MAFF Ministry of Agriculture Fisheries and Food

AGRICULTURAL LAND CLASSIFICATION
LAND AT LEE LANE,
ROYSTON, SOUTH YORKSHIRE
PROPOSED MIXED HOUSING AND
EMPLOYMENT DEVELOPMENT
FEBRUARY 1994

ADAS
Leeds Statutory Group

Job No:- 29/94
MAFF Ref:- EL 10280
Commission No:- 952

2FCS 6832

SUMMARY

An Agricultural Land Classification Survey was carried out on land at Lee Lane, Royston, South Yorkshire between December 1993 and February 1994.

18.1ha of the site is agricultural land of which 1.5ha falls within Subgrade 3a. Soils consist of medium clay loam topsoils overlying medium or heavy clay loam upper subsoils and very stony coarse sand lower subsoils. Soil profiles are well drained (Wetness Class I) and the land is limited to Subgrade 3a by droughtiness.

The remaining agricultural land (16.6ha) falls within Subgrade 3b. Two soil types occur: Firstly, poorly drained soils (Wetness Class IV). These consist of medium or heavy clay loam topsoils over gleyed, heavy clay loam upper subsoils and heavy clay loam or clay lower subsoils which are slowly permeable at less than 40cm depth. This land is limited to Subgrade 3b by severe soil wetness and workability restrictions.

The second soil type in this subgrade comprises well drained soils (Wetness Class I). Slightly stony medium clay loam, sandy clay loam or medium sandy loam topsoils overlie moderately stony to very stony coarse sand subsoils. This land is limited to Subgrade 3b by severe summer droughtiness.

0.4ha of the site is covered by rough scrub, classified as Non Agricultural Land.

Urban land, consisting of a road (the B6428, Lee Lane), covers 0.4ha..

CONTENTS

MAP

AGRICULTURAL LAND CLASSIFICATION REPORT: LAND AT LEE LANE, ROYSTON, SOUTH YORKSHIRE: PROPOSED MIXED HOUSING AND EMPLOYMENT DEVELOPMENT

1. INTRODUCTION AND SITE CHARACTERISTICS

1.1 Location and Survey Methods

The site lies either side of Lee Lane (the B6428) on the western edge of the village of Royston and is centred on National Grid Reference SE349113. Survey work was carried out between December 1993 and February 1994 when soils were examined by hand auger borings at 100m intervals predetermined by the National Grid. Additional borings were made to refine grade boundaries. One soil inspection pit was dug to clarify soil depth and to assess the subsoil stoniness. Land quality was assessed using 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

Most of the land surveyed was agricultural land under permanent grass or set-aside. The remainder of the site consisted of Urban land and Non Agricultural land. The site lies at 74 to 85m AOD. Land in the south is gently to moderately sloping (3-5°) with a northerly aspect. The remainder is level. Surface micro-relief is irregular in the parts of the site affected by mining subsidence.

1.3 Climate

Grid Reference	: SE 349113
Altitude (m)	: 75
Accumulated Temperature above 0°C (January-June)	: 1341 Day°C
Average Annual Rainfall (mm)	: 659
Climatic Grade	: 1
Field Capacity Days	: 151
Moisture Deficit (mm) Wheat	: 99
Moisture Deficit (mm) Potatoes	: 88

1.4 Geology, Soils and Drainage

The site is underlain by sandstones and shales of the Carboniferous Coal Measures Series. There is little drift cover and most soils are formed from weathering shale, except in the northern part of the site where there is a small area of glaciofluvial sand and gravel.

Two main soil types occur across the site. The first consists of poorly drained (Wetness Class IV), or occasionally imperfectly drained (Wetness Class III) soils formed in weathering shale. Topsoils generally consist of very slightly stony (3-5%, total, small and medium subrounded and subangular sandstones and hardstones) medium or heavy clay loam. Very slightly stony, gleyed, medium or heavy clay loam upper subsoils occur in places. Lower subsoils consist of stoneless, gleyed, heavy clay loam or clay which is slowly permeable at between 30 and 45cm depth. These soils are similar to those of the Dale Association as mapped by the Soil Survey and Land Research Centre.

The second soil type comprises well drained (Wetness Class I) soils formed in glacio fluvial sand and gravel. Topsoils generally consist of slightly stony (8-10%, total, rounded and subrounded very small, small and medium sandstones and hardstones) medium clay loam, sandy clay loam or medium sandy loam. Slightly stony, medium or heavy clay loam upper subsoils occur in places. Lower subsoils consist of coarse sand. This is moderately stony (20%, total, small and medium rounded sandstones, hardstones and gravel) becoming very stony (60%, total) below 50cm depth. These soils are similar to those of the Newport 2 Association as mapped by the Soil Survey and Land Research Centre.

2. AGRICULTURAL LAND CLASSIFICATION

The ALC grades occurring on this site are as follows:

Grade/Subgrade	Hectares	Percentage of Total Area
1		
2		
3a	1.5	7.9
3b	16.6	87.9
4		
5		
(Sub total)	(18.1)	(95.8)
Urban	0.4	2.1
Non Agricultural	0.4	2.1
Woodland - Farm		
- Commercial		
Agricultural Buildings		
Open Water		
Land not surveyed		
(Sub total)	(0.8)	(4.2)
TOTAL	18.9	100

2.1 Subgrade 3a

A small area of Subgrade 3a land lies to the south of the road in the west of the site. Soil profiles are well drained (Wetness Class I) and topsoils consist of slightly stony (18%, total, small and medium rounded sandstones and hardstones) medium clay loam. Medium clay loam or heavy clay loam upper subsoils pass into very stony (50%, total,) coarse sand lower subsoils below about 50cm depth. This land is limited to Subgrade 3a by slight summer droughtiness.

2.2 Subgrade 3b

Two soil types occur within this subgrade. The first, and most extensive is poorly drained (Wetness Class IV). Topsoils consist of very slightly stony (3-5%, total, small and medium subrounded and rounded sandstones and hardstones) medium or heavy clay loam over, in places, very slightly stony, gleyed, heavy clay loam upper subsoils. Lower subsoils consist of stoneless, gleyed heavy clay loam or clay which is slowly permeable at less than 40cm depth. This land is limited to Subgrade 3b by severe soil wetness and workability restrictions.

The second main soil type is well drained (Wetness Class I). Topsoils consist of slightly stony (8-10%, total, small and medium rounded sandstones, hardstones and gravel) medium clay loam or sandy loam over subsoils of moderately stony (20%, total) coarse sand which becomes very stony (60%, total) below 50cm depth. This land is restricted to Subgrade 3b by severe summer droughtiness.

2.3 Non Agricultural Land

This consists of a small area of rough scrub in the north west of the site.

2.4 Urban Land

The B6428 road is classed as Urban Land.

RPT File: 2 FCS 6832
Leeds Statutory Group

MAP