AGRICULTURAL LAND CLASSIFICATION

PROPOSED SEACROFT & CROSSGATES BYPASS
LEEDS
CORRIDOR OF INTEREST

MAFF
LEEDS REGIONAL OFFICE

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AGRICULTURAL LAND CLASSIFICATION REPORT ON LAND WITHIN THE CORRIDOR OF INTEREST OF THE PROPOSED SEACROFT AND CROSSGATES BY PASS, LEEDS

SECTION 1: Introduction and Site Characteristics

1.1 Location

The corridor of interest runs along the northern and eastern outskirts of Leeds, starting on the ring road at Roundhay Park Lane in the north and finishing on the A63(T) at Swillington Common in the south east. It has an approximate length of 10 km and varies in width from 350 m to 1,500 m.

1.2 Survey Methods

Survey work was carried out between May and August 1991 when soils were examined by hand auger borings at 100 m intervals at points predetermined by the National Grid. Further borings were made, where necessary, to refine grade boundaries and confirm soil types.

All land quality assessments were made using the methods described in "Agricultural Land Classification of England and Wales: Revised Guidelines for Grading the Quality of Agricultural Land" (MAFF 1988).

1.3 Land Use

Most of the agricultural land is either arable or permanent grazing. Cereals and oilseed rape are the main crops with small areas of potatoes, peas and soft fruit occurring, mainly in the southern half of the corridor.

1.4 Climate and Relief

Average Annual Rainfall varies from 740 mm in the northern part of the corridor to 700 mm in the south. Accumulated temperatures above 0°C (January to June) vary from 1,261 day°C in the north to 1,314 day°C in the south and the soil is at field capacity for 182 days a year in the north, falling to 163 days a year in the south.

The combination of rainfall and temperature impose an overall climatic limitation of Grade 2 on all land within the corridor. Summer moisture deficits of 84 to 94 mm for winter wheat and 68 to 82 mm for potatoes indicate a slight to moderate drought limitation on the light textured and shallow soils which occur over sandstone in the central and southern parts of the corridor.

1.5 Soils and Geology

Carboniferous Coal Measures consisting of interbedded shales and sandstones underlie the corridor of interest although this has a cover of boulder clay over much of the route. Where sandstone occurs close to the surface the soils are light to medium textured, well drained or moderately well drained (Wetness Classes I or II) and, in places, shallow. Where there are deposits of boulder clay or weathering shale occurs close to the surface, the soils are medium to heavy textured, imperfectly or poorly drained, and fall in Wetness Classes III or IV.

SECTION 2: Agricultural Land Classification Grades

The ALC grades occurring in the corridor of interest are as follows:-

Grade	Hectares	Percentage of Total Area
2	46.2	8.1
3a	51.2	9.0
3b	309.2	54.2
Non Agricultural	73.0	12.8
Agricultural Buildings	5.2	0.9
Urban	34.1	6.0
Not Surveyed (Access Refused)	51.8	9.0
	570.7	100%

2.1 Grade 2

Grade 2 land occurs in 2 small areas in the far north of the corridor (near Red Hall), and in 3 separate areas in the centre and south of the corridor. Generally land in this grade consists of medium or fine sandy loam topsoils (although loamy sand and medium clay loam topsoils also occur) overlying medium sandy loam, loamy medium sand or medium sand subsoils. Soil droughtiness is slightly restricting and, along with climate, is the main restricting factor on ALC grade.

The Grade 2 land in the far south of the corridor is an exception to the above and the soil in this area consists of medium clay loam topsoils overlying medium or heavy clay loam subsoil. Soil wetness is the main limiting factor on ALC grade in this case.

Subgrade 3a

Six small areas of subgrade 3a land occur scattered throughout the corridor. In most cases topsoils consist of medium sandy loam and subsoils of sandy loam, loamy sand or sand. Weathering sandstone often occurs at depths of 40 to 60 cm. These soils are well drained (Wetness Class I), and soil droughtiness is the main limitation on ALC grade.

In the case of the land in subgrade 3a which lies to the north and west of Swillington Common Farm, topsoils consist of medium clay loam overlying medium clay loam, heavy clay loam or clay subsoils. Slowly permeable layers often occur at depths of between 50 and 60 cm and profiles are imperfectly drained, falling in Wetness Class III. Soil wetness is, thus, the overall limiting factor on ALC grade in this case.

Subgrade 3b

Large areas of subgrade 3b land occur in the central part of the corridor north of Whinmoor. Most of this contains medium to heavy textured topsoils (medium or heavy clay loam) overlying heavy textured subsoils (generally heavy clay loam, silty clay or clay). These soils are poorly drained, falling in Wetness Class IV, and soil wetness and workability problems are the main limiting factors on ALC grade. In the areas of subgrade 3b land which lie on the crests of the hills around Lazencroft Farm and Barrowby Lane, topsoils and subsoils are light textured (often medium sandy loam topsoils overlying loamy sand or sand subsoils) and pass into sandstone at depth. These soils are well drained, falling in Wetness Class I, but are limited to subgrade 3b by droughtiness.

Non Agricultural Land

This occurs scattered throughout the corridor of interest and includes woodland, scrubland, playing fields and parkland.

Agricultural Buildings

This includes a number of farms and agricultural outbuildings which occur within the corridor.

Urban

Land classified as urban includes existing roads and railways, a disused railway line and a small number of buildings and amenity areas.

Unsurveyed Areas

The ALC grades placed on the land to the north and south of the large unsurveyed area near Pendas Fields suggests that much of this is also likely to be of subgrade 3b. Definitive grading of this area however, cannot be carried out until access is obtained.

Resource Planning Group
Leeds Regional Office
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MAPS