

AGRICULTURAL LAND CLASSIFICATION  
LEEDS UDP  
TOPIC 589, CHURCH LANE  
ADEL  
WEST YORKSHIRE

NOVEMBER 1995

ADAS  
Leeds Statutory Group

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## SUMMARY

14.5 ha of land at Church Lane, Adel (Leeds UDP Topic 589) were the subject of a detailed Agricultural Land Classification (ALC) survey in November 1995.

2.6 ha were classified as Subgrade 3a. Moderate soil wetness and workability problems limit the ALC grade of this land.

A further 10.1 ha were Subgrade 3b. A more severe soil wetness problem limited the ALC grade of most of this land. A small area in the south of the site contains very shallow soils. Here droughtiness is the limiting factor.

Other Non-Agricultural land occupies 1.8 ha.

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1. AGRICULTURAL LAND CLASSIFICATION

AGRICULTURAL LAND CLASSIFICATION REPORT ON LEEDS UDP, TOPIC 589, LAND AT CHURCH LANE, ADEL

1. INTRODUCTION AND SITE CHARACTERISTICS

1.1 Location and Survey Methods

14.5 ha of land at Church Lane, Adel were surveyed in detail in November 1995. The site has a centroid grid reference of SE 273405 and is located about 8 km north west of Leeds city centre.

Soils were examined by hand auger borings at locations predetermined by the OS National Grid. Supplementary borings were used to check upon and refine grade boundaries. The overall density of borings was one per hectare. Three soil profile pits were dug to examine representative soils in greater detail. 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 all land except two small grass paddocks around Adel Willows was in arable use growing winter cereals. Land slopes gently to moderately (up to 7° in places) in a westerly and easterly direction towards the stream which bisects the site north-south. Altitude ranges from 130 m AOD to 120 m AOD.

1.3 Climate

Grid Reference	: SE273405
Altitude (m)	: 125
Accumulated Temperature above 0°C (January - June)	: 1273 day °C
Average Annual Rainfall (mm)	: 747
Climatic Grade	: 2
Field Capacity Days	: 192
Moisture Deficit (mm) Wheat	: 84
Moisture Deficit (mm) Potatoes	: 69

#### 1.4 Geology, Soils and Drainage

Solid deposits of Upper Carboniferous Guiseley Grit underlie the whole site. However, in the east and west of the site this gritstone is covered with deposits of boulder clay drift at least a metre thick. These have weathered to produce slowly permeable, poorly drained soils. Topsoils are generally sandy clay loam or medium clay loam over similar or clayey textured subsoils. These soils are Wetness Class IV.

Towards the centre of the site on either side of the stream boulder clay is absent and soils are developed from light textured locally derived drift, possibly Head deposits, or are developed directly from weathering gritstone. Soils are moderately well or imperfectly drained and occasionally slowly permeable at or below 65 cm depth.

Profiles are very shallow near the stream in the south of the site with bedrock exposed within 40 cm depth. These soils are droughty.

## 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		
3a	2.6	18
3b	10.1	70
4		
5		
(Sub total)	(12.7)	(88)
Other land	1.8	12
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	14.5	100
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### 2.1 Subgrade 3a

This subgrade occupies a strip of land alongside the stream where slopes of up to 7° occur. Land is moderately well or imperfectly drained (slowly permeable at or below 65 cm depth) and is limited to this subgrade by soil wetness and workability problems.

### 2.2 Subgrade 3b

Most of the Subgrade 3b land is limited by soil wetness and workability problems more severe than on the 3a land. A small area of land in the south of the site adjacent to the stream also contains shallow soils with a significant droughtiness limitation.

### 2.3 Other land

This includes the houses and gardens at Adel Willows.

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MAP