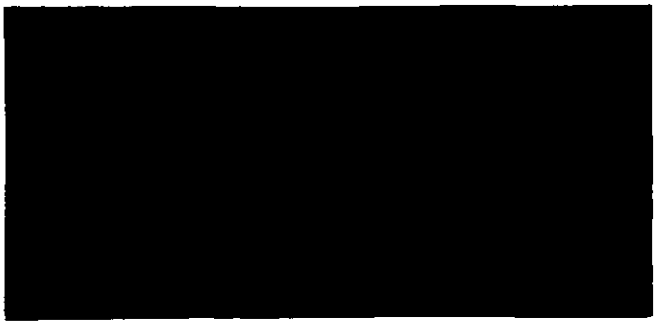

MAFF Ministry of Agriculture Fisheries and Food

AGRICULTURAL LAND CLASSIFICATION
NORTH YORKSHIRE MINERALS LOCAL PLAN
FOXCLIFFE QUARRY
NORTH YORKSHIRE
SEPTEMBER 1995

ADAS
Leeds Statutory Group

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SUMMARY

A detailed Agricultural Land Classification (ALC) survey of 33.6 ha of land north of Knottingley (North Yorkshire Minerals Local Plan, Foxcliffe Quarry) was carried out in August 1995.

At the time of the survey, 30.9 ha was agricultural land in an arable rotation including potatoes, cereals, sugar beet and rape. 4.9 ha of this land falls in Grade 2. The soils are deep and well drained with light textured topsoils and upper subsoils overlying very light lower subsoils. The soils are naturally susceptible to a moderate droughtiness limitation which can be alleviated by the use of irrigation water available on this site. The land is restricted to Grade 2 by droughtiness.

20.5 ha of the site is of Subgrade 3a quality. The soils are well drained with slightly stony medium textured topsoils overlying similar textured subsoils which are moderately stony or very stony. Limestone rock occurs at below 35 cm depth. These soils are naturally susceptible to a severe droughtiness limitation which can be ameliorated by the use of supplies of irrigation water available on the site. This land is restricted to Subgrade 3a by a moderate droughtiness limitation.

5.5 ha of the site falls within Subgrade 3b. Soils are similar to those on the Subgrade 3a land, but topsoils are stonier (up to 18% medium and large limestones) in places. The land is undulating, with slopes of 8°-9° in places. This land is limited to this subgrade by topsoil stoniness and slope.

Urban land covers 0.7 ha of the site. This comprises an old quarry, a track and a paved storage area.

1.9 ha of the site is Woodland.

A slurry store is classed as Agricultural Buildings (0.1 ha).

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AGRICULTURAL LAND CLASSIFICATION REPORT ON LAND AT FOXCLIFFE QUARRY (NORTH YORKSHIRE MINERALS LOCAL PLAN)

1. INTRODUCTION AND SITE CHARACTERISTICS

1.1 Location and Survey Methods

The site lies approximately 2 km north of Knottingley, between Byram Park and Burton Salmon. It covers 33.6 ha. Survey work was carried out in September 1995, when the soils were examined by hand auger borings at 100 m intervals predetermined by the National Grid. Two soil pits were dug to allow more detailed examintion of the profiles.

The 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 92% of the site was in agricultural use. All of this was used for potatoes, wheat, sugar beet and rape in rotation. Three small areas of Woodland lie across the site. Urban land consists of an old quarry, access track and concrete waste storage area. A slurry store in the south of the site is classed as Agricultural Buildings.

Site altitude varies from 10m in the south to 18 m in the north-west. Most of the site is level to gently sloping (0 - 3°). Some land south of the track is strongly sloping (8°-9°), with variable aspect.

1.3 Climate

Grid Reference	: SE 492 265
Altitude	: 15
Accumulated Temperature above 0°C (January - June)	: 1400 day°C
Average Annual Rainfall (mm)	: 605
Climatic Grade	: 1
Field Capacity Days	: 128
Moisture Deficit (mm) Wheat	: 106
Moisture Deficit (mm) Potatoes	: 98

1.4 Geology, Soils and Drainage

The area is underlain by Magnesian Limestone. Drift deposits cover bedrock to a depth of at least 120 cm in the north-east of the site and in a small area to the west of the old quarry. Otherwise, soils are formed from weathering limestone.

The soils are well drained, falling in Wetness Class I. Two soil types occur. The first type covers most of the site. These soils generally consist of slightly stony to moderately stony, sandy clay loam or medium sandy loam topsoils overlying similar but stonier subsoils, with weathering limestone lying at below 35 cm depth. These soils are similar to those of the Aberford series as mapped by the Soil Survey and Land Research Centre. The second soil type is confined to the north-east of the site and a small area west of the old quarry. Soil profiles are deep and well drained. Loamy medium sand topsoils and upper subsoils overlie medium sand lower subsoils.

2. AGRICULTURAL LAND CLASSIFICATION

The ALC grades occurring on this site are as follows:

Grade/Subgrade	Hectares	Percentage of Total Area
1		
2	4.9	14.6
3a	20.5	61.0
3b	5.5	16.4
4		
5		
(Sub total)	(30.9)	(92.0)
Urban	0.7	2.1
Non Agricultural		
Woodland	1.9	5.6
Agricultural Buildings	0.1	0.3
Open Water		
Land not surveyed		
(Sub total)	(2.7)	(8.0)
TOTAL	33.6	100

The distribution of ALC grades and subgrades across most of the site, excluding the Subgrade 3b land in the south (2.3 below), is limited by soil droughtiness. The availability of adequate supplies of irrigation water has been considered in determining final ALC grade. This has ameliorated soil droughtiness limitations by one grade or subgrade.

2.1 Grade 2

Two areas of Grade 2 land occur on the site: one in the north-east and one to the west of the old quarry. Soils in both areas are similar. Stoneless, loamy medium sand topsoils and upper subsoils overlie lower subsoils consisting of medium sand. Soil profiles are well drained, falling within Wetness Class I. The interaction of climate and soils generates a moderate susceptibility to drought. However, this may be alleviated by the use of irrigation water vailable on this site. This land is, therefore, restricted to Grade 2 by a slight droughtiness limitation.

2.2 Subgrade 3a

Most of the site is of Subgrade 3a quality. Soils generally consist of slightly stony (6-14%, total limestones) sandy clay loam or medium sandy loam textured topsoils. These overlie similar textured but stonier (25 - 65% total limestones) subsoils with Limestone bedrock lying below 35 cm depth. Climate and soil factors generate a severe droughtiness limitation. However, this may be alleviated by the use of irrigation water available on this site. This land is, therefore, restricted to Subgrade 3a by a moderate droughtiness limitation.

2.3 Subgrade 3b

The Subgrade 3b land lies in the south of the site. Soils are similar to those in 2.2 above except that, in places, topsoils are stonier (up to 18% medium and large limestones). The land is undulating with gradients up to 9° in places. This land is restricted to Subgrade 3b by slope and topsoil stoniness limitations.

2.4 Urban

This consists of an old quarry, a track and a paved area used to store farm waste.

2.5 Woodland

Three areas of Woodland occur across the site, including an area of new planting around the slurry store in the south of the site.

2.6 Agricultural Building

This refers to a slurry tank in the south of the site.

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