STATEMENT OF PHYSICAL CHARACTERISTICS AND AGRICULTURAL LAND CLASSIFICATION

PROPOSED CLAY EXTRACTION SITE
POT HOUSE, WEST BRETTON, WEST YORKSHIRE

MAFF
LEEDS REGIONAL OFFICE

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FILE REF: 2FCS 4794
PROJECT NO: 16/90

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1. STATEMENT OF PHYSICAL CHARACTERISTICS

A. GENERAL INTRODUCTION

This 14 hectare site (grid reference SE 285145) is located approximately 8 km south west of Wakefield town centre.

Survey work was carried out in March 1990 when soils were examined by hand auger boring at 100 m intervals at points predetermined by the National Grid.

Detailed soil description and sampling for laboratory analysis was carried out at inspection pits located at representative points on the site.

CLIMATE

The average annual rainfall in the area is approximately 740 mm. Accumulated temperature above 0°C between January and June is 1267 day°C and the land is at field capacity for about 177 days a year. These characteristics result in an overall climatic limitation of Grade 2.

GEOLOGY AND RELIEF

Shales and mudstones from the carboniferous coal measures underlie the site. The land slopes to the north west with gradients moderate and in places strong.

LAND USE

Agricultural land use on the site is predominantly permanent pasture with a small area in the west of the site bare fallow at the time of survey. A small area of urban land is found in the north of the site.

B. SOIL RESOURCES

Two major soil types were identified on the site. One soil type typically consists of a clay loam topsoil with variable clay loam upper subsoils overlying clay. Profile examination (soil profile pit 1) showed the topsoil to have a fine granular and subangular blocky structure over medium and coarse subangular blocky structured subsoil. The second soil type is disturbed. Topsoils are very slightly stony clay loams with fine and medium subangular blocky structure. Subsoils are slightly stony and medium to heavy in texture. Soil structure varies from weakly developed coarse angular blocky structure to compacted.

TOPSOILS

Only one topsoil is identified. This consisted of medium textured material with an optimum depth of 25 cm (Unit T1).

SUBSOILS

Two subsoil categories are identified. Undisturbed medium and heavy textured soils are mapped as unit S1. Disturbed and compacted soils of predominantly medium texture are mapped as unit S2.

2. AGRICULTURAL LAND CLASSIFICATION

The ALC grades occurring on this site are as follows:

Grade	Hectares	Per Cent of Total Site Area
3a	5.0	35.7
3b	8.8	62.9
5	0.1	0.7
Urban	0.1	0.7
Total	14.0 ha	100%

Subgrade 3a

Land in this subgrade is found in the northern part of the site. Soils fall within Wetness Classes II and III and are limited to this subgrade by a combination of soil wetnesses and workability problems.

Subgrade 3b

This land is found in the southern part of the site. Soils, which are disturbed and compacted in places, fall within Wetness Class IV. They are limited to subgrade 3b by a combination of soil wetness and workability problems. Strong slopes in part of this area also limits land to subgrade 3b.

Grade 5

A small area of grade 5 quality land occurs in the southern edge of the site. This land is limited by gradient.

Urban

The small area of urban land is found in the northern corner of the site.

3. SOIL PROFILE DESCRIPTIONS

PROFILE 1

Land Use: Fallow
Aspect : North
Slope : 5°

HORIZON	DEPTH (CM)	DESCRIPTION
1	0-27	Dark brown (10YR 3/3) medium clay loam; unmottled; stoneless; strongly developed fine granular and fine subangular blocky structure; common medium fissures; many fine and medium macropores; moderately porous; abundant very fine and fine fibrous roots; some mixing with subsoil material; clear smooth boundary.
2	27-45	Brown (10YR 5/3) heavy clay loam; many distinct strong brown (7.5YR 5/6) and grey (7.5YR N/5) mottles; very few small subangular stones; moderately developed medium subangular blocky structure; few fissures and macropores; slightly porous; few fine fibrous roots; smooth clear boundary.
3	45-100	Grey (10YR 6/1) clay; abundant prominent strong brown (7.5YR 5/6) mottles; weakly developed coarse subangular blocky structure; few fissures and macropores; slightly porous; very few fine fibrous roots.

PROFILE 2

Land Use: Permanent Grassland
Aspect : North West
Slope : 3°

HORIZON	DEPTH (CM)	DESCRIPTION
1	0-25	Dark brown (10YR 3/3) medium clay loam; very slightly stony; medium subangular stones; no mottles; moderately well developed fine and medium subangular blocky; few medium fissures; few fine and medium macropores; slightly to moderately porous; many fine fibrous roots; clear smooth boundary.
2	25-42	Brown (10YR 4/3) medium clay loam; slightly stony; medium subangular stones; few faint and distinct strong brown (7.5YR 5/6) mottles; weakly developed coarse angular blocky structure; very few fine pores and fissures; compacted below 42 cm.

MAPS