2mm. The ALC grade of this land is limited by slight soil droughtiness and topsoil stoniness.

2.5.7 Woodland

A belt of woodland occurs in the south of the site, on a steep bank alongside the River Tees.

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