

AGRICULTURAL LAND CLASSIFICATION  
KIRK DEIGHTON, WETHERBY  
PROPOSED MOTORWAY SERVICES  
JUNE 1993

ADAS  
Leeds Statutory Group

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## SUMMARY

An Agricultural Land Classification survey of 14.3ha of land, at Kirk Deighton, east of Wetherby was carried out in two stages; in October 1990 for the proposed A1 improvements and in June 1993.

All of this is in agricultural use of which 3.3ha fall within Grade 1. Soils within this Grade consist of deep well drained medium sandy loam topsoils and subsoils some of which pass into clay loam at depth. There are no or only very minor limitations on the agricultural use of land of this type.

2.6ha fall within Subgrade 3a. Topsoils consist of medium clay loam over similar upper subsoils which pass into lower subsoils varying from coarse sand to heavy silty clay loam. Profiles of this type are limited to Subgrade 3a either by droughtiness or wetness.

The remainder of the site (8.4ha) falls within Subgrade 3b. Soils consist of heavy clay loam or heavy silty clay loam topsoils over poorly drained gleyed slowly permeable silty clay subsoils. Soil wetness and workability problems are the main limiting factors on this land.

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1. AGRICULTURAL LAND CLASSIFICATION

AGRICULTURAL LAND CLASSIFICATION REPORT ON LAND AT KIRK DEIGHTON,  
WETHERBY: PROPOSED MOTORWAY SERVICES

1. INTRODUCTION AND SITE CHARACTERISTICS

1.1 Location and Survey Methods

The site lies approximately 1km north east of Wetherby to the east of the existing A1 around National Grid Reference SE 409499. Work on the western part of the site was carried out in October 1990 during a survey of land affected by the A1 improvement proposals. The remainder was surveyed in June 1993. During both surveys soils were examined by hand auger borings at 100m intervals predetermined by the National Grid. Extra borings were made where necessary to refine grade boundaries and one soil pit was dug in order to assess subsoil structure. Land quality was determined 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 the slightly higher western part of the site was in arable use. The remainder consisted of permanent grassland. The site lies at an altitude of approximately 30m AOD and is flat to very gently sloping (0-1°).

1.3 Climate

Grid Reference	: SE 409499
Altitude (m)	: 30
Accumulated Temperature above 0°C (January-June)	: 1374 day°C
Average Annual Rainfall (mm)	: 686
Climatic Grade	: 1
Field Capacity Days	: 168
Moisture Deficit (mm) Wheat	: 100
Moisture Deficit (mm) {Potatoes	: 89

#### 1.4 Geology, Soils and Drainage

Soils are developed largely on superficial glacial and post glacial drift which forms a thick cover over the underlying Permian Magnesian Limestones and Mudstones. On the slightly higher ground in the western part of the site loamy drift is widespread and soils consist of well drained (Wetness Class I) medium sandy loam topsoils and upper subsoils which sometime pass into sandy clay loam or reddish heavy clay loam at depth. In the more extensive flat lower lying eastern part of the site, however, poorly drained land consisting mainly of heavy clay loam or heavy silty clay loam topsoils over gleyed slowly permeable (Wetness Class IV) heavy clay loam or silty clay subsoils is widespread.

## 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	3.3	23.1
2		
3a	2.6	18.2
3b	8.4	58.7
4		
5		
(Sub total)	(14.3)	(100)
Urban		
Non Agricultural		
Woodland - Farm		
- Commercial		
Agricultural Buildings		
Open Water		
Land not surveyed		
(Sub total)		
	<hr/>	<hr/>
TOTAL	14.3	100
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2.1 Grade 1

This grade is widespread on the slightly higher ground in the western part of the site. Soils consist of deep well drained (Wetness Class 1) medium sandy loams and subsoils sometimes overlying sandy clay loam or reddish heavy clay loam at depth. There are few limitations on the agricultural use of soils of this type.

2.2 Subgrade 3a

Subgrade 3a land occurs along the northern edge of the site. Soils are variable but commonly consist of medium clay loam topsoils over gleyed medium sandy loam, or sandy clay loam upper subsoils. Lower subsoils, below about 50cm depth, vary from coarse gritty sand to slowly permeable heavy silty clay loam. Drainage status varies from well drained to imperfectly drained (Wetness Classes I-III). Profiles with coarse textured lower subsoils are limited to Subgrade 3a by droughtiness. Those with heavy lower subsoils are limited by wetness.

2.3 Subgrade 3b

Subgrade 3b land occupies most of the flat lower lying eastern part of the site. Most land in this subgrade consists of heavy clay loam or heavy silty clay loam topsoils over gleyed slowly permeable heavy clay loam or silty clay subsoils, all of which fall within Wetness Class IV (poorly drained). Soil wetness and workability problems are the main limiting factors on land of this type.

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MAP