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AGRICULTURAL LAND CLASSIFICATION
LEEDS UDP
WEST YORKSHIRE
TOPIC 546
NOVEMBER 1994

ADAS
Leeds Statutory Group
2 FCS 10354

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SUMMARY

A detailed Agricultural Land Classification of 14.7 ha of land between Topcliffe Lane, Morley and Junction 28 of the M62 was carried out in November 1994.

At the time of survey 86 % of the site was in agricultural use. 10.9 ha of this falls within Subgrade 3a and 1.8 ha within Subgrade 3b. Most soils within both subgrades consist of well drained fine sandy loam or sandy clay loam overlying medium silty clay loam or sandy clay loam subsoils followed at varying depths by weathering sandstone bedrock.

Droughtiness is the main limiting factor and restricts profiles to Subgrade 3a where sandstone occurs within about 50cm of the surface and Subgrade 3b where rock occurs at less than 40cm depth. In the southern part of the site adjoining the M62 there are also some heavier profiles containing gleyed slowly permeable silty clay subsoils. Here the land is limited to Subgrades 3a and 3b by soil wetness.

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AGRICULTURAL LAND CLASSIFICATION REPORT ON LAND BETWEEN TOPCLIFFE LAND, MORLEY AND JUNCTION 28 OF THE M62 MOTORWAY (TOPIC 546) LEEDS UDP

1. INTRODUCTION AND SITE CHARACTERISTICS

1.1 Location and Survey Methods

The site lies approximately 8km south of Leeds city centre between Topcliffe Lane, Morley and Junction 28 of the M62 motorway, on the south eastern edge of Morley around National Grid reference SE 275 265. It covers a total area of 14.7 ha. Survey work was carried out in November 1994 when the soils on the site were examined by hand auger borings at 100m intervals predetermined by the National Grid. In addition soil pits were dug to allow the depth of the sandstone, subsoil structure and stoniness to be developed accurately. 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 86 % of the site was in agricultural use, all of it as arable land. There is also an area of woodland on the eastern edge of the site and a strip of urban land which marks the course of a dismantled railway.

This site is very gently undulating at an altitude of around 37m AOD.

1.3 Climate

Grid Reference	: SE 275 265
Altitude (m)	: 137
Accumulated Temperature above 0°C (January - June)	: 1266 day °C
Average Annual Rainfall (mm)	: 737
Climatic Grade	: 2
Field Capacity Days	: 174
Moisture Deficit (mm) Wheat	: 86
Moisture Deficit (mm) Potatoes	: 71

1.4 Geology, Soils and Drainage

The site is underlain by Coal Measure Sandstones consisting of thinly bedded fine sandstone. Most soils on the site are derived from weathering sandstone and consist of well drained (Wetness Class I) fine sandy loam or fine sandy clay loam topsoils over medium silty clay loam or sandy clay loam upper subsoils. Weathering sandstone bedrock occurs at depth varying from 30cm to 80cm, resulting in a droughtiness limitation in most profiles. Lenses of heavy silty clay loam or silty clay occur in places in the southern part of the site. The profiles contain gleyed slowly permeable subsoils and have a wetness limitation.

2. AGRICULTURAL LAND CLASSIFICATION

The ALC grades occurring on this site are as follows:

Grade/Subgrade	Hectares	Percentage of Total Area
1		
2		
3a	10.9	74
3b	1.8	12
4		
5		
(Sub total)	(12.7)	(86)
Urban	0.4	3
Non Agricultural		
Woodland	1.6	11
Agricultural Buildings		
Open Water		
Land not surveyed		
(Sub total)	(2.0)	(14)
TOTAL	14.7	100

2.1 Subgrade 3a

Land within this Subgrade is widespread across the site. Soils are all well drained (Wetness Class I) and consisting mainly of very slightly stony fine sandy loam or sandy clay loam topsoils over medium silty clay loam or sandy clay loam and sandy clay loam subsoils. Profiles become stonier with depth and pass into thinly bedded weathering fine sandstone at about 50cm depth. These soils are restricted to Subgrade 3a by droughtiness. In a few places in the southern part of the site where subsoils consist of medium and heavy silty clay loam which is slowly permeable below 50cm depth, wetness is the main limiting factor.

2.2 Subgrade 3b

Subgrade 3b land occurs on the northern and southern edge of the site. In the north well drained (Wetness Class I) fine sandy loam topsoils and loamy fine sand subsoils overlie sandstone within 40cm of the surface. Profiles of this type are limited by Subgrade 3b by droughtiness. In the south near the A650 medium clay loam topsoils lie directly over gleyed slowly permeable silty clay subsoils. These soils are poorly drained (Wetness Class IV) and are limited to Subgrade 3b by wetness.

2.3 Urban

This strip of land marks the route of a dismantled railway.

2.4 Non Agricultural

This consists of an area of woodland on the eastern edge of the site.

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