



LEEDS UDP
TOPIC 895
WEST YORKSHIRE
FEBRUARY 1995

ADAS
Leeds Statutory Group

Job No:- 27/95
MAFF Ref:- EL49/13
Commission No: 1601

SUMMARY

A semi-detailed Agricultural Land Classification survey of 379.6 ha of land between Walton and Wetherby (Leeds UDP, Topic 895) was carried out in February 1995.

At the time of survey 328.3 ha of the site was in agricultural use of which 37.3 ha falls in Grade 2. These soils are well or moderately well drained with light to medium - textured topsoils over very light to heavy-textured subsoils. Slowly permeable layers begin in places at around 70 cm depth. This land is limited to Grade 2 by either slight soil wetness or slight soil droughtiness.

164.3 ha of Subgrade 3a was mapped on the site. Profiles are either well drained, with light-textured topsoils over very light-textured subsoils or medium-textured topsoils and subsoils over weathering limestone bedrock at around 60 cm depth (in both of these cases soil droughtiness restricts the ALC grade) or imperfectly drained with medium-textured topsoils over medium to heavy-textured upper subsoils and slowly permeable heavy-textured lower subsoils. Soil wetness limits this land to Subgrade 3a.

The remainder of the agricultural land (126.7 ha) falls in Subgrade 3b. In most cases the soils are poorly drained and consist of medium to heavy-textured topsoils overlying slowly permeable heavy-textured subsoils at around 30 cm depth. Soil wetness limits this land to Subgrade 3b. In a few areas weathering limestone bedrock begins at around 40 cm depth and soil droughtiness limits the ALC grade.

Other land on this site includes Urban land (consisting of minor roads, a dismantled railway, a former munitions dump and a tennis court, covering 14.2 ha), Non-agricultural land (a sports field covering 1.2 ha), Woodland (32.4 ha) and Agricultural Buildings (3.5 ha).

AGRICULTURAL LAND CLASSIFICATION REPORT ON LAND BETWEEN WETHERBY AND WALTON, WEST YORKSHIRE (LEEDS UDP, TOPIC 895)

1. Introduction

A semi-detailed Agricultural Land Classification survey of 379.6 ha of land between Wetherby and Walton was carried out in February 1995 to validate the information on land quality provided by Environmental Resources Limited (E.R.L.) for the objectors, Mountleigh Northern Developments Ltd. The semi-detailed survey involved hand auger borings at 140 m intervals at points predetermined by the National Grid, giving an overall boring density of one per two hectares. Part of the east of the area had already been subject to a detailed ALC survey (boring density one per hectare) in September 1993 ("Walton, Wetherby. Proposed Golf Course") and was not therefore surveyed. Five soil pits were dug to allow full profile descriptions to be made. 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 Climate

Grid Reference	: SE 430 478
Altitude	: 30 m
Accumulated Temperature above 0°C (January - June)	: 1375 day °C
Average Annual Rainfall (mm)	: 674
Climatic Grade	: 1
Field Capacity Days	: 163
Moisture Deficit (mm) Wheat	: 101
Moisture Deficit (mm) Potatoes	: 91

1.3 Land Use and Relief

At the time of the semi-detailed survey 86.5% of the site was in agricultural use, principally growing oilseed rape and winter cereals, but with smaller areas of beans, ley grass and permanent grass. The remainder of the site consists of Woodland, Urban land, Agricultural Buildings and Non Agricultural land.

It should be noted that while the E.R.L. report correctly reflects land use on the site in most areas, their map is inaccurate in showing a large block of "land not in agricultural use" in the "Champagne Whin" area in the north-east. At the time of the ADAS survey most of this land was under oilseed rape or ley or permanent grass.

Site altitude varies from 15m AOD in the south-west (alongside the River Wharfe) to 40 m AOD in the south-east. The land on the site is typically level to gently sloping (0 - 3°) with variable aspect. Only in a very small area in the south of the site do slopes exceed 7° and here the land is limited to Subgrade 3b.

1.4 Geology and Soils

The solid and drift geology and the soils on this site are accurately described in Section 3.2 "Geology and Soils" of the Environmental Resources Limited report.

2.1 Agricultural Land Classification

The "Detailed Agricultural Land Survey" (Section 3.3.2, E.R.L. report) carried out on behalf of the objectors was done using an unconventional method whereby the area was surveyed on a field by field basis using a W or Z pattern with samples being taken every 100 to 150 metres. Subsamples of topsoil and subsoil were collected from a minimum of six points per field and aggregated to provide samples for each field. On the basis of the information collected in this way each field was then assigned to an ALC grade.

However, in this area, where there is a complex range of soils, grade boundaries rarely concur with field boundaries. Field 46 (Figure 3.3 (b), E.R.L. report) can be used as an example. Although mapped in its entirety as Grade 2 by E.R.L. it is in fact limited to Subgrade 3b in the north by soil wetness (where medium clay loam topsoils overlie gleyed and slowly permeable clay subsoils at around 25 cm depth) and to Subgrade 3a in the centre and south by soil droughtiness (where sandy loam topsoils overlie loamy sand or sand subsoils).

Of the area covered by Topic 895, the E.R.L. survey found that the land to the north-east of the disused railway line which crosses the site from west to south-east has Grade 2 and Subgrade 3a in roughly equal proportions, with no Subgrade 3b land. The ADAS semi-detailed survey suggests that there is relatively little Grade 2 land in this area and that approximately 45% of the land falls in Subgrade 3a and 42% in Subgrade 3b. As already noted, most of the land in the Champagne Whin area is in agricultural production and is not Non Agricultural land as mapped by E.R.L.

To the south-west of the disused railway the two surveys coincide to a greater extent and the ADAS survey (which includes land in this area not surveyed by E.R.L.) found that approximately 41% of the land is Subgrade 3a, 20% is Subgrade 3b and 20% is Grade 2.

2.2 For the site as a whole the semi-detailed survey carried out by ADAS produced the following grade areas:-

<u>Grade/Subgrade</u>	<u>Hectares</u>	<u>Percentage of Total Area</u>
1		
2,	37.3	9.8
3a	164.3	43.3
3b	126.7	33.4
4		
5		
(Sub total)	(328.3)	(86.5)
Urban	14.2	3.7
Non Agricultural	1.2	0.3
Woodland	32.4	8.6
Agricultural Buildings	3.5	0.9
Open Water		
Land not surveyed		
(Sub total)	<u>(51.3)</u>	<u>(13.5)</u>
TOTAL	<u>379.6</u>	<u>100</u>

2.3 Grade 2

Grade 2 land was mapped by ADAS in a small area in the north of the site and in a larger area in the west. The soils in these areas are well or moderately well drained, falling in Wetness Classes I or II, and consist of sandy loam, sandy clay loam, or clay loam topsoils overlying a range of subsoil textures which vary between loamy sand and heavy clay loam. Slowly permeable layers begin in some areas at around 70 cm depth. The topsoils are typically very slightly stony, containing up to 4% stones greater than 2 cm. Either slight soil wetness or slight soil droughtiness limit these areas to Grade 2.

2.4 Subgrade 3a

Much of the site falls in Subgrade 3a. Three distinct soil types occur. The first consists of well drained (Wetness Class I) medium -textured topsoils and subsoils overlying weathering limestone bedrock at between 50 cm and 60 cm depth. Soil droughtiness limits the ALC grade of this land. The second soil type consists of slightly stony sandy loam topsoils overlying slightly or very slightly stony loamy sand or sand subsoils. Again the soils are well drained and soil droughtiness limits this land to Subgrade 3a. The third soil type consists of sandy clay loam or medium clay loam topsoils over sandy clay loam, medium clay loam or heavy clay loam upper subsoils and slowly permeable sandy clay loam or heavy clay loam lower subsoils. These slowly permeable lower subsoils typically begin at around 50 cm depth and in this case the soils are imperfectly drained (Wetness Class III) and soil wetness limits the land to Subgrade 3a.

2.5 Subgrade 3b

Subgrade 3b land covers approximately 126.7 ha on the site. In most cases soil wetness is the limiting factor, where medium to heavy-textured topsoils overlie similarly textured gleyed (or reddish, where the soils are derived from marl) slowly permeable subsoils at around 30 to 35 cm depth. These soils are poorly drained, falling in Wetness Class IV. In some parts of the south of the site medium clay loam or medium silty clay loam topsoils and subsoils overlie weathering limestone bedrock at around 40 cm depth. These soils are well drained (Wetness Class I) but the land is limited to Subgrade 3b by soil droughtiness.

2.6 Urban

This category includes the minor roads, dismantled railway, former munitions dump at Champagne Whin and a tennis court in the south-east of the site.

2.7 Non Agricultural

This category covers a recently reseeded sports field in the south-east.

2.8 Woodland

A number of blocks of woodland occur, particularly in the north and south of the site.

2.9 Agricultural Buildings

Agricultural buildings occur at Flint Mill Farm in the south-west. Sykes House Farm in the centre, and on Springs Lane in the north-east of the site.

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RPT File: 2FCS 10643