

STATEMENT OF PHYSICAL CHARACTERISTICS AND
AGRICULTURAL LAND CLASSIFICATION

METHLEY QUARRY
Proposed Further Extension

ADAS
Leeds Regional Office

June 1989

Lds.ALC4.Methley2

CONTENTS

1. STATEMENT OF PHYSICAL CHARACTERISTICS
2. AGRICULTURAL LAND CLASSIFICATION

MAPS

1. TOPSOIL RESOURCE
2. SUBSOIL RESOURCE
3. AGRICULTURAL LAND CLASSIFICATION

1. STATEMENT OF PHYSICAL CHARACTERISTICS

A. GENERAL INTRODUCTION

The site (grid reference SE 415270) lies on the terraces of the Rivers Calder and Aire between Methley and Castleford, about 15 km south east of Leeds. It covers approximately 26.2 hectares to the north east of the present quarry workings.

Survey work was carried out in May 1989 when soils were examined by hand auger boring at a density of one boring per hectare to a depth of one metre. Additional borings were made where necessary to refine soil and grade boundaries.

LAND USE

Almost all of the site is in arable use growing cereals. There are also small areas of rough grassland not in agricultural use around the site of Grange Farm and at the eastern extremity of the site.

CLIMATE

The average annual rainfall is approximately 620 mm and the medium accumulated temperature above 0°C (January-June) is 1400 °C. The site is at field capacity for about 137 days per year. There is thus no overall climatic limitation on the site. The relatively high soil moisture deficits of 108 mm for wheat and 99 mm for potatoes will, however, result in a slight droughtiness limitation on lighter soils.

GEOLOGY

"Second river terrace" sand deposits underlie the whole of the site and form a thick cover over the underlying Coal Measures. There is also a small area of clayey river alluvium at the eastern extremity.

DRAINAGE

Almost all of the soils on the site are well drained and fall within Wetness Class I. The small area of clayey alluvium is slowly permeable below the topsoil and falls within Wetness Class IV.

B. SOIL PROPERTIES

Two major soil types are identified:-

1. River Terrace Soils

These soils are generally deep and well drained. Topsoils consist of medium or coarse sandy loam over a similar or lighter, coarse textured subsoil. Loose coarse sand occurs occasionally below about 70 cm depth. Stoniness is not a problem, most soils being no more than very slightly stony.

2. Alluvial Soils

These soils occur at the eastern edge where the site extends on the Aire floodplain. Topsoils consist of medium or heavy silty clay loam passing into similar or heavier subsoils below about 25 cm depth.

C. SOIL RESOURCES

The topsoils and subsoil resources on the site are shown on the accompanying maps along with soil depth information.

TOPSOILS

Unit T1

This unit consists of light textured material derived from the "second river terrace deposits". Textures are usually of medium or coarse sandy loam.

Unit T2

This unit consists of medium or heavy silty clay loam derived from river alluvium.

2. SUBSOILS

a. Upper Subsoils

Unit U1

This consists of the medium sandy loam occurring immediately below the topsoil on the terrace gravels. It has a mean thickness of 40 cm.

b. Lower Subsoils

Unit S1

This is formed of very light terrace material, usually slightly stony coarse sand.

Unit S2

This unit consists of medium or heavy textured alluvial material and occurs only at the eastern extremity of the site.

2. AGRICULTURAL LAND CLASSIFICATION

The ALC grades occurring on the site are as follows

Grade	Hectares	Percentage of the total agricultural land area
2	25.3	100
Non Agricultural	0.9	-
Total	<hr/> 26.2	<hr/> 100

Slight droughtiness is the overriding limitation on all the agricultural land.

Grade 2.

Grade 2 land occurs over almost the whole site. Topsoils are usually of medium or coarse sandy loam over a similar or lighter subsoils. Although well drained (Wetness Class I) and easily worked at most times of the year, available water assessments indicate that slight summer droughtiness is a limitation and it is for this reason that the area is placed within Grade 2.

Non Agricultural Land

This consists of the site of Grange Farm and a small area of rough grass at the eastern edge of the site.

RPG Leeds
June 1989