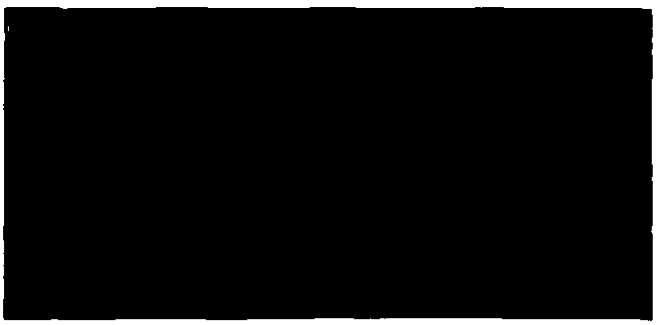

MAFF Ministry of Agriculture Fisheries and Food

STATEMENT OF PHYSICAL CHARACTERISTICS AND AGRICULTURAL LAND CLASSIFICATION MILLHOUSES II OCCS BARNSLEY SOUTH YORKSHIRE MAY 1995

ADAS
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SUMMARY

A Statement of Physical Characteristics and Agricultural Land Classification survey of 4.3 ha of land at Millhouses, Barnsley ("Millhouses II OCCS") was carried out in May 1995. At the time of survey all of the site was in agricultural use and 1.2 ha falls in Subgrade 3a. The soils are well drained, with sandy loam topsoils and sandy loam or loamy sand subsoils overlying weathering sandstone at around 90cm depth. Soil droughtiness limits this land to Subgrade 3a.

The remainder of the land on the site (3.1 ha) falls in Subgrade 3b. Again the soils are well drained, but weathering sandstone outcrops to within 35cm of the soil surface and a more severe soil droughtiness restriction further limits the ALC grade to Subgrade 3b.

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STATEMENT OF PHYSICAL CHARACTERISTICS AND AGRICULTURAL LAND CLASSIFICATION REPORT ON THE PROPOSED MILLHOUSES II OCCS, BARNSLEY, SOUTH YORKSHIRE

1. INTRODUCTION AND STATEMENT OF PHYSICAL CHARACTERISTICS

1.1 Location and Survey Methods

The site lies approximately 8km east-south-east of Barnsley town centre, to the north of the B6273 (Rotherham Road) - A635 (Doncaster Road) roundabout. It covers a total area of 4.3 ha. Survey work was carried out in May 1995 when the soils were examined by hand auger borings at 100m intervals predetermined by the National Grid. Four soil pits were dug to allow a full profile description to be made and to confirm depth to bedrock. The land quality was assessed using the methods described in "Agricultural Land Classification of England and Wales. Revised guidelines and criteria for grading the quality of agricultural land " (MAFF, 1988).

1.2 Land Use and Relief

At the time of the survey all of the land was under barley. Site altitude varies from 33m AOD in the north-east to 45m AOD in the south-west and the land is gently sloping (2-3°) with a north-easterly aspect.

1.3 Climate

Grid Reference	: SE 428 045
Altitude (m)	: 37
Accumulated Temperature above 0°C (January - June)	: 1386 day°C
Average Annual Rainfall (mm)	: 625
Climatic Grade	: 1
Field Capacity Days	: 134
Moisture Deficit (mm) Wheat	: 107
Moisture Deficit (mm) Potatoes	: 98

1.4 Geology, Soils and Drainage

This site is underlain by Carboniferous Coal Measures consisting of interbedded sandstones and shales, and weathering sandstone outcrops to within one metre of the soil surface over most of the site. With the exception of localised Head deposits there is no drift cover. The soils are well drained, falling in Wetness Class I, with medium sandy loam topsoils overlying medium sandy loam or loamy medium sand subsoils. Sandstone bedrock begins at between 30cm and 80cm depth in most cases. The soils on this site correspond to the Rivington Series as mapped by the Soil Survey and Land Research Centre.

1.5 Soil Properties

One main soil type occurs on this site, a description of which is given below. Topsoil and subsoil resources are also shown on the accompanying maps, along with soil thickness and volume information.

(a) Soil Type 1 : - Light textured soils (Unit T1/S1/Sandstone)
(Full Profile Description, Table 1)

This soil, formed on weathering sandstone, occurs over the whole site. It is characterised by it's light-texture (sandy loam topsoils overlie sandy loam or loamy sand subsoils) and the presence of weathering sandstone within 80cm of the soil surface in most cases. In the south and east of the site there is no subsoil and the topsoil directly overlies weathering sandstone.

1.6 Soil Resources

(i) Topsoils

Unit T1 occurs over the whole of the site. It is light-textured (usually medium sandy loam) and typically very slightly to slightly stony, with 4-8% very small to medium subangular sandstones. It has a moderately developed fine and medium subangular blocky structure and a median depth of 33cm.

(ii) Subsoils

Unit S1 occurs in the north-west of the site. It is light to very light-textured, consisting of medium sandy loam or loamy medium sand, and slightly stony, with 10-15% very small to medium angular and subangular sandstones. Unit S1 has a weakly developed medium subangular blocky structure and a mean unit depth of 59cm. It is underlain by weathering sandstone.

2. SOIL PROFILE DESCRIPTION

Table 1 Light Textured Soil, T1/S1/Sandstone

Profile Pit 1 (Near auger boring 1)

Slope :- 1°NE
Land Use :- Barley
Weather :- Bright and mild

Depth (cm)	Horizon Description
0-38	Very dark greyish brown (10YR3/2) medium sandy loam; no mottles; very slightly stony, with around 5% very small to medium subangular sandstones; slightly moist; moderately developed fine and medium subangular blocky structure; firm; very porous; many fine and very fine fibrous roots; slightly sticky; slightly plastic; non-calcareous; clear irregular boundary.
38-120	Olive yellow (2.5Y 6/6) loamy medium sand; few distinct brownish yellow (10YR6/8) mottles; slightly stony, with around 15% very small to medium subangular and angular sandstones; slightly moist; weakly developed medium subangular blocky structure; firm; extremely porous; few very fine fibrous roots; slightly sticky; slightly plastic; non-calcareous.

3. AGRICULTURAL LAND CLASSIFICATION

The ALC grades occurring on this site are as follows:

Grade/Subgrade	Hectares	Percentage of Total Area
1		
2		
3a	1.2	27.9
3b	3.1	72.1
4		
5		
(Sub total)	(4.3)	(100.0)
Urban		
Non Agricultural		
Woodland - Farm		
- Commercial		
Agricultural Buildings		
Open Water		
Land not surveyed		
(Sub total)		
TOTAL	4.3	100

3.1 Subgrade 3a

A small area of Subgrade 3a land has been mapped in the north of the site. The soils are well drained, falling in Wetness Class I, and consist of slightly stony medium sandy loam topsoils (containing 6-8% sandstones >2cm) and slightly stony medium sandy loam or loamy medium sand subsoils. Weathering sandstone bedrock occurs at around 90cm depth and soil droughtiness is the factor which restricts the ALC grade of this land.

3.2 Subgrade 3b

Much of the site falls in Subgrade 3b. The soils are well drained (Wetness Class I) and consist of slightly stony medium sandy loam topsoils directly overlying weathering sandstone bedrock at around 35cm depth. Severe soil droughtiness is the factor limiting this land to Subgrade 3b.

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MAPS