

AGRICULTURAL LAND CLASSIFICATION
LEEDS UDP, TOPIC 895
SPRINGSWOOD A & B
WEST YORKSHIRE
JUNE 1995

ADAS
Leeds Statutory Group

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2 FCS 10760

SUMMARY

A semi detailed Agricultural Land Classification Survey (ALC) was carried out on two sites Springswood A and Springswood B for the Leeds UDP (Topic 895) in February and June 1995. The two sites cover similar but not identical areas between Wetherby and Walton in West Yorkshire.

At the time of survey most of the sites were in agricultural use growing mainly arable crops.

Grade 2 land occurs on both Springswood A (43.5) and Springswood B (65.5 ha). In both cases soils were well or moderately well drained (Wetness Class I or II) and often slightly droughty. Droughtiness or soil wetness limit the ALC grade.

Subgrade 3a is widespread covering 216.7 ha on site A and 211.4 ha on site B. Three soil types occur. Two are light textured with either very light textured subsoil or bedrock at about 60 cm depth. Droughtiness limits ALC grade in both cases. Remaining Subgrade 3a land is imperfectly drained with slowly permeable lower subsoils. Soil wetness limits ALC grade.

Remaining agricultural land falls into Subgrade 3b (131.1 ha site A, 129.2 ha site B). Poorly drained soils limited by soil wetness comprise most of this subgrade but some areas contain very shallow soils over limestone bedrock at about 40 cm depth.

Other non agricultural uses comprise 31.7 ha on site A and 34.7 ha on site B, in both cases mostly woodland.

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AT SPRINGSWOOD, WETHERBY, LEEDS UDP TOPIC 895

1. INTRODUCTION AND SITE CHARACTERISTICS

1.1 Location and Survey Methods

A semi detailed survey of approximately 480 ha of land between Wetherby and Walton was carried out in February and May 1995. This report describes two slightly different sites referred to as Springswood A and Springswood B both of which have large areas in common. The survey involved hand auger borings at a density of one boring per 2 hectares at locations predetermined by the National Grid. Part of the east of the survey area was the subject of a detailed ALC survey in September 1993 (Walton - Wetherby proposed golf course) and was not therefore surveyed again. Soil profile pits were dug to describe representative soil types in greater detail.

All land quality assessments were made 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 most of the agricultural land on the sites was in arable use, mostly growing oilseed rape and winter cereals. Woodland was the major non agricultural use. Altitude ranges from 15 A.O.D. in the south west (alongside the River Wharfe) to 40 m A.O.D. in the south east. Slopes are typically level to gentle with variable aspect. Only in a very small area in the south do slopes exceed 7° and limit ALC grade to Subgrade 3b.

1.3 Climate

Grid Reference	: SE 430 478
Altitude	: 30
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

1.4 Geology, Soils and Drainage

Most of the area is covered with a mixture of drift deposits which obscure the solid strata below. Solid rock mostly comprises Permian Magnesian Limestone and occasionally Permian Marl.

Magnesian Limestone outcrops close to the surface mainly in the far south of the sites A and B. Here shallow, well drained but droughty soils have developed over weathering limestone at between 30 and 65 cm depth.

Elsewhere soils are mostly derived from drift comprising an often complex mixture of boulder clay, morainic sandy and gravelly drift and lacustrine silts and clays.

Morainic drift tends to have produced, well or moderately well drained soils with a droughtiness or slight soil wetness limitation.

Boulder clay and lacustrine deposits have weathered into slowly permeable soils with a significant soil wetness limitation.

2. AGRICULTURAL LAND CLASSIFICATION SPRINGSWOOD A

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	43.5	10
3a	216.7	51
3b	131.1	31
4		
5		
(Sub total)	(391.3)	(92)
Urban	8.8	2
Non Agricultural	1.2	<1
Woodland	19.3	5
Agricultural Buildings	2.1	<1
Open Water	0.3	<1
Land not surveyed		
(Sub total)	(31.7)	(8)
	<hr/>	<hr/>
TOTAL	423.0	100
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2. AGRICULTURAL LAND CLASSIFICATION SPRINGSWOOD B

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	65.5	15
3a	211.4	48
3b	129.2	29
4		
5		
(Sub total)	(406.1)	(92)
Urban	12.0	3
Non Agricultural	1.0	<1
Woodland	19.3	4
Agricultural Buildings	2.1	<1
Open Water	0.3	<1
Land not surveyed		
(Sub total)	(34.7)	(8)
	_____	_____
TOTAL	440.8	100
	_____	_____

2.3 Grade 2

Grade 2 land occurs on both sites of A and B but is more widespread on the latter. In both cases soils have developed from light textured probably morainic drift. Soils are well or moderately well drained with sandy loam, sandy clay loam or clay loam topsoils over a variety of subsoil textures ranging from loamy sand to heavy clay loam. Topsoil stoniness does not exceed 4% stones greater than 2 cm in diameter. Slight soil wetness or slight droughtiness limit the ALC of this land.

2.4 Subgrade 3a

Much of the land surveyed 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 is widespread in the centre of both sites. 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 site A.

2.7 Non Agricultural

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

2.8 Woodland

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

2.9 Agricultural Buildings

Agricultural buildings occur at Sykes House Farm and on Springs Lane of the site.

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MAPS