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Ministry of
Agriculture
Fisheries
and Food

AGRICULTURAL LAND CLASSIFICATION
LEEDS UDP
PARLINGTON ESTATE
WEST YORKSHIRE
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ADAS
Leeds Statutory Group

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SUMMARY

An Agricultural Land Classification of 694 ha of land at Parlington was carried out in two main stages - detailed surveys over much of the south and west of the site were carried out in early 1992 and a reconnaissance survey of remaining areas was carried out in February 1994.

Grade 2 land covers a total of 71.3 ha. Profiles are well drained and very slightly to slightly stony, with either sandy loam topsoils over sandy loam or loamy sand subsoils, or medium clay loam or medium silty clay loam topsoils overlying similar or heavier-textured (heavy clay loam or heavy silty clay loam) subsoils. Weathering bedrock often occurs at between 70cm and 90cm depth and the land is limited to Grade 2 by slight soil droughtiness.

Subgrade 3a land covers a total of 273.3 ha. Profiles are well drained and very slightly to slightly stony. Most of this land consists of medium-textured topsoils and subsoils overlying weathering limestone at between 40cm and 60cm depth, although in the south-west sandy loam topsoils overlie loamy sand or sand subsoils which in turn overlie sandstone bedrock at between 50cm and 70cm depth. The ALC grade of this land is limited by moderate soil droughtiness and, in places, by soil depth.

A total of 151.3ha of land falls in Subgrade 3b. Generally soil profiles are well drained and slightly stony, with medium silty clay loam topsoils directly overlying weathering limestone at around 35cm depth. This land is limited to Subgrade 3b by severe soil droughtiness.
In the south-western corner of the site the Subgrade 3b land consists of poorly drained soils where medium or heavy clay loam topsoils overlie slowly permeable heavy clay loam or clay subsoils at around 35cm depth. This land is restricted to Subgrade 3b by soil wetness and workability limitations.

The remainder of the site consists of Urban land (1.1 ha), Non Agricultural Land (8.3 ha), Farm Woodland (184.9 ha) and Agricultural Buildings (3.7 ha).

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AGRICULTURAL LAND CLASSIFICATION REPORT FOR LEEDS UDP (PARLINGTON ESTATE)

1. INTRODUCTION AND SITE CHARACTERISTICS

1.1 Location and Survey Methods

The site lies approximately 13 Km east-north-east of Leeds city centre, between the villages of Aberford and Garforth. It is centred on Grid Reference SE420366 and covers a total area of 693.9 ha. Detailed ALC surveys had been carried out on much of the west and south of the site in March and April 1992 as part of Leeds UDP and a small area in the south-eastern corner, on the line of the proposed A1-M1 Link Road, was surveyed in August 1990. A reconnaissance survey of the remaining land was carried out in February 1994 when soils were examined by hand auger borings at 200m intervals predetermined by the National Grid. A total of six soil profile pits were dug in order to confirm depth to bedrock, to assess subsoil structure and to allow samples to be taken for laboratory analysis.

In all of the surveys 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).

Any minor differences between the maps produced as part of the previous surveys and the map included in this report are a function of the different mapping scale used.

1.2 Land Use and Relief

Approximately 71% of the site is in agricultural (mainly arable) use and farm woodland covers another 27%. The remainder of the site consists of small areas of Urban and Non Agricultural land, and Agricultural Buildings.

Site altitude varies between 55m AOD and 75m AOD and the land is generally gently to moderately sloping (2-5°) with variable aspect.

1.3 Climate

Grid Reference	: SE420366
Altitude (m)	: 70
Accumulated Temperature above 0°C (January-June)	: 1334 day°C
Average Annual Rainfall (mm)	: 681
Climatic Grade	: 1
Field Capacity Days	: 158
Moisture Deficit (mm) Wheat	: 96
Moisture Deficit (mm) Potatoes	: 85

1.4 Geology, Soils and Drainage

The north and east of the site are underlain by deposits of Lower Magnesian Limestone, and weathering bedrock usually occurs within one metre of the soil surface. With the exception of localised Head deposits and small areas of boulder clay, there are no drift deposits over the limestone and the soils are formed in weathering bedrock.

The south-west of the site is underlain by Carboniferous Coal Measures consisting of interbedded sandstones and shales. Weathering sandstone bedrock frequently occurs within one metre of the soil surface and, again, with the exception of Head deposits and small areas of boulder clay, there are no drift deposits on this part of the site.

Where the soils have formed in weathering sandstone or limestone profiles are well drained (falling in Wetness Class I) with light-textured topsoils overlying very light-textured subsoils (in the case of the soils over sandstone) or medium-textured topsoils overlying medium to heavy textured subsoils (in the case of the soils over limestone).

Where the soils have formed in weathering shale profiles are generally poorly drained (falling in Wetness Class IV) with medium to heavy-textured topsoils overlying slowly permeable heavy-textured subsoils.

The principal soils on this site correspond to the Aberford, Dale and Rivington I Associations as mapped by the Soil Survey and Land Research Centre.

2. AGRICULTURAL LAND CLASSIFICATION

The ALC grades occurring on this site are as follows:

Grade/Subgrade	Hectares	Percentage of Total Area
1		
2	71.3	10.3
3a	273.3	39.4
3b	151.3	21.8
4		
5		
(Sub total)	(495.9)	(71.5)
Urban	1.1	0.2
Non Agricultural	8.3	1.2
Woodland	184.9	26.6
Agricultural Buildings	3.7	0.5
Open Water		
Land not surveyed		
(Sub total)	(198.0)	(28.5)
TOTAL	693.9	100

2.1 Grade 2

Grade 2 land occurs in a number of areas in the south of the site and in one area in the north-east. Profiles are well drained (Wetness Class I) with sandy loam topsoils overlying sandy loam or loamy sand subsoils in the south-west of the site, and medium clay loam or medium silty clay loam topsoils overlying medium or heavy clay loam or medium or heavy silty clay loam subsoils elsewhere. Both topsoils and subsoils are very slightly to slightly stony, containing 4-8% sandstones or limestones in most cases, and weathering limestone bedrock often occurs at between 70cm and 90cm depth. The ALC grade of this land is limited by slight soil droughtiness.

2.2 Subgrade 3a

Approximately 39% of the agricultural land on the site falls in Subgrade 3a. Most of the land in this subgrade consists of well drained (Wetness Class I) soils with medium silty clay loam topsoils and subsoils overlying weathering limestone bedrock at between 40cm and 60cm depth. Both topsoils and subsoils are very slightly to slightly stony, containing between 5% and 10% limestones in most cases, and the ALC grade of the land is limited by moderate soil droughtiness and, in places, by soil depth.

In the south-western corner of the site the soils have formed in weathering sandstone. Again, profiles are well drained (Wetness Class I) but in this case medium sandy loam topsoils overlie loamy medium sand or medium sand subsoils. Weathering sandstone bedrock typically occurs at between 50cm and 70cm depth and this area of land is also limited to Subgrade 3a by soil droughtiness.

2.2 Subgrade 3b

Subgrade 3b land occurs in a number of areas across the site. In most cases soil profiles are well drained (Wetness Class I) with medium clay loam or medium silty clay loam topsoils directly overlying weathering limestone bedrock at around 35cm depth. The soils are slightly stony, containing between 6% and 12% limestones in most cases, and the ALC grade of the land is limited by severe soil droughtiness.

In the south-western corner of the site the soils are poorly drained (Wetness Class IV) with medium or heavy clay loam topsoils overlying slowly permeable heavy clay loam or

clay subsoils at around 35cm depth. In this case the land is limited to Subgrade 3b by soil wetness and workability restrictions.

2.3 Urban

A small area of derelict land in the north-east of the site has been classified as Urban.

2.4 Non Agricultural

A number of small areas of Non Agricultural Land occur on the site, these being scrubland, parkland or playing fields.

2.5 Farm Woodland

A total of 185 ha of farm woodland occurs in a number of blocks across the site.

2.6 Agricultural Buildings

The farmhouses and outbuildings at Park House Farm (in the south of the site) and Home Farm (in the centre) fall within this category.

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Leeds Statutory Centre

MAP