

AGRICULTURAL LAND CLASSIFICATION  
BRADFORD UDP  
SITES AROUND SILSDEN  
WEST YORKSHIRE  
APRIL 1995

ADAS  
Leeds Statutory Group

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## SUMMARY

A detailed Agricultural Land Classification of 5 sites around Silsden, West Yorkshire was carried out in April 1995. The following table provides a summary of the results.

### Area (ha)

Site	Grade 2	Grade 3a	Grade 3b	Urban
H5.14			18.9	1.0
H5.13			7.8	0.5
E4.1	2.3	10.5		0.3
E1.24		4.0		0.1
H5.16			5.4	0.1

Site H5.15 was not surveyed because of access problems.

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AGRICULTURAL LAND CLASSIFICATION REPORT ON LAND AROUND SILSDEN,  
BRADFORD UDP

1. INTRODUCTION AND SITE CHARACTERISTICS

1.1 Location and Survey Methods

Land at 5 locations around Silsden was surveyed in April 1995. Part of site E4.1 was originally surveyed by ADAS in 1990 when it was the subject of an ad-hoc planning application. The agricultural land quality of each of these sites is described in the following sections of this report. All of the sites were surveyed in detail when soils were examined by hand auger borings at 100m intervals predetermined by the National Grid. Soil profile pits were dug to examine representative soil 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).

A sixth site, H5.15, was not surveyed due to access being refused.

## 2.1 SITE H5.14

### 2.1.1 Location

Site H5.14 is located on the north eastern edge of Silsden and has a centroid grid reference of SE 049 468.

### 2.1.2 Land Use and Relief

All of the agricultural land on the site was under grass at the time of survey. Altitude ranges from 180m AOD in the north east to 150m AOD in the south. Slopes are gentle to strong with a westerly to south westerly aspect.

### 2.1.3 Climate

Grid Reference	: SE 049 468
Altitude (m)	: 170
Accumulated Temperature above 0°C (January - June)	: 1224 day °C
Average Annual Rainfall (mm)	: 963
Climatic Grade	: 3a
Field Capacity Days	: 230
Moisture Deficit (mm) Wheat	: 64
Moisture Deficit (mm) Potatoes	: 44

### 2.1.4 Geology, Soil and Drainage

The site is underlain by Upper Carboniferous Coal Measures, and is covered by deposits of Boulder Clay. Soils are moderately well to poorly drained, (Wetness Classes II, III and IV) with medium clay loam topsoils overlying gleyed, medium or heavy textured upper subsoils and clayey subsoils.

2.1.5 AGRICULTURAL LAND CLASSIFICATION - SITE H5.14

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		
3b	18.9	95.0
4		
5		
(Sub total)	(18.9)	(95.0)
Urban	1.0	5.0
Non Agricultural		
Woodland - Farm		
- Commercial		
Agricultural Buildings		
Open Water		
Land not surveyed		
(Sub total)	(1.0)	(5.0)
TOTAL	<u>19.9</u>	<u>100</u>

#### 2.1.6 Subgrade 3b

All the agricultural land, 18.9 ha, falls into Subgrade 3b. Medium clay loam topsoils overlie medium, heavy or sandy clay loam upper subsoils that are gleyed throughout the site. Lower subsoils are clayey and slowly permeable in some areas. Most of the land is restricted to this Subgrade by soil wetness limitation.

Two small areas adjacent to Brown Bank Lane are also limited to Subgrade 3b by their micro relief, and a small area of strongly sloping land in the centre of the site is limited by slope.

#### 2.1.7 Urban

1.0 ha is classed as Urban, including farm houses in the south and north east of the site, and a fenced area adjacent to Brown Bank Lane, possibly a relic of the mining industry.

## 2.2 SITE H5.13

### 2.2.1 Location

Site H5.13 is located on the north eastern edge of Silsden and has a centroid grid reference of SE 048 467.

### 2.2.2 Land Use and Relief

All of the agricultural land on the site was under grass at the time of survey. Altitude ranges from 140m AOD to 155m AOD in the west. Slopes are gentle (2-3°) with a westerly aspect.

### 2.2.3 Climate

Grid Reference	: SE 048 467
Altitude (m)	: 150
Accumulated Temperature above 0°C (January - June)	: 1247 day °C
Average Annual Rainfall (mm)	: 950
Climatic Grade	: 3a
Field Capacity Days	: 228
Moisture Deficit (mm) Wheat	: 67
Moisture Deficit (mm) Potatoes	: 48

### 2.2.4 Geology, Soils and Drainage

The site is underlain by Upper Carboniferous Coal Measures and is covered by deposits of Boulder Clay.

Soils are moderately well to imperfectly drained (Wetness Classes II and III), with medium clay loam topsoils overlying gleyed medium or heavy textured upper subsoils and clayey lower subsoils.



## 2.2.5 AGRICULTURAL LAND CLASSIFICATION - SITE H5.13

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		
3b	7.8	94.0
4		
5		
(Sub total)	(7.8)	(94.0)
Urban	0.5	6.0
Non Agricultural		
Woodland - Farm		
- Commercial		
Agricultural Buildings		
Open Water		
Land not surveyed		
(Sub total)	(0.5)	(6.0)
 TOTAL	 8.3	 100

#### 2.2.6 Subgrade 3b

All of the agricultural land, 7.8 ha, falls into Subgrade 3b. Medium clay loam topsoils overlie medium, heavy or sandy clay loam upper subsoils that are gleyed throughout the site. Lower subsoils are medium textured or clayey. The land is restricted to Subgrade 3b by soil wetness limitation.

#### 2.2.7 Urban

0.5 ha is classed as Urban, including a lane in the south, and gardens in the west of the site.

## 2.3 SITE E4.1

### 2.3.1 Location

Site E4.1 is located to the south of Silsden, between the town and the River Aire, and has a centroid grid reference of SE 043 455.

### 2.3.2 Land Use and Relief

All of the agricultural land was under grass at the time of survey. Altitude ranges from 85m AOD in the south to 100m AOD in the north of the site. Slopes are level to gentle (0-3°) with a southerly aspect.

### 2.3.3 Climate

Grid Reference	: SE 043 455
Altitude (m)	: 90
Accumulated Temperature above 0°C (January - June)	: 1316 day °C
Average Annual Rainfall (mm)	: 914
Climatic Grade	: 2
Field Capacity Days	: 222
Moisture Deficit (mm) Wheat	: 76
Moisture Deficit (mm) Potatoes	: 60

### 2.3.4 Geology, Soils and Drainage

The site is underlain by Upper Carboniferous Coal Measures, and is covered by deposits of alluvium and river delta deposits.

Soils are well to moderately well drained (Wetness Classes I and II) with medium clay loam topsoils.

Subsoils are medium or sandy clay loam or sandy loam and are often gleyed at around 30cm depth. Soils are moderately well to imperfectly drained (Wetness Classes II and III).

Flood risk was not considered a limitation on this site.

### 2.3.5 AGRICULTURAL LAND CLASSIFICATION - SITE E4.1

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	2.3	16.9
3a	10.5	77.2
3b		
4		
5		
(Sub total)	(12.8)	(94.1)
Urban	0.3	2.2
Non Agricultural	0.5	3.7
Woodland - Farm		
- Commercial		
Agricultural Buildings		
Open Water		
Land not surveyed		
(Sub total)	(0.8)	(5.9)
 TOTAL	 <u>13.6</u>	 <u>100</u>

#### 2.3.6 Grade 2

2.3 ha falls in Grade 2. Medium clay loam topsoils overlie slightly stony (15%), similar textured subsoils. The land is restricted to this grade by slight soil wetness limitations.

#### 2.3.7 Subgrade 3a

10.5 ha falls in Subgrade 3a. Medium clay loam topsoils overlie gleyed, similar textured subsoils in the west, and overlie medium textured, gleyed upper subsoils, with sandy loam or sandy clay loam lower subsoils in the east.

#### 2.3.8 Non Agricultural

0.5 ha is classed as Non-agricultural land in the north of this site. This area is presently derelict land.

#### 2.3.9 Urban

The road across the northern corner of the site is included as 0.3 ha of Urban land.

## 2.4 SITE E1.24

### 2.4.1 Location

Site E1.24 is located to the south west of Silsden, to the north and south of Sykes Lane. The centroid grid reference is SE 039 459.

### 2.4.2 Land Use and Relief

All the agricultural land was under grass at the time of survey. Altitude ranges from 95m AOD in the north to 105m AOD in the south. Slopes are gentle to moderate (2-4°) with a southerly aspect.

### 2.4.3 Climate

Grid Reference	: SE 039 459
Altitude (m)	: 100
Accumulated Temperature above 0°C (January - June)	: 1304 day °C
Average Annual Rainfall (mm)	: 922
Climatic Grade	: 2
Field Capacity Days	: 223
Moisture Deficit (mm) Wheat	: 75
Moisture Deficit (mm) Potatoes	: 58

### 2.4.4 Geology, Soils and Drainage

The site is underlain by Upper Carboniferous Coal Measures and is covered by deposits of Boulder Clay.

Soils are moderately well to imperfectly drained (Wetness Classes II and III), with medium clay loam topsoils overlying gleyed medium textured subsoils.

#### 2.4.5 AGRICULTURAL LAND CLASSIFICATION - SITE E1.24

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	4.0	72.7
3b		
4		
5		
(Sub total)	(4.0)	(72.7)
Urban	0.1	1.8
Non Agricultural	1.4	25.5
Woodland - Farm		
- Commercial		
Agricultural Buildings		
Open Water		
Land not surveyed		
(Sub total)	(1.5)	(27.3)
<b>TOTAL</b>	<b>5.5</b>	<b>100</b>

#### 2.4.6 Subgrade 3a

All the agricultural land on the site, 4.0 ha, falls into Subgrade 3a. Medium clay loam topsoils overlie medium clay loam or medium sandy loam upper subsoils, and medium sandy loam or sandy clay loam lower subsoils. Subsoils become gleyed at 30-50cm depth. The land is restricted to Subgrade 3a by soil wetness limitations.

#### 2.4.7 Non Agricultural

1.4 ha in the east of the site is currently being used for timber storage, and also includes derelict buildings.

#### 2.4.8 Urban

0.1 ha of Urban land features the lane in the centre of the site.



## 2.5 SITE H5.16

### 2.5.1 Location

Site H5.16 is located on the eastern edge of Silsden, adjacent to the Leeds and Liverpool Canal. Its centroid grid reference is SE 035 460.

### 2.5.2 Land Use and Relief

All of the agricultural land on the site was under grass at the time of survey.

Altitude ranges from 130m AOD in the north west, to 105m AOD in the south east. Slopes are moderate (4-5°) with a southerly aspect.

### 2.5.3 Climate

Grid Reference	: SE 035 460
Altitude (m)	: 115
Accumulated Temperature above 0°C (January - June)	: 1287 day °C
Average Annual Rainfall (mm)	: 936
Climatic Grade	: 2
Field Capacity Days	: 226
Moisture Deficit (mm) Wheat	: 72
Moisture Deficit (mm) Potatoes	: 54

### 2.5.4 Geology, Soils and Drainage

The site is underlain by Upper Carboniferous Coal Measures, and is covered by deposits of Boulder Clay.

Soils are imperfectly to poorly drained (Wetness Classes III and IV) with medium clay loam topsoils overlying medium or sandy clay loam, or medium sandy loam gleyed subsoils.

## 2.5.5 AGRICULTURAL LAND CLASSIFICATION - SITE H5.16

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		
3b	5.4	98.2
4		
5		
(Sub total)	(5.4)	(98.2)
Urban	0.1	1.8
Non Agricultural		
Woodland - Farm		
- Commercial		
Agricultural Buildings		
Open Water		
Land not surveyed		
(Sub total)	(0.1)	(1.8)
<b>TOTAL</b>	<b>5.5</b>	<b>100</b>

#### 2.5.6 Subgrade 3b

All of the agricultural land on the site, 5.4 ha falls into Subgrade 3b. Medium clay loam topsoils overlie medium sandy loam, medium clay loam or sandy clay loam subsoils, with a medium sandy clay loam upper subsoils where they occur.

Subsoils become gleyed at around 30cm depth. The land is restricted to this Subgrade by soil wetness limitations.

#### 25.7 Urban

0.1 ha in the north west of the site is occupied by a road, and is classed as Urban.

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