

**AGRICULTURAL LAND CLASSIFICATION AND SOIL RESOURCES  
HILL AND MOOR LANDFILL  
PERSHORE AIRFIELD**

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**AGRICULTURAL LAND CLASSIFICATION AND SOIL RESOURCES  
REPORT FOR HILL AND MOOR LANDFILL  
PERSHORE AIRFIELD**

**1. SUMMARY**

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

<b>Grade/Subgrade</b>	<b>ha</b>	<b>% of site</b>
3a	50.1	38.8
3b	28.8	22.4
Other land	50.1	38.8

- 1.2 The main limitation to the agricultural use of land in Subgrade 3a and Subgrade 3b is soil wetness.

**2. INTRODUCTION**

- 2.1 The site was surveyed by the Resource Planning Team in November 1995. 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 129.0 ha site is situated to the northeast of Pershore, north of Wyre Piddle. The land immediately to the south, east and west of the site is predominantly in agricultural use, land to the north of the site is a disused airfield.
- 2.3 The survey was requested by MAFF in connection with a proposed extension to the Hill and Moor 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 part of the site was under permanent grass, and part recently ploughed following a cereal crop.

### **3. CLIMATE**

3.1 The following interpolated data are relevant for the site (SO 975 485).

Average Annual Rainfall (mm)	611
Accumulated Temperature above 0° C January to June (day °C)	1485

3.2 There is no overall climatic limitation on the site.

3.3 Other relevant data for classifying land include:

Field Capacity Days (days)	129
Moisture Deficit Wheat (mm)	113
Moisture Deficit Potatoes(mm)	107

### **4. SITE**

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

4.2 These factors do not impose any limitations on the agricultural use of the land.

### **5. GEOLOGY AND SOILS**

5.1 The solid geology of the area is comprised of Jurassic Lower Lias clay, soils of Worcester and the Malverns district, Soil Survey of England and Wales, Sheet 150.

5.2 The underlying geology influences the soils which either have a clay loam or clay texture.

## 6. AGRICULTURAL LAND CLASSIFICATION

6.1 Subgrade 3a - occupies 50.1 ha (38.8%) of the survey area and is found mainly across the western half of the site, and south of the Landfill site.

6.1.1 The soils generally have a clay or heavy clay loam topsoil texture over clay to depth. Observations of gleying and the depth to the slowly permeable layer places these soils in Wetness Class III. The topsoils are calcareous, containing 1-5% calcium carbonate.

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

6.2 Subgrade 3b - occupies 28.8 ha (22.4%) of the survey area and is found over the east and south of the site.

6.2.1 The soil typically has a heavy clay loam texture overlying clay to depth. Occasionally, in the area south of Jacksons Farm, heavy clay loam topsoil textures were found to overlie a sandy clay loam subsoil and clay to depth. Observations of gleying and the depth to the slowly permeable layer places these soils in Wetness Class III. Generally, the topsoils are not calcareous.

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

6.3 Other land covers 50.1 ha (38.8%) of the survey area and includes the present landfill workings and reclaimed land, open water, woodland and disused farm buildings.

### 6.4 SUMMARY OF AGRICULTURAL LAND CLASSIFICATION GRADES

Grade/Sub-grade	Area in Hectares	% of Survey Area	% of Agricultural Land
3a	50.1	38.8	63.5
3b	28.8	22.4	36.5
Other land	50.1	38.8	
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<b>Totals</b>	<b>129.0</b>	<b>100.0</b>	<b>100.0</b>
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# HILL AND MOOR LANDFILL, PERSHORE AIRFIELD, SOIL RESOURCES REPORT

## 1. INTRODUCTION

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

## 2. SOIL UNITS

- 2.1 Unit I comprises 26.9 ha (20.9%) of the site, and is found across the western side of the site. The soils have approximately 40 cm of a clay topsoil texture overlying clay to depth. The soils are gleyed within 40 cm and are calcareous throughout. A typical profile description is as follows:-

0-38 cm; Dark greyish brown 2.5Y4/2 clay, very lightly stony, weakly developed, medium, sub-angular, blocky; firm; few, fine, fibrous roots; 5-10% Calcium Carbonate.

38-60 cm; Olive 5Y5/3 clay; common yellowish brown 10YR5/6, light olive brown 2.5Y5/6 and grey 5Y5/1 mottles; weakly developed, medium, angular blocky, breaking to fine angular blocky; firm; less than 0.5% porosity; few, fine, fibrous roots; 5-10% Calcium Carbonate.

60 - 120 cm; Grey N5/ clay; common yellowish brown 10YR5/6, light olive brown 2.5Y5/6 and grey 5Y6/2 mottles; weakly to moderately developed coarse angular blocky; very firm; less than 0.5% porosity; few, fine, fibrous roots; 5-10% Calcium Carbonate.

- 2.2 Unit II occupies 23.2 ha (18.0%) of the site and is found across the centre of the site and to the east of the site bordering the site access road. The soils have up to 30 cm of a heavy clay loam or clay topsoil texture overlying a gleyed clay subsoil to depth. The profiles are calcareous throughout. A typical profile description is as follows:-

0-26 cm; Light olive brown, 2.5Y5/3, heavy clay loam' very slightly stony; weakly developed coarse sub-angular blocky; common fine fibrous roots; 1-5% Calcium Carbonate.

26-70 cm; Light olive brown, 2.5Y5/3, clay; common yellowish brown, 10YR5/8 and grey 2.5Y6/1 mottles; weakly developed coarse angular blocky; very firm less than 0.5% porosity; few to common fine, fibrous roots; 5-10% Calcium Carbonate.

70 - 120 cm; Grey, 2.5Y6/1, clay; common, yellowish brown 10YR5/8 mottles; weakly developed, coarse, platy; less than 0.5% porosity; few, fine, fibrous roots; 5-10% Calcium Carbonate.

2.3 Unit III occupies 28.8 ha (22.3%) of the site and is found across the southeast and east of the site. The soils have up to 30 cm of a heavy clay loam topsoil, overlying a gleyed clay subsoil to depth. The topsoils are not calcareous but overlie calcareous subsoils. A typical profile description is as follows:-

0 - 30 cm; Olive brown, 2.5Y4/3 heavy clay loam; very slightly stony; weakly to moderately developed medium, subangular blocky; firm ; few, fine, fibrous roots.

30 - 75 cm; Light olive brown 2.5Y5/3 clay; common yellowish brown 10YR5/6 mottles; weakly developed medium to coarse angular blocky; firm to very firm; less than 0.5% porosity; few, fine, fibrous roots; 5-10% Calcium Carbonate.

75 - 120 cm; Light olive brown 2.5Y5/3 clay; common to many yellowish brown 10YR5/8 mottles; weakly developed coarse platy to weakly developed, coarse, angular blocky; very firm; less than 0.5% porosity; few, fine, fibrous roots; 5-10% Calcium Carbonate.

2.4 Other land covers 50.1 ha (38.8%) of the site and includes the current landfill workings, restored land, woodland, open water and disused agricultural buildings.

2.5 Summary of Soil Unit Areas

Unit	Area ha	% of Site
I	26.9	20.8
II	23.2	18.0
III	28.8	22.4
Other land	50.1	38.8
	129.0	100.0