



AGRICULTURAL LAND CLASSIFICATION
LEEDS UDP TOPIC 442
MICKLEFIELD ENLARGED SETTLEMENT
WEST YORKSHIRE

JUNE 1995

ADAS
Leeds Statutory Group

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SUMMARY

A detailed Agricultural Land Classification (ALC) survey was carried out in March and April 1992 of 133.0 ha of land west of Micklefield (ref Leeds UDP Topic 442). At the time of survey most of the site was in arable use.

Soils on the site are predominantly developed from weathering Permian Magnesian Limestone and associated Marls. Drift cover is mostly thin and locally derived, or absent. Soil profiles typically contain medium textured topsoils and subsoils over weathering limestone at depths of between 20cm and 90cm.

Grade 2 covers 39.1 ha. Soils are well drained, and slightly droughty. Bedrock is encountered at about 65cm depth. Subgrade 3a land (65.4 ha) is similar to the Grade 2 area although contains shallower soils. This increases the drought limitation. The Subgrade 3b area (20.3 ha) is further limited on droughtiness by very shallow soils less than 35cm deep.

Very shallow (20cm deep) soils with severe drought limitations are Graded 4.

Non Agricultural and Urban land occupy 3.7 ha, and 2.0 ha respectively, while Agricultural Buildings cover 0.9 ha.

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1. AGRICULTURAL LAND CLASSIFICATION

AGRICULTURAL LAND CLASSIFICATION REPORT ON PROPOSED MICKLEFIELD
ENLARGED SETTLEMENT, WEST YORKSHIRE, LEEDS UDP TOPIC 442.

1. INTRODUCTION AND SITE CHARACTERISTICS

1.1 Location and Survey Methods

A detailed survey of 133.0 ha of land between the A656, the A1 Trunk road and the Leeds-York railway was carried out in March and April 1992. Soils were examined by hand auger borings at 100m intervals at locations pre-determined by the National Grid. Soil profile pits were dug to describe representative soils types in greater detail. The 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 most of the site was in arable use including spring and winter cereals and potatoes. The topography is mostly gentle and does not limit the use of agricultural machinery.

1.3 Climate

Grid Reference	: SE435339
Altitude (m)	: 70
Accumulated Temperature above 0°C (January - June)	: 1335 day °C
Average Annual Rainfall (mm)	: 674
Climatic Grade	: 1
Field Capacity Days	: 150
Moisture Deficit (mm) Wheat	: 98
Moisture Deficit (mm) Potatoes	: 87

1.4 Geology, Soils and Drainage

Soils are mostly derived from weathering Permian Magnesian Limestone and associated Marls. Drift is mostly absent and where it does occur is thin and derived from weathering local limestone.

Soils are mostly light to medium in texture typically medium clay loam or medium silty clay loam topsoil and subsoils over weathering limestone at between 50 and 100 cm depth. Profiles are generally well to moderately well drained (soil Wetness Class I to II) and subject to a droughtiness limitation. Heavier textured, clayey slowly permeable subsoils occur in places. Soils with clayey, slowly permeable subsoils are imperfectly to poorly drained (Wetness Class III to IV) and limited by soil wetness and workability.

Soils on the site correspond to the Aberford Association as mapped by the Soil Survey and Land Research Centre (1984).

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	39.1	29
3a	65.4	49
3b	20.3	15
4	1.6	1
5		
(Sub total)	(126.4)	(94)
Urban	2.0	2
Non Agricultural	3.7	3
Woodland		
Agricultural Buildings	0.9	1
Open Water		
Land not surveyed		
(Sub total)	(6.6)	(6)
TOTAL	<u>133.0</u>	<u>100</u>

2.1 Grade 2

Land in this grade occurs in the west and centre of the site. Topsoils and subsoils are medium textured and occasionally clayey below about 70cm depth. Profiles are generally soil Wetness Class I (well drained) but some are Class II (moderately well drained). Weathering limestone bedrock is encountered at about 65 to 70cm depth. Droughtiness is the factor limiting the ALC grade of most of this land although some areas have a slight soil wetness problem.

2.2 Subgrade 3a

This subgrade is widespread, especially in the southern half of the site. Again soils are mostly medium textured over weathering limestone at about 50cm depth. Some profiles contain slowly permeable subsoils and are subject to soil wetness limitations.

Most of the land is restricted to this subgrade by a more severe droughtiness limitation than on the areas mapped as Grade 2.

2.3 Subgrade 3b

Subgrade 3b is found in the centre and south of the site. Profiles are similar to those graded 2 and Subgrade 3b - medium textured over weathering limestone which outcrops at about 35cm depth. These shallow soils are more drought limited than the deeper soils found elsewhere on the site. This droughtiness limits the land to Subgrade 3b.

2.4 Grade 4

This grade contains the shallowest soils on the site. Limestone bedrock is exposed within 20cm depth. A severe drought problem limits the ALC grade.

2.5 Non Agricultural

This includes woodland, playing fields and an area used to store straw bales.

2.6 Agricultural Buildings

Well House Farm is found in the west of the site.

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MAP