BARNSLEY LANE LANDFILL SITE EXTENSION
NEAR BRIDGNORTH
Agricultural Land Classification

April 1996

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ADAS Ref: 25/RPT/0771
MAFF Ref: EL 35/11200
LUPU
Commiss. No: WO1868

AGRICULTURAL LAND CLASSIFICATION REPORT FOR BARNSLEY LANE LANDFILL SITE EXTENSION NEAR BRIDGNORTH

1 SUMMARY

1.1 The Agricultural Land Classification (ALC) Survey for this site shows that the following proportions of ALC grades are present:

Grade/Other land	Area (ha)	%Surveyed area
2	2.0	19.4
3a	8.0	77.6
3b	0.1	1.0
4	0.2	2.0
Land not surveyed	13.3	N/A
Total survey area	10.3	
Total site area	23.6	

1.2 The main limitation to the agricultural use of land in Grade 2 and Subgrade 3a is soil droughtiness.

1.3 The main limitation to the agricultural use of land in Subgrade 3b and Grade 4 is slope.

2 INTRODUCTION

2.1 The site was surveyed by the Resource Planning Team in April 1996. An Agricultural Land Classification survey was undertaken according to the guidelines laid down in the "Agricultural Land Classification of England and Wales - Revised Guidelines and Criteria for Grading the Quality of Agricultural Land" (MAFF 1988).

2.2 The 23.6 ha site is situated 3kms to the east of Bridgnorth, close to the village of Barnsley. The land immediately to the south, east and west of the site is predominantly in agricultural use.

2.3 The survey was requested by MAFF in connection with the ad hoc development proposal for an extension to the existing landfill site.

2.4 At MAFF Land Use Planning Unit's request this was a detailed grid survey at 1:10000 with a minimum auger boring density of 1 per hectare. The attached map is only accurate at the base map scale and any enlargement would be misleading.

2.5 At the time of the survey the site was under permanent grass and cereals.

3 CLIMATE

3.1 The following interpolated data are relevant for the site (Grid Ref) : S0 760 920.

Average Annual Rainfall (mm)	702
Accumulated Temperature above 0ºC January to June (day ºC)	1396

3.2 There is no overall climatic limitation on the site.

3.3 Other relevant data for classifying land include:

Field Capacity Days (days)	160
Moisture Deficit Wheat (mm)	99
Moisture Deficit Potatoes (mm)	88

4 SITE

4.1 Three site factors of gradient, micro relief and flooding are considered when classifying land.

4.2 Micro relief and flooding do not impose any limitations on the agricultural use of the land. Gradient limitations exist on parts of the site.

5 GEOLOGY AND SOILS

5.1 The solid geology of the area is comprised of Triassic Pebble Beds and conglomerate - British Geological Survey Sheet 167 Dudley/Wolverhampton 1 Inch.

5.2 The underlying geology influences the soils which either have a predominantly sandy loam or loamy sand texture.

6 AGRICULTURAL LAND CLASSIFICATION

6.1 Grade 2 - occupies 2.0 ha (19.4%) of the survey area and is found in the east and south west of the site.

6.1.1 These soils typically have a sandy loam texture overlying loamy sand or sandy clay to depth, with few or no stones within the profile. The moisture balance places these soils into Grade 2.

6.1.2 The main limitation to the agricultural use of this land is soil droughtiness.

6.2 Subgrade 3a - occupies 8.0 ha (77.6%) of the survey area and is found over most of the site

6.2.1 The soil has loamy sand or sandy loam texture over loamy sand or sand to depth, with few or no stones within the profile. The moisture balance places these soils into Subgrade 3a.

6.2.2 The main limitation to the agricultural use of this land is soil droughtiness.

6.3 Subgrade 3b - occupies 0.1 ha (1.0%) of the survey area and consists of a narrow strip of land in the centre of the site.

6.3.1 Gradients of between 7 and 10 degrees place this land into Subgrade 3b.

6.3.2 The main limitation to the agricultural use of this land is gradient.

6.4 Grade 4 occupies 0.2 ha (2.0%) of the survey area and is found along the southern boundary of the existing landfill site.

6.4.1 The land has a gradient of 14° placing it in Grade 4.

6.4.2 The main limitation to the agricultural use of this land is gradient.

6. Land not surveyed occupies 13.3ha and 56% of the total site area. It includes restored land where access was not possible and current landfill operation.

6.6 SUMMARY OF AGRICULTURAL LAND CLASSIFICATION GRADES

Grade/Sub-grade	Area (Hectares)	% Surveyed Area
2	2.0	19.4
3a	8.0	77.6
3b	0.1	1.0
4	0.2	2.0
Land not surveyed	13.3	N/A
Total survey area	**10.3**	
Total site area	**23.6**	**100.0**

SOIL RESOURCES REPORT FOR BARNSLEY LANE LANDFILL SITE EXTENSION, NEAR BRIDGNORTH

7. INTRODUCTION

7.1 The soils on the site were investigated using a Dutch auger, with borings made on 100m grid, and by examining soil pits to a depth of 1.20m. Three soil units were identified and these are described below.

8. SOIL UNITS

8.1 Soil unit I occupies 8.4 ha (35%) of the site. The soils have up to 35cm of sandy loam or loamy sand overlying loamy sand and occasionally sand to depth. A typical profile description is:-

0 - 31cm	brown, 10YR43, medium sandy loam, 5% hard stones; moderately developed, medium angular blocky, friable; common roots.
31 - 52cm	strong brown, 75YR56, loamy medium sand, 5% hard stones; moderately developed, medium angular blocky, friable; few roots.
52 - 100cm	reddish brown, 05YR54, loamy medium sand, 1% small hard stones, moderately developed, medium sub-angular blocky, friable.
100 - 120cm	reddish brown, 05YR54, loamy fine sand, stoneless; moderately developed, medium sub-angular blocky; friable.

8.2 Soil unit II occupies 1.3 ha (6%) and is found in the south west of the site. The soils have either a medium sandy loam or sandy clay loam texture to about 35cm and overlying either sandy clay loam or loamy medium sand to 55cm and clay to depth. A typical profile description is:-

0 - 35cm	brown, 10YR43, sandy clay loam; stoneless; weakly developed, medium sub-angular blocky, friable; common roots.
35 - 55	yellowish red, 05YR46, medium sand; 30% hard stones; weakly developed, granular, very friable.
55 - 100	weak red. 25YR54 clay; common strong brown, 75YR58, mottles; 5% hard stones, weakly developed, medium platey; firm.

8.3 Soil unit III occupies 0.6 ha (<1%) and is found in the north east of the site area. The soils have upto 30cm of loamy medium sand over either a loamy medium sand, medium sand or medium sandy loam to between 60 and 90cm, and sandy clay loam to depth. A typical profile description is:-

0 - 28cm	brown, 7.5YR44, loamy medium sand; 1% hard stones; moderately developed, medium sub-angular blocky, friable, common fine roots.
28 - 61cm	yellowish red, 05YR46, loamy medium sand; stoneless; moderately developed, medium sub-angular blocky, friable.
61 - 86cm	reddish brown, 05YR44, medium sandy loam; stoneless; moderately developed, medium platey; friable.
86 - 100cm	reddish brown, 05YR44, sandy clay loam, 20% hard stones; moderately developed, medium sub-angular blocky, friable.

8.4 Land not surveyed cover 13.3 ha (58%) and includes restored land and the current landfill site operations.

BARNSLEY LANE LANDFILL SITE EXTENSION NEAR BRIDGNORTH
SOIL VOLUMES

SOIL UNIT I- area 8.4 ha

Depth cm	Texture	Volume m3
35	msl/lms	29400
85	lms	71400

SOIL UNIT II- area 1.3 ha

Depth cm	Texture	Volume m3
35	scl	4550
20	scl	2600
65	c	8450

SOIL UNIT III- area 0.6 ha

Depth cm	Texture	Volume m3
28	lms	1680
33	lms	1980
25	msl	1500
34	scl	2040

rdm/rpt