

AGRICULTURAL LAND CLASSIFICATION
AND STATEMENT OF PHYSICAL CHARACTERISTICS

LAND AT GRANGE FARM
ARTHINGTON,
WEST YORKSHIRE

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ADAS
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ALCARTH.WYK

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SUMMARY OF AGRICULTURAL LAND CLASSIFICATION AND STATEMENT OF PHYSICAL
CHARACTERISTICS

Grange Farm, Arthington, West Yorkshire

This proposed landfill site covers a total of 1.41 ha. Medium-textured soils cover the whole site with a medium clay loam topsoil typically overlying a similarly-textured subsoil. Below depths of 50 to 60 cm the soil is moderately to very stony. The whole site has been classified as Subgrade 3a and moderate droughtiness is the factor limiting the land to this subgrade.

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LAND AT GRANGE FARM, ARTHINGTON

PROPOSED LAND FILL SITE

1.0 INTRODUCTION AND SITE CHARACTERISTICS

The site is located around Grid Reference SE272447, and lies approximately 2 km north east of Bramhope. It covers 1.41 hectares, all of which is in agricultural use.

Survey work was carried out in July 1992 when soils were examined by hand auger borings at 50 m intervals, predetermined by the National Grid. Further borings were made, where necessary, to confirm soil types. A detailed soil description was carried out at an inspection pit located at a representative point on the site.

1.1 Land Use

The whole site is under permanent pasture.

1.2 Climate

Average Annual Rainfall:	760 mm
Accumulated Temperature above 0°C (January to June)	1357 day °C
Field Capacity Days:	197
Moisture Deficit (Wheat):	92 mm
Moisture Deficit (Potatoes):	79 mm

1.3 Relief

The site varies between 50 and 55 metres above Ordnance Datum. It is gently sloping with a northerly aspect.

1.4 Geology

The area is covered by deposits of morainic drift and boulder clay. The underlying Millstone Grit was not encountered within 1 m of the soil surface.

2.0 STATEMENT OF PHYSICAL CHARACTERISTICS

One soil type covers the whole site.

2.1 Medium textured soils.

This soil type covers the whole site and consists of a very slightly stony medium clay loam topsoil over a slightly stony medium clay loam subsoil. The soil is well drained, falling in Wetness Class I.

Topsoils

Topsoil T1 covers the whole site. It consists of a very slightly stony medium clay loam to a depth of about 25 cm. It has a moderately developed medium to coarse angular blocky structure.

Subsoils

Subsoil S1 covers the whole site. It consists of a slightly to moderately stony medium clay loam to a depth of about 50 cm. It has a moderately developed medium angular blocky structure.

3.0 AGRICULTURAL LAND CLASSIFICATION GRADES

The ALC grades occurring on this site are as follows:-

<u>Subgrade</u>	<u>Hectares</u>	<u>Percentage of Total Area</u>
3a	1.41	100

3.1 Subgrade 3a

Land in this subgrade covers the whole site. The soils are well drained (falling in Wetness Class I) and consist of a very slightly stony medium clay loam topsoil over a slightly to moderately stony medium clay loam subsoil to a depth of approximately 50 cm. Below this depth the soil is moderately to very stony (containing 20 - 40% large sandstones) and soil droughtiness is, therefore, the factor which limits this land to Subgrade 3a.

4.0 SOIL PROFILE DESCRIPTION

Table 1

Soil Type 1 (T1/S1): Medium textured soil.

Land Use: Permanent Pasture.

Slope: 2°N

Moisture Deficits: 92 mm (Wheat) 79 mm (Potatoes)

Wetness Class I

Horizon	Depth (cm)	Description
1	20	Very dark greyish brown (10 YR 3/2) medium clay loam; common medium yellowish brown mottles (10 YR 5/6); very slightly stony, (small to medium subangular hard sandstones); moderately developed medium to coarse angular blocky structure; moderately weak; medium packing density; moderately porous; slightly sticky; slightly plastic; many fine and medium fibrous roots; smooth distinct boundary.
2	50	Dark greyish brown (10 YR 4/2) medium clay loam; no mottles; slightly to moderately stony (medium to large subangular hard sandstones); moderately weak soil strength; medium angular blocky structure; high packing density; slightly porous; slightly sticky; slightly plastic; many fine and medium fibrous roots; smooth diffuse boundary.
3	50+	Moderately to very stony (20 - 40% large sandstones); impenetrable.