AGRICULTURAL LAND CLASSIFICATION AND STATEMENT OF PHYSICAL CHARACTERISTICS

SWILLINGTON BRICK FACTORY, LEEDS
PROPOSED QUARRY EXTENSION

MAFF
Leeds Regional Office

October 1989

lds.AL1Swill.Fct

CONTENTS

MAPS

AGRICULTURAL LAND CLASSIFICATION
PROPOSED EXTENSION TO BRICKWORKS
QUARRY AT SWILLINGTON, LEEDS

1.1 INTRODUCTION

1.13 hectares of land to be taken by the proposed extension to a clay quarry at Swillington, Leeds (National Grid Reference SE 387316) were surveyed in October 1989. Soils were examined by hand auger borings and soil profile pits. Borings were made at a density of 6 per hectare at points predetermined by the National Grid.

1.2 CLIMATE AND RELIEF

Salient climatic parameters are as follows:-

Average Annual Rainfall (mm)	673
Mean Accumulated Temperature above 0°C (Jan-June)	1320
Duration of Field Capacity (Days)	154
Moisture Deposits mm Wheat	97
Potatoes	85

The rainfall and temperature figures indicate that there is no overall climatic limitation on ALC grade. None of the soils are droughty for wheat or potatoes.

The land slopes gently southwards. The average altitude is about 85 m a.o.d.

1.3 GEOLOGY, SOILS AND DRAINAGE

Carboniferous Coal Measures lie close to the surface in this area. Deposits of Boulder Clay drift are thin or absent and soils are all developed on solid strata. Soft shales have weathered to produce fine silty and clayey textured soils that are slowly permeable below the

topsoil. All profiles fall within soil Wetness Class IV.'

1.4 LAND USE

89% of the site is in agricultural use which is currently grassland.

Non agricultural and other uses (0.13 ha) are all associated with the farmhouse, its garden and accompanying outbuildings.

1.5 AGRICULTURAL LAND CLASSIFICATION

1.5.1 Subgrade 3b (1.0 ha 89% of land area)

All the farmland falls within subgrade 3b. The topsoil consists of medium silty clay loam over a gleyed, slowly permeable silty clay subsoil. Soil wetness is the critical limiting factor on this land.

1.5.2 Non Agricultural (0.1 ha 9% of land area)

This consists of the farm garden.

1.5.3 Farm Buildings (0.03 ha 2% of land area)

This includes the farmhouse and associated buildings.

Resource Planning Group
Leeds RO

October 1989

2. STATEMENT OF PHYSICAL CHARACTERISTICS
(Soil Properties and Resources)

Soils are all derived from weathered Carboniferous Coal Measure shales. One soil type was identified a description of which is included below.

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

Topsoil

This consists of a dark greyish brown, stoneless, distinctly mottled medium silty clay loam. The structure is moderately developed, medium subangular blocky with many fine pores and fissures. The topsoil corresponds with unit T1 on the accompanying maps.

Subsoil

More than one subsoil horizon was identified but for the purposes of this report is described as one unit. This consists of light grey, stoneless, heavy silty clay loam with many medium prominent ochreous mottles and a well developed coarse prismatic structure. The subsoil unit corresponds with unit S1 on the accompanying maps.

SWILLINGTON BRICKWORKS QUARRY EXTENSION

Soil Profile Pit Description

Land Use	Grass
Slope and Aspect	2°SE
Weather	Previously very dry

Horizon cm	
0-24	Dark greyish brown (2.5Y 4/2) stoneless; medium silty clay loam; common large distinct yellowish red (5YR 5/8) root mottles, moderately developed medium subangular blocky structure; many fine fibrous roots; very firm; very dry; non calcareous; gradual smooth boundary.
24-35	Greyish brown (2.5Y 5/2) stoneless, medium silty clay loam; common distinct medium reddish brown (5YR 4/4) mottles; moderately developed coarse angular blocky structure; common fine pores and fissures; firm; slightly moist; common fine fibrous roots; non calcareous; abrupt even boundary.
35-100	Light grey (10YR 7/2) stoneless, heavy silty clay loam; many medium prominent yellowish red (5YR 5/6) mottles; well developed coarse prismatic structure; firm; slightly moist; few very fine pores and fissures; few fine fibrous roots; non calcareous.