MAFF Ministry of Agriculture Fisheries and Food

AGRICULTURAL LAND CLASSIFICATION
ALLERTON, NORTH YORKSHIRE
PROPOSED MOTORWAY SERVICE AREA

November 1995

ADAS
Leeds Statutory Group

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SUMMARY

An Agricultural Land Classification (ALC) survey of 12.5 ha of land at Allerton, North Yorkshire was carried out during November 1995.

At the time of the survey, 11.2 ha of this was agricultural land of which 6.7 ha falls within Grade 2. Soils in this grade generally consist of very slightly stony or slightly stony medium to light textured topsoils and upper subsoils overlying very light textured lower subsoils. Heavy textured, slowly permeable horizons occur within the subsoil in parts of the site. Soil drainage is variable, ranging from Wetness Class I to III. Very slight topsoil stoniness, soil wetness, soil droughtiness and pattern limitations restrict this land to Grade 2.

The remaining 4.5 ha of agricultural land on the site falls within Subgrade 3a. Soils generally consist of light or very light textured topsoils over very light textured subsoils. These soils are well drained and the land is restricted to this subgrade by a slight soil droughtiness limitation.

Gelsholme Plantation covers 1.3 ha of land and is classed as Woodland.

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AGRICULTURAL LAND CLASSIFICATION (ALC) REPORT ON LAND AT ALLERTON, NORTH YORKSHIRE. PROPOSED MOTORWAY SERVICE AREA.

1. INTRODUCTION AND SITE CHARACTERISTICS

1.1 Location and Survey Methods

The site lies to the south of the A59 York to Harrogate road and adjoins the southbound carriageway of the A1. It lies around National Grid Reference SE 412 570. Adjacent land, west of the A1, had been previously surveyed by Leeds Statutory Group (Job References 66/90, Flaxby Covert and 90/90, A1(M) Walshford to Dishforth). The site described in this report was surveyed in November 1995. Soils were examined by hand auger borings at a density of one boring per hectare at points pre-determined by the National Grid. Additional borings were made to confirm ALC grade boundaries. Soil profiles were described in detail at four inspection pits. Topsoil stoniness was assessed by sieving at two further points in the north of the site.

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, 89.6% of the site was in agricultural use under arable rotation. The remainder of the site is Woodland. Site altitude varies from approximately 37m to 40m. The land is mostly level (0-1°), but is very gently sloping (2° to 4°) in the south where the land rises around a low hill.

1.3 Climate

Grid Reference	: SE412570
Altitude (m)	: 38
Accumulated Temperature above 0°C (January - June)	: 1362 day °C
Average Annual Rainfall (mm)	: 670
Climatic Grade	: 1
Field Capacity Days	: 159
Moisture Deficit (mm) Wheat	: 101
Moisture Deficit (mm) Potatoes	: 91

1.4 Geology, Soils and Drainage

A thick covering of drift deposits consisting of till and glaciofluvial sands and sand and gravel extends across the whole site.

All soil profiles across the site are deep, extending to at least 120cm. Soil characteristics are variable, but two main soil types may be identified. The first and most extensive soil type comprises soils with very slightly stony to slightly stony (3% to 7% stones > 2cm) medium to light textured (sandy clay loam or medium sandy loam) topsoils and upper subsoils. The upper subsoils are generally gleyed, sometimes within 40cm depth. Very light textured (loamy medium sand or medium sand) lower subsoils lie below 55cm depth. In some places, a layer of heavy textured, slowly permeable soil occurs within the subsoil. Soil drainage is variable, depending on the depth to a slowly permeable horizon, if present. Drainage ranges from Wetness Class I (well drained) to Wetness Class III (imperfectly drained).

The second soil type consists of light to very light textured topsoils (medium sandy loam or loamy medium sand) overlying very light textured (loamy medium sand or medium sand) subsoils. Soils are well drained, falling within Wetness Class I.

2. AGRICULTURAL LAND CLASSIFICATION

The ALC grades occurring on this site are as follows:

Grade/Subgrade	Hectares	Percentage of Total Area
1		
2	6.7	53.6
3a	4.5	36.0
3b		
4		
5		
(Sub total)	(11.2)	(89.6)
Urban		
Non Agricultural		
Woodland	1.3	10.4
Agricultural Buildings		
Open Water		
Land not surveyed		
(Sub total)	(1.3)	(10.4)
TOTAL	12.5	100

2.1 Grade 2

Two areas of Grade 2 land occur across the site; one in the north and one in the south-west. Soils in this grade are variable. Topsoils and upper subsoils are light to medium textured (mostly medium sandy loam but occasionally sandy clay loam) and very slightly stony or slightly stony (3% to 7% stones > 2cm). Upper subsoils are generally gleyed, sometimes within 40cm depth. Lower subsoils are very light textured, consisting of loamy medium sand or sand and occur below 55cm depth. Gleyed, slowly permeable heavy clay loam or clay horizons sometimes occur within the subsoil. Soil drainage varies from well drained (Wetness Class I) to imperfectly drained (Wetness Class III) depending on the depth at which subsoils become slowly permeable, if at all.

Although some individual borings fall within Grade 1, most profiles are limited to Grade 2 by either very slight topsoil stoniness, soil wetness or soil droughtiness limitations. The variability of soil properties generates a very slight pattern restriction which prevents any of this land being mapped as Grade 1.

2.2 Subgrade 3a

Land in this subgrade lies across the centre and south-east of the site. Soils generally consist of medium sandy loam or loamy medium sand topsoils over loamy medium sand or medium sand subsoils. Soils are well drained (Wetness Class I) and this land is restricted to Subgrade 3a by a slight soil droughtiness limitation.

2.3 Woodland

Gelsholme Plantation in the centre of the site is classed as Woodland.

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