



AGRICULTURAL LAND CLASSIFICATION
NORTH YORKSHIRE MINERALS
LOCAL PLAN
LAND AT WYKEHAM
SEPTEMBER 1995

ADAS
Leeds Statutory Group

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SUMMARY

A detailed survey of 101.5 ha of land west of the existing Wykeham quarry was conducted in September 1994 for the North Yorkshire Minerals Local Plan.

Soils on the site are mostly developed from river alluvium or peaty deposits.

17.4ha of Grade 2 were mapped. These comprise peat soils with wetness limitation and medium to light textured soils with a droughtiness limitation.

Subgrade 3a occupies 14.5 ha. This land contains some alluvial soils with a soil wetness problem and peaty soils with a soil pattern limitation.

The remaining agricultural land (35.1 ha) falls within subgrade 3b. Here alluvial soils with a significant soil wetness limitation are found.

Non-agricultural (1.5 ha), woodland (2.0 ha) and unsurveyed land (31.0 ha) were also identified.

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1. AGRICULTURAL LAND CLASSIFICATION

AGRICULTURAL LAND CLASSIFICATION REPORT ON LAND AT WYKEHAM FOR NORTH YORKSHIRE MINERALS LOCAL PLAN

1. INTRODUCTION AND SITE CHARACTERISTICS

1.1 Location and Survey Methods

101.5 ha of land to the east of the existing Wykeham quarry were surveyed in detail in September 1995. The site has a centroid grid reference of TA000822. Soils on the site were examined using hand held auger borings at a density of one boring per hectare at locations pre-determined by the National Grid. Four soil profile pits were dug to examine the soil in greater detail. Most of the site is covered by the Soil Survey Record No. 96 Sheet SE97N198S (See 1.4 Geology and soils). 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 survey 66% of the site was in agricultural use growing arable crops including potatoes, cereals and peas. Land is mostly level at an altitude of 30m A.O.D.

1.3 Climate

Grid Reference	: TA000822
Altitude (m)	: 30m
Accumulated Temperature above 0°C (January - June)	: 1347 °C
Average Annual Rainfall (mm)	: 691
Climatic Grade	: 1
Field Capacity Days	: 172
Moisture Deficit (mm) Wheat	: 103
Moisture Deficit (mm) Potatoes	: 93

1.4 Geology, Soils and Drainage

Solid strata are not exposed within a metre of the surface on the site. Soils are all developed from glacial and post glacial drift deposits. These mostly comprise river alluvium and peat. Alluvium in the east of the site and toward the centre of the western survey block is heavy textured with either a clay or heavy clay loam topsoil over similar textured clayey, slowly permeable subsoils. Occasionally lower subsoils become lighter in texture after a medium sandy loam. These soils are Soil Wetness Class IV, and correspond with the Fladbury and Stixwold series.

Remaining alluvial soils found near the River Derwent have medium to heavy textured topsoils and subsoils. Subsoils are gleyed but not slowly permeable and these soils are Wetness Class II, and correspond with the Trent series.

In the far east and west of the site peaty and organic mineral soils of the Altcar association are found. These extend to at least 60 cm depth below which are a mixture of textures including sandy loam, clay and medium clay loam. Subsoils are occasionally acidic below 50 cm depth. The peat has been drained and is assessed as soil Wetness Class III. A small area in the east of the site contains well drained (Wetness Class I) medium to light textured, slightly stony soils developed over sand and gravel. They have a slight droughtiness limitation.

This pattern of soils corresponds with the distribution as mapped by the Soil Survey Record No. 96 (1986).

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	17.4	17.1
3a	14.5	14.3
3b	35.1	34.6
4		
5		
(Sub total)	(67.0)	(66.0)
Urban		
Non Agricultural	1.5	1.5
Woodland	2.0	2.0
Agricultural Buildings		
Open Water		
Land not surveyed	31.0	30.5
(Sub total)	(34.5)	(34.0)
TOTAL	<u>101.5</u>	<u>100</u>

2.1 Grade 2

Grade 2 land comprises two different soil types. Firstly in the north of the Grade 2 area are deep, medium to light textured soils. This land is subject to a slight droughtiness limitation. To the south of this land are found peaty soils.

Humified peat usually extends to 60 cm, below which are found a variety of mineral soil textures. Soils are not acidic above 50 cm depth and are assessed as Soil Wetness Class III. This land has a slight soil wetness limitation.

2.2 Subgrade 3a

Subgrade 3a land occurs in the western part of the site. Near the River Derwent are found medium to heavy textured topsoils over medium textured gleyed but not slowly permeable subsoils. Soil wetness and workability limit the ALC grade of this land. In the extreme west are found a mixture of peaty and organic mineral soils all Soil Wetness Class III. Although some land is of Grade 2 quality the variable texture of the topsoil imposes a pattern limitation of Subgrade 3a.

2.3 Subgrade 3b

All the subgrade 3b land is subject to a significant soil wetness and workability limitation. Topsoils are either clay or heavy clay/silty clay loam over similar or occasionally lighter textured usually slowly permeable subsoils. Profiles are generally Wetness Class IV but occasionally Class II.

2.4 Non-Agricultural

This comprises scrub vegetation on the levée of the River Derwent.

2.5 Woodland

This is found in the south east of the site.

2.6 Not surveyed

Access refusal resulted in the central part of the site being unsurveyed.

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MAP