



AGRICULTURAL LAND CLASSIFICATION
SHEFFIELD UNITARY DEVELOPMENT
PLAN. LAND AT MOSBOROUGH
SOUTH YORKSHIRE

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ADAS
Leeds Statutory Group

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SUMMARY

A detailed survey of 29.0 ha of land north of Mosborough was carried out in September 1995 for Sheffield UDP.

Soils on the site are mostly developed from weathering Carboniferous Sandstone.

12.2 ha of Subgrade 3a land were mapped. This comprises medium textured soils with droughtiness and pattern limitations.

Subgrade 3b covers 3.1 ha of the site. This comprises three areas: the first is moderately sloping land (8°) limited by slope. The second consists of land with a highly irregular ground surface, limited by microrelief. The third consists of restored soils with medium topsoils and heavy, slowly permeable subsoils. This land is limited by soil wetness.

Urban land (0.8 ha), non-agricultural land (12.4 ha) and woodland (0.5 ha) were also identified.

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1. AGRICULTURAL LAND CLASSIFICATION

AGRICULTURAL LAND CLASSIFICATION (ALC) REPORT ON LAND AT MOSBOROUGH FOR SHEFFIELD UNITARY DEVELOPMENT PLAN

1. INTRODUCTION AND SITE CHARACTERISTICS

1.1 Location and Survey Methods

29.0 ha of land to the north of Mosborough was surveyed in September 1995. The site lies to the west of the A616 road (Mosborough High Street) and is centred around National Grid Reference SK 419815. Soils on the site were examined by hand auger borings at a density of one boring per hectare at points pre-determined by the National Grid. Two soil inspection pits were dug to examine soil profiles in greater detail. 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 the survey, 15.3 ha of the site was in agricultural use as part of an arable rotation including rape, cereals, peas and beans. Much of the remainder of the site is non-agricultural land. This consists of playing fields, land awaiting development for housing, a caravan park, disused nurseries and land which has been uncultivated for many years. The latter two are now overgrown by scrub. A small area of Woodland lies in the north of the site. Urban land consists of roads and a macadam path in the south.

The site is mostly gently sloping or moderately sloping (2-7°) with an easterly to south-south-easterly aspect. A small area in the north is strongly sloping (8°). Altitude ranges between 110m and 185m AOD.

1.3 Climate

Grid Reference	: SK419815
Altitude (m)	: 150
Accumulated Temperature above 0°C (January - June)	: 1267 day °C
Average Annual Rainfall (mm)	: 784
Climatic Grade	: 2
Field Capacity Days	: 178
Moisture Deficit (mm) Wheat	: 84
Moisture Deficit (mm) Potatoes	: 69

1.4 Geology, Soils and Drainage

The site is underlain by Carboniferous Sandstone. Drift is thin or absent. Soils are generally formed from weathering sandstone except in two areas where land has been restored.

Soils formed on sandstone are well drained, falling within Wetness Class I. Topsoils are medium textured and very slightly stony. Medium textured, slightly stony upper subsoils are present in some profiles. Lower subsoils are light textured (loamy medium sand) and moderately stony. Weathering sandstone lies at below 60cm depth.

Land in two areas has been restored. These are firstly in the extreme north of the site, adjacent to the B6054 road (Quarry Hill). The second restored area is in the centre of the site, south of Moor Farm. Soil profiles in both areas are poorly drained, falling within Wetness Class IV. Medium textured topsoils overlie heavy textured subsoils which are gleyed and slowly permeable at between 30 cm and 40 cm depth.

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		
2		
3a	12.2	42.1
3b	3.1	10.7
4		
5		
(Sub total)	(15.3)	(52.8)
Urban	0.8	2.8
Non Agricultural	12.4	42.8
Woodland - Farm	0.5	1.7
- Commercial		
Agricultural Buildings		
Open Water		
Land not surveyed	.	
(Sub total)	(13.7)	(47.2)
TOTAL	29.0	100

2.1 Subgrade 3a

Most of the agricultural land on the site falls into Subgrade 3a. Soils are well drained falling into Wetness Class I. Topsoils are medium sandy loams or sandy clay loams and are very slightly stony (up to 5%, total sandstones). Similar textured, slightly stony (up to 8%, total sandstones) upper subsoils occur in places. Lower subsoils are moderately stony (up to 30%, total sandstones) loamy medium sands. Weathering sandstone occurs at depths greater than 60cm.

Soils suffer a slight to moderate risk of drought. The variability of the susceptibility to drought generates a pattern limitation, restricting this land to Subgrade 3a.

2.2 Subgrade 3b

Three areas of Subgrade 3b land occur on the site. The first is in the north of the site, to the west of Owlthorpe Rise. Soils are similar to those described in section 2.1 above. This land is moderately sloping (8°). The limiting factor restricting the ALC grade of this land is slope.

The second area in Subgrade 3b consists of restored land in the north-eastern boundaries of the site, between a strip of Non-Agricultural land and Mosborough High Street. Soils are poorly drained, falling within Wetness Class IV. Medium sandy loam topsoils overlie silty clay subsoils, which are gleyed and slowly permeable at between 30 cm and 40cm depth. The slope angle and direction change rapidly over short distances in this area. This severely hinders mechanical operations and the complexity of the pattern of microrelief limits this land to Subgrade 3b.

The final area of Subgrade 3b land lies in the extreme north of the site adjacent to the B6054 road (Quarry Hill). Soils here have been restored. Soil profiles are poorly drained, falling within Wetness Class IV. Soils consist of medium silty clay loam topsoils over silty clay subsoils which are gleyed and slowly permeable at 30cm and 40cm depth. This land is limited to Subgrade 3b by severe soil wetness.

2.3 Urban

Urban land consists of roads and a macadam surfaced path in the south of the site.

2.4 Non-Agricultural

Areas of Non-Agricultural land on the site are as follows: an area around the disused nurseries in the north of the site has not been used for agriculture for many years and is now invaded by scrub. Land in the east of the site, west of Queen Street is in a similar condition. This also applies to most of the land south of Mosborough High Street. However, one block of land adjoining the houses is used as a caravan park. The area around *Bridle Style and Meadow Crescent* in the south of the site has been prepared for development and is no longer in agricultural use. The final block of Non-Agricultural Land is in the playing fields in the south of the site.

2.5 Woodland

A small area of land adjacent to Mosborough High Street is under mature woodland.

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MAP