MAFF Ministry of Agriculture Fisheries and Food

AGRICULTURAL LAND CLASSIFICATION
DONCASTER UDP
SOUTH YORKSHIRE
SITE PH2, BROAD AXE, SCAWTHORPE
AUGUST 1994

ADAS
Leeds Statutory Group

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SUMMARY

A detailed Agricultural Land Classification survey of 21.1 ha of land at Broad Axe, Scawthorpe (Doncaster UDP, Site PH2) was carried out in August 1994. At the time of survey the whole site was in agricultural use and 9.1 ha of this falls in Subgrade 3a. Profiles are well drained, with medium sandy loam, sandy clay loam or medium clay loam topsoils and subsoils overlying weathering limestone bedrock at between 55 cm and 90 cm depth. In this case soil droughtiness limits the land to Subgrade 3a. The reminder of the site (12.0 ha) falls in Subgrade 3b. Profiles are similar to those on the Subgrade 3a land but weathering limestone occurs at between 30 cm and 55 cm depth and soil droughtiness is a more serious limitation, thus restricting these areas to Subgrade 3b.

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AGRICULTURAL LAND CLASSIFICATION REPORT ON LAND AT BROAD AXE, SCAWTHORPE (DONCASTER UDP SITE PH2)

1. INTRODUCTION AND SITE CHARACTERISTICS

1.1 *Location and Survey Methods*

The site lies approximately 4km north-west of Doncaster town centre and lies around Grid Reference SE 546 056. It covers a total area of 21.1 ha. Survey work was carried out in August 1994 when the soils were examined by hand auger borings at 100m intervals predetermined by the National Grid. Two soil inspection pits were dug to confirm depth to bedrock and to allow more complete profile descriptions to be made.

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 the whole site had recently been disc-harrowed following harvest. Site altitude varies between 15m AOD in the south-east and 35 m AOD in the north-west and the land is gently sloping (2-3°) with a south-easterly aspect.

1.3 Climate

Grid Reference	: SE 546 056
Altitude (m)	: 25
Accumulated Temperature above 0°C (January - June)	: 1396 day °C
Average Annual Rainfall (mm)	: 596
Climatic Grade	: 1
Field Capacity Days	: 125
Moisture Deficit (mm) Wheat	: 109
Moisture Deficit (mm) Potatoes	: 101

1.4 Geology, soil and Drainage

The site is underlain by Magnesian Limestone deposits, which outcrop to within one metre of the soil surface over most of the site. Although the 1" geology map for the area suggests there are no drift deposits, there does in fact appear to be a very thin layer of glacial sand over the site.

The soils are well drained, falling in Wetness Class I, and typically consist of medium sandy loam, sandy clay loam or medium clay loam topsoils and subsoils overlying weathering limestone bedrock at between 30 cm and 90 cm depth. Horizons of heavy clay loam occur at depth in places. Both topsoils and subsoils are very slightly to slightly stony, containing between 3% and 8% subangular limestones.

2. AGRICULTURAL LAND CLASSIFICATION

The ALC grades occurring on this site are as follows:

Grade/Subgrade	Hectares	Percentage of Total Area
1		
2		
3a	9.1	43.1
3b	12.0	56.9
4		
5		
(Sub total)	(21.1)	(100)
Urban		
Non Agricultural		
Woodland - Farm		
- Commercial		
Agricultural Buildings		
Open Water		
Land not surveyed		
(Sub total)		
TOTAL	21.1	100

2.1 Subgrade 3a

Land in this subgrade occurs in the north and in the south and east of the site. Profiles are well drained, falling in Wetness Class I, and typically consist of medium sandy loam, sandy clay loam or medium clay loam topsoils and subsoils overlying weathering limestone bedrock at between 55 cm and 90 cm depth. This land is limited to Subgrade 3a by soil droughtiness and although some profiles meet the requirements for Grade 2, the variability in depth to bedrock prevents these being mapped out as a separate unit.

2.2 Subgrade 3b

Subgrade 3b land covers much of the centre and west of the site. Again, profiles are well drained (Wetness Class I), with medium sandy loam, sandy clay loam or medium clay loam topsoils and subsoils overlying weathering limestone bedrock at between 30 cm and 55 cm depth. Soil droughtiness is more limiting than on adjoining Subgrade 3a land and further restricts these areas to Subgrade 3b.

MAP