

AGRICULTURAL LAND CLASSIFICATION

PORT WAKEFIELD

**Proposed Channel Tunnel Rail
Freight Terminal**

(Amended Application area)

**ADAS
Leeds Regional Office**

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MAP

1. Agricultural Land Classification

1. INTRODUCTION AND SITE CHARACTERISTICS

1.1 Location

The site is located around National Grid Reference SE 390 245 north of Normanton on each side of the Normanton - Leeds railway. The M62 motorway runs from east to west along the southern boundary of the site with junction 31 lying close to the eastern boundary.

1.2 Survey Method

The area east of the Normanton - Leeds Railway was surveyed in February 1992 as part of the land covered by the earlier application which also extended south of the M62. The area west of the railway was first surveyed in June 1991 for one of the Wakefield Unitary Development Plan proposals. Further work was carried out in this area in January 1992, after the Port Wakefield proposals were amended to include this land, to provide further ALC details and to cover a small area near the canal which had not been included in the UDP proposals. In all the surveys soils were examined by hand auger borings at a density of one boring per hectare at points predetermined by the National Grid. Additional borings were made and soil pits dug where required to provide information on soil structure and to refine grade boundaries. A large numbers of these were in the area west of the railway at Lower Altofts where land is of a higher quality than elsewhere in the application area.

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).

1.3 Land Use

Urban use accounts for over 30% of the land within the application area. Land in this category consists of housing, tracks, sewage works, motorway embankments and a land fill site.

Restored land is used for permanent pasture and non-agricultural land consists of planted woodland allotments and vacant land. The remaining undisturbed land is largely in arable use.

1.4 Climate and Relief

Average Annual rainfall (AAR) is approximately 625 mm. Accumulated temperature (ATO) above 0°C between January and June is 1397 day °C, and land is at field capacity for 138 days a year.

Climatic factors do not impose any limitations on ALC grade.

The site is gently or occasionally moderately undulating at an average altitude of 20 m a.o.d and there are no gradients steep enough to restrict agricultural use.

1.6 Geology and Soils

The area is underlain by Coal Measure shales and sandstones. Naturally formed soils are developed on these deposits or on Head deposits derived from them. Much of the site, however, has been disturbed by coal working and tipping and there are large areas of disturbed and/or restored land, especially east of the Normanton - Leeds railway. The resultant soils are variable and range from well drained sandy loam topsoils over similar subsoils to poorly drained medium or heavy clay loam topsoils over slowly permeable clay subsoils. Disturbed and restored areas often contain compacted rubble and shale below a thin heavy topsoil.

2. AGRICULTURAL LAND CLASSIFICATION

The ALC grades occurring on the site are as follows:

Grade	Hectares	Percentage of Total survey area
2	43.5	27.9
3a	17.4	11.2
3b	37.5	24.1
4		
Urban	49.4	31.7
Non-agricultural	7.5	4.8
Farm Buildings	0.4	0.3
TOTAL	<u>155.7</u>	<u>100</u>

2.1 Grade 2

Land in this grade is extensive west of the railway at Lower Altofts. Soils consist of sandy loam medium clay loam or sandy clay loam topsoils over similar upper subsoils. Lower subsoils vary from medium sandy loam or loamy medium sand to heavy silty clay loam, silty clay or clay. The coarser textured or unmottled medium textured subsoils do not contain slowly permeable horizons and are well drained, falling into Wetness Class I. The heavier subsoils are often slowly permeable below about 70 cm depth and thus fall within Wetness Class II.

Slight soil wetness and workability problems are limiting factors on land in this grade in winter and slight droughtiness in summer.

2.2 Subgrade 3a

Subgrade 3a land occurs north of the sewage works near Millhouse Farm and more extensively around Silkstone Row at Lower Altofts. There is also a small area adjoining the railway south of Pope Street. In the area around Silkstone Row soils consist largely of medium clay loam topsoils over similar upper subsoils passing to slowly permeable heavy clay loam or clay at depths of 45 - 60 cm. Profiles of this type are imperfectly drained (Wetness Class III) and limited to subgrade 3a by winter wetness and workability problems. A few profiles with coarse textured subsoils (medium sand or loamy medium sand) also occur within this area and are limited to subgrade 3a by droughtiness. The area of subgrade 3a adjoining the railway south of Pope Street contains shallow slightly stony sandy loams over weathering sandstone bedrock. These well drained (Wetness Class I) soils are also limited by droughtiness. The land near Millhouse Farm is more variable especially in the subsoils which often consist of interbedded light and heavy material and profiles are limited to subgrade 3a by either wetness or droughtiness.

2.3 Subgrade 3b

Much of the land in this subgrade is associated with the restored colliery spoil tips in the north eastern part of the site. Soils in these areas consist of heavy clay loam topsoils over similar but compacted subsoils, often with shale at depth. Other relatively undisturbed areas within this subgrade in the north west and near Silkstone Row consist of medium clay loam topsoils over slowly permeable heavy clay loam subsoils. In both cases soils are poorly drained and fall within Wetness Class IV.

Severe soil wetness and workability problems are the over-riding limiting factors on land in this subgrade.

2.4 Urban

This consists of railways, tracks, sewage works, motorway embankments, industrial developments and a land fill site.

2.5 Non-Agricultural

Land in this grade includes recently planted woodland, and disused or derelict areas.

2.7 Farm Buildings

The farm buildings at the Low House Farm are placed within this category.

Resource Planning Group
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