AGRICULTURAL LAND CLASSIFICATION
AND STATEMENT OF PHYSICAL CHARACTERISTICS

Proposed Quarry Extension at Swinescaif Road, South Cave, Humberside

MAFF
Leeds Regional Office

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AGRICULTURAL LAND CLASSIFICATION REPORT ON THE PROPOSED QUARRY EXTENSION AT SWINESCAIF ROAD, SOUTH CAVE, HUMBERSIDE

INTRODUCTION

This 9 hectare site lies about $1\frac{1}{2}$ km north of South Cave around National Grid reference of SE 928325. Soils were surveyed in August 1990 by hand auger borings located at 15 points predetermined by the National Grid. In addition a soil profile pit was dug to examine soil characteristics in greater detail. Land quality assessments were made using the revised guidelines published by MAFF in 1988.

CLIMATE AND RELIEF

Salient climatic parameters at the site are as follows:-

Average Annual Rainfall (mm)	695
Accumulated Temperature (above 0°C) Jan-June	1290
Field Capacity Days	158
Moisture Deficit (mm) wheat	96
potatoes	84

The above combination of rainfall and accumulated temperature impose an overall climatic limitation of grade 2. The site has a south westerly aspect with gentle and moderate slopes. Average altitude is 100 m a.o.d.

GEOLOGY, SOILS AND DRAINAGE

Soils are all developed on Cretaceous chalk, drift cover is very thin or absent. Profiles are shallow and stony and consist typically of 30 cm of slightly stony medium silty clay loam topsoil over a similar thickness of very stony medium clay loam or silty clay loam subsoil. Weathering bedrock occurs at about 60 cm. All soil profiles are freely drained and contain no slowly permeable layers (Wetness Class I). Droughtiness, however, is a significant limitation due to the high stone content of the subsoil.

AGRICULTURAL LAND CLASSIFICATION

Subgrade 3b (ha, % of total area)

All the agricultural land is limited to subgrade 3b by droughtiness.

Non Agricultural (ha, % of total area)

Three separate strips of woodland are included in this category.

Resource Planning Group Leeds Regional Office August 1990

STATEMENT OF PHYSICAL CHARACTERISTICS

One soil type occurs on the site, a description of which are given below. Topsoil and subsoil resources are shown on the accompanying maps along with soil depth and quantity information.

TOPSOILS

The topsoil is a dark brown slightly stony medium silty clay loam with a well developed medium subangular blocky structure. This soil corresponds with unit T1 on the topsoil resource map.

SUBSOILS

Usually a strong brown coloured fine sandy clay loam or medium clay loam with abundant small to large angular and subangular chalk and flint stones. The structure is well developed fine subangular blocky. The subsoil corresponds with unit S1 or the resource map.

SWINESCRAIF QUARRY

Soil Profile Description

Land Use Cereals Slope 5° SW

Weather Recently very dry

Horizon (cm)

- 1. 0-26 Dark brown (7.5YR 4/2) unmottled; medium silty clay loam; slightly stony (10%) with common medium angular and subangular chalk stones; dry; well developed medium subangular blocky; moderately weak; common fine pores and fissures; common fine fibrous roots; clear wavy boundary.
- 2. 26-60 Strong brown (7.5YR 4/6) unmottled fine sandy clay loam; very stony (60%) with abundant small to large angular and subangular chalk stones; dry; well developed fine subangular blocky; friable; common fine pores and fissures; few fine fibrous roots; merges into weathering chalk at 60 cm.