



STATEMENT OF PHYSICAL CHARACTERISTICS
AND AGRICULTURAL LAND CLASSIFICATION
WESTON PARK, BURLEY-IN-WHARFEDALE
NORTH YORKSHIRE
PROPOSED BORROW PIT EXTENSION
AUGUST 1994

ADAS
Leeds Statutory Group

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SUMMARY

An Agricultural land Classification and Statement of Physical Characteristics Survey was carried out on 1.9 ha of land north-east of Burley-in-Wharfedale in August 1994

At the time of the survey, all of this land was in agricultural use.

Grade 2 land covers 1.3 ha. Soils are well drained (Wetness Class I) and deep. Topsoils and upper subsoils are medium textured and stoneless to slightly stony. Lower subsoils are heavy textured and slowly permeable. This land is limited to Grade 2 by slight soil wetness and workability restrictions.

Subgrade 3a land covers 0.6 ha of the site. Soils are similar to those on the Grade 2 land, but are subject to occasional medium duration winter floods and are therefore limited to Subgrade 3a by flood risk.

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STATEMENT OF PHYSICAL CHARACTERISTICS AND AGRICULTURAL LAND CLASSIFICATION REPORT ON THE PROPOSED BORROW PIT EXTENSION AT WESTON PARK, BURLEY-IN-WHARFEDALE, NORTH YORKSHIRE

1. INTRODUCTION AND STATEMENT OF PHYSICAL CHARACTERISTICS

1.1 Location and Survey Methods

The site is located approximately 1 km north-east of Burley-in-Wharfedale, north of the River Wharfe. It is centred around Grid Reference SE 174464 and covers 1.9 ha. All of the site was in agricultural use at the time of the survey.

Survey work was carried out in August 1994. Soils were examined by hand auger borings at a density of 2 borings per hectare at points predetermined by the National Grid. One soil inspection pit was dug to assess soils in greater detail. 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

The site lies on the flood plain of the River Wharfe at an altitude of 59 m AOD. The land is level. At the time of the survey, all of the site was under permanent grass.

1.3 Climate

Grid Reference	: SE 174 464
Altitude (m)	: 59
Accumulated Temperature above 0°C (January-June)	: 1348 day°C
Average Annual Rainfall	: 813
Climatic Grade	: 1
Field Capacity Days	: 206
Moisture Deficit (mm) Wheat	: 90
Moisture Deficit (mm) Potatoes	: 76

1.4 Geology, Soils and Drainage

The site is underlain by Millstone Grit over which there is a thick covering of drift deposits. These consist mostly of alluvial deposits below which are sand and coarse gravel. Topsoils are stoneless to very slightly stony, generally consisting of medium clay loam, or sandy clay loam. Upper subsoils are generally similar. Lower subsoils consist of a stoneless slowly permeable silty clay or heavy silty clay loam below which are gravel deposits. Profiles are well drained (Wetness Class I).

1.5 Soil Properties

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

- a. Soil Type 1: Medium textured soils over heavy textured lower subsoils
(Unit T1/U1/S1)
(Full Profile Description Table 1)

This soil formed on alluvium overlying fluvial sand and gravel occurs over the whole of the site. It is characterised by medium textured topsoils and upper subsoils over heavy textured lower subsoils.

1.6 Soil Resources

Unit T1 occurs over all of the site. This unit consists of medium textured material, typically medium clay loam or sandy clay loam. The soils are stoneless to very slightly stony, containing 0-5% small and medium rounded and subrounded hardstones. The topsoil has a mean thickness of 25cm.

ii. Upper Subsoils

Unit U1

Unit U1 occurs over all of the site. This unit is medium textured and generally consists of medium clay loam or sandy clay loam. Upper subsoils are stoneless to slightly stony, containing 0-5% small, medium and large rounded and subrounded hardstones. Structure is well developed medium subangular blocky. This unit varies in thickness around a mean value of 55cm.

Unit S1

Unit S1 occurs over all of the site. Soils are stoneless and heavy textured, generally consisting of silty clay or heavy silty clay loam. This unit is variable in thickness, having a mean value of 40cm although gravel is sometimes encountered at less than 120 cm depth.

2. Soil Profile Description

Medium textured topsoil and upper subsoil over heavy textured lower subsoil (Unit T1/US1/LS1).

Slope: Level

Land Use: Permanent Grass

Recent Weather: - Dry

Parent Material: Alluvium

Depth cm	Horizon Description
0-26	Very dark greyish brown (10 YR 3/2); unmottled; sandy clay loam; stoneless; dry; well developed fine subangular blocky; firm; many fine fibrous roots; many biopores; non-calcareous; abrupt smooth boundary.
26-79	Brown (10YR 4/3); unmottled; sandy clay loam; very slightly stony with few medium rounded sandstones; dry; well developed medium subangular blocky; firm; many fine fibrous roots; many biopores; non calcareous; abrupt smooth boundary.
79-120	Greyish brown (10YR 5/2) with common distinct yellow (10YR 7/6) mottles; heavy silty clay loam; stoneless; moist; weakly developed coarse angular blocky; very firm; few fine fibrous roots; very few fine pores; non calcareous.

3. 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>
1		
2	1.3	68
3a	0.6	32
3b		
4		
5		
(Sub total)	(1.9)	(100)
Urban		
Non Agricultural		
Woodland - Farm		
- Commercial		
Agricultural Buildings		
Open Water		
Land not surveyed		
(Sub total)		
	_____	_____
TOTAL	1.9	100
	_____	_____

Grade 2

Land in this grade covers the north of the site. Topsoils consist of stoneless to very slightly stony, medium textured material (typically medium clay loam, or sandy clay loam). Upper subsoils consist of similar textured material, which is stoneless to slightly stony. In some places, very stony, light textured (loamy coarse sand or coarse sand) subsoils are present. These soils are well to moderately well drained, falling within Wetness Class I or II. This land is limited to Grade 2 by a slight soil wetness and workability restrictions.

Subgrade 3a

Land in this subgrade occurs across the southern part of the site. Soils are similar to those occurring on the Grade 2 land. This area is subject to occasional medium duration floods in winter. It is limited to Subgrade 3a by the risk of flooding.

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MAPS