

AGRICULTURAL LAND CLASSIFICATION

AGRICULTURAL LAND CLASSIFICATION  
AND STATEMENT OF PHYSICAL CHARACTERISTICS  
SWILLINGTON BRICKWORKS, WEST YORKSHIRE  
AUGUST 1992

ADAS  
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ALCWILB.WKS

LAND AT SWILLINGTON BRICKWORKS, WEST YORKSHIRE

SUMMARY

An area of 3.74 ha. of land was surveyed, all of which is under permanent grass. The whole site has been classified as Subgrade 3b and consists of medium clay loam or heavy clay loam topsoils overlying clay or silty clay subsoils. The subsoils are slowly permeable and soil wetness is the factor which limits the A.L.C. grade of the land.

## CONTENTS

1. INTRODUCTION AND SITE CHARACTERISTICS
2. AGRICULTURAL LAND CLASSIFICATION
3. STATEMENT OF PHYSICAL CHARACTERISTICS
4. SOIL PROFILE DESCRIPTION

## MAPS

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

1. INTRODUCTION AND SITE CHARACTERISTICS

The site is located around Grid Reference SE387313 and lies approximately 9 km east of Leeds city centre. It covers a total of 3.79 ha., all of which is under permanent grass.

Survey work was carried out in August 1992 when soils were examined by hand auger borings at 100 m intervals predetermined by the National Grid. A detailed soil description and sampling for laboratory analysis were carried out at an inspection pit located at a representative point on the site.

Climate

Altitude	69 m
Accumulated Temperature above 0°C (January - June):	1338 day °C
Average Annual Rainfall	664 mm
Climatic Grade	1
Field Capacity Days	152
Moisture Deficit (Wheat):	99 mm
Moisture Deficit (Potatoes):	88 mm

Relief

The site slopes gently from west to east.

Geology

The site is underlain by Carboniferous Coal Measure shales which have weathered to form a medium to heavy-textured soil. No drift deposits occur on the site.

2. AGRICULTURAL LAND CLASSIFICATION

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

<u>Grade/Subgrade</u>	<u>Hectares</u>	<u>Percentage of Total Area</u>
3b	3.79	100

Subgrade 3b

Subgrade 3b land covers the whole site. Soils consist of a medium or heavy clay loam topsoil overlying a clay or silty clay subsoil. The soils are stoneless or very slightly stony (typically containing 0-2% small rounded shales and fragments of coal) and poorly drained, falling in Wetness Class IV. Soil wetness is thus, along with soil workability, the factor which limits this land to Subgrade 3b.

3. STATEMENT OF PHYSICAL CHARACTERISTICS

One soil type occurs on this site:-

Medium to Heavy-textured Soils derived from weathering Coal Measure Shales

Topsoils (Unit T1)

Topsoils consist of very slightly stony medium clay loams or heavy clay loams with a moderately developed medium subangular blocky structure. Median topsoil depth is 25 cm.

Subsoils (Unit S1)

Subsoils consist of clay or silty clay with a moderately developed coarse prismatic structure. Generally the subsoils are stoneless to very slightly stony (containing 0 -2% small rounded shales and fragments of coal) but in placed moderately stony bands occur at depth. Mean subsoil depth is 77 cm.

SOIL PROFILE DESCRIPTION

Pit 1. Slope: 1°E Land Use: Permanent Grassland.

<u>Depth (cm)</u>	<u>Description</u>
0 - 20	Dark grey (10 YR 4/1) heavy clay loam; few fine faint light yellowish brown (10 YR 6/6) mottles; very slightly stony (2% small rounded shales and fragments of coal); dry; moderately developed medium subangular blocky structure; moderately hard soil strength; few fine and very fine pores; common fine and medium fissures; many fine fibrous roots; moderately sticky; moderately plastic; non-calcareous; gradual irregular boundary.
25 - 100	Light grey (10 YR 7/1) clay with many medium prominent reddish yellow (7.5 YR 6/8) mottles; very slightly stony (2% small rounded shales and fragments of coal); moist; moderately developed coarse prismatic structure; extremely firm soil strength; very slightly porous (<0.5% pores > 0.5 m); few fine and medium fissures; few fine fibrous roots; moderately sticky; moderately plastic; non-calcareous.