



AGRICULTURAL LAND CLASSIFICATION
LEEDS UDP
WEST YORKSHIRE
TOPIC 541
DECEMBER 1994

ADAS
Leeds Statutory Group
2FCS 10342

Job No:- 140/94
MAFF Ref:- EL 49/13
Commission No:- 1480

2FCS 10342

ALCS41\TAHC

SUMMARY

A detailed Agricultural Land Classification of 24.9 ha of land adjoining Victoria Road (A643) Churwell, Morley was carried out in November 1994.

At the time of survey 23.9 ha (96%) of this was in agricultural use of which 1.4 ha falls within Grade 2. Soils in this grade are well drained (Wetness Class I) and consist of fine or medium sandy loam topsoils over similar subsoils followed by weathering sandstone at about 70cm depth. This land is limited to Grade 2 by slight droughtiness and by climate restrictions.

Subgrade 3a land covers 13.1 ha. Soils within this subgrade are mainly imperfectly drained (Wetness Class III) and consist of medium clay loam topsoils over mottled medium silty clay loam upper subsoils. This land is limited to Subgrade 3a by slight soil wetness. Also included within this Subgrade, especially in the north west of the site, are a few smaller areas of well drained land where the occurrence of sandstone bedrock within 100cm of the surface imposes a droughtiness limitation.

Subgrade 3b land covers 7.2 ha. Soils within this Subgrade are poorly drained (Wetness Class IV) and consist of medium clay loam topsoils over gleyed slowly permeable heavy silty clay loam or silty clay subsoils. Land of this type is limited to Subgrade 3b by wetness.

The Grade 4 land in the southern part of the site (2.2 ha) consists of heavy silty clay loam topsoils directly overlying gleyed slowly permeable silty clay or clay subsoils. This land is poorly drained and limited to this Grade by severe soil wetness problems.

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1. AGRICULTURAL LAND CLASSIFICATION

AGRICULTURAL LAND CLASSIFICATION REPORT ON LAND ADJOINING VICTORIA ROAD, CHURWELL, MORLEY (TOPIC 541) LEEDS UDP.

1. INTRODUCTION AND SITE CHARACTERISTICS

1.1 Location and Survey Methods

The site lies approximately 5km south west of Leeds city centre on the south eastern side of the A643 Victoria Road, Churwell on the northern edge of Morley, around National Grid reference SE 275 265. It covers a total area of 24.9 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 assessed 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 96% of the site was in agricultural use, mainly as arable land. There is also a small area of urban land on the south eastern edge of the site which marks the location of old mine shafts.

The site is very gently undulating at an altitude of around 115m AOD.

1.3 Climate

Grid Reference	: SE 270 289
Altitude (m)	: 115
Accumulated Temperature above 0°C (January - June)	: 1290 day °C
Average Annual Rainfall (mm)	: 731
Climatic Grade	: 2
Field Capacity Days	: 177
Moisture Deficit (mm) Wheat	: 88
Moisture Deficit (mm) Potatoes	: 74

1.4 Geology, Soils and Drainage

The site is underlain by Coal Measures consisting of interbedded fine often silty sandstones and shales. There is no drift cover and soils on the site are derived either from weathering sandstone, or shale which weathers to form silty clay. Soils formed over sandstone consist of well drained (Wetness Class I) fine sandy loam, sandy clay loam or medium clay loam topsoils over medium silty clay loam or fine sandy loam subsoils. Weathering sandstone bedrock occurs at depths varying from 40cm to 70cm, resulting in a droughtiness limitation in most profiles.

Soils derived from the more silty sandstones and those containing lenses of clay are imperfectly drained (Wetness Class III). Profiles consist of medium clay loam topsoils over mottled but permeable medium silty clay loam upper subsoils, followed at depth, by gleyed slowly permeable heavy silty clay loam lower subsoils. Thinly bedded fine sandstones, shale or siltstone sometimes occurs at 80cm to 90cm depth.

Soils formed over weathering shale are poorly drained (Wetness Class IV) and consist of medium clay loam or medium or heavy silty clay loam topsoils over gleyed slowly permeable clay or silty clay subsoils.

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	1.4	5.6
3a	13.1	52.6
3b	7.2	28.9
4	2.2	8.9
(Sub total)	(23.9)	(96.0)
Urban	0.6	2.4
Non Agricultural Woodland - Farm - Commercial		
Agricultural Buildings	0.4	1.6
Open Water		
Land not surveyed		
(Sub total)	(1.0)	(4.0)
TOTAL	<u>24.9</u>	<u>100</u>

2.1 Grade 2

Grade 2 land occurs in the northern corner of the site. Soils are all well drained (Wetness Class I) and consist of slightly stony fine sandy loam topsoils over similar upper subsoils. Profiles become stonier with depth and pass into thinly bedded weathering fine or medium sandstone at about 70cm depth. These soils are restricted to Grade 2 by slight droughtiness and by overall climatic limitation on this site.

2.2 Subgrade 3a

Land within this Subgrade is widespread across the central and eastern parts of the site. Soils are mainly imperfectly drained (Wetness Class III) and consist of slightly stony medium clay loam topsoils over mottled, but permeable, medium silty clay loam upper subsoils. Lower subsoils formed of gleyed, slowly permeable heavy silty clay loam occur at about 60cm depth, followed sometimes by thinly bedded fine sandstone, siltstone or shale. These soils are limited to subgrade 3a by wetness. Also included within this subgrade are smaller areas where the occurrence of sandstone bedrock within 40cm of the surface imposes a droughtiness limitation. Profiles of this type are especially common in the area adjoining Lane Side Farm and on the more undulating land on the southern edge of the site.

2.3 Subgrade 3b

Subgrade 3b land occurs mainly in the southern part of the site. There is also a smaller area to the west of the disused mineshafts. All soils within this Subgrade are poorly drained (Wetness Class IV) and consist of medium clay loam or medium silty clay loam topsoils over gleyed slowly permeable heavy silty clay loam or silty clay subsoils. Wetness is the main limiting factor.

2.4 Grade 4

This Grade occurs in the southern part of the site and to the south of the old mine shafts. Profiles consist of heavy silty clay loam or occasionally silty clay topsoils directly overlying very strongly gleyed slowly permeable silty clay or clay subsoils. These soils are poorly drained and are restricted to Grade 4 by a severe wetness limitation.

2.5 Urban

This consists of an area of partially excavated colliery waste marking the site of old mine shafts.

2.6 Agricultural Buildings

The farm buildings at Lane Side Farm are placed within this category.

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MAP

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