

AGRICULTURAL LAND CLASSIFICATION
DISPERSAL AIRFIELD, CURBOROUGH, FRADLEY
PROPOSED WASTE DISPOSAL SITE

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**AGRICULTURAL LAND CLASSIFICATION REPORT FOR
DISPERSAL AIRFIELD, CURBOROUGH, FRADLEY
PROPOSED WASTE DISPOSAL SITE**

1. SUMMARY

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

Grade/Subgrade	ha	% of site
3a	10.4	17.0
3b	46.8	77.0
4	0.9	1.5
Other Land		
Non Agricultural	0.1	0.2
Urban	2.3	4.0
Open Water	0.2	0.3

- 1.2 The main limitation to the agricultural use of land in Subgrade 3a is soil wetness.
- 1.3 The main limitation to the agricultural use of land in Subgrade 3b is soil wetness.
- 1.4 The main limitation to the agricultural use of land in Grade 4 is soil droughtiness.

2. INTRODUCTION

- 2.1 The site was surveyed by the Resource Planning Team in December 1994. 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 60.7 ha site is situated to the south west of Fradley airfield near Lichfield. The majority of the land surrounding the site is in agricultural use. The land immediately to the north east of the site is occupied by an auction centre. The site has previously been used as part of the Lyntus dispersal airfield, relics of which remain on site.
- 2.3 The survey was requested by MAFF in connection with an application to develop a waste disposal site on this land.

2.4 At the request of the MAFF Land Use Planning Unit this was a detailed grid survey at 1: 10 000 scale 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 cereals, grass, oilseed rape and fodder crops, with the remainder being fallow.

3. CLIMATE

3.1 The following interpolated data are relevant for the site (SO 138 120):

Average Annual Rainfall (mm)	680
Accumulated Temperature above 0°C January to June (day °C)	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)	154
Moisture Deficit Wheat (mm)	101
Moisture Deficit Potatoes (mm)	91

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 this land.

5. GEOLOGY AND SOILS

5.1 The geology of the area is comprised of Red Marls and First Terrace deposits (British Geological Survey, Sheet 154 Lichfield 1 : 1 Inch).

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

6. AGRICULTURAL LAND CLASSIFICATION

6.1 Subgrade 3a - occupies 10.4 ha (17.0 %) of the survey area and is found in three distinct pockets.

6.1.1 These soils typically have a clay loam texture overlying sandy loam or sandy clay loam and clay to depth, with few to common stones within the profile. Occasionally there may be lenses of loamy medium sand or heavy clay loam within the subsoil. Observations of gleying and the depth to the slowly permeable layer places these soils in to Wetness Class III.

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

6.2 Subgrade 3b - occupies 46.8 ha (77 %) of the survey area and covers the majority of the site.

6.2.1 These soils typically have a medium or heavy clay loam texture over heavy clay loam and clay to depth, with common to many stones within the profile. There are areas within this subgrade that are contaminated with brick, rubble and heavy metals, all stemming from the previous airfield activities on this site. Observations of gleying and the depth to the slowly permeable layer places these soils in to Wetness Class III & IV.

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

6.3 Subgrade 4 - occupies 0.9 ha (1.5 %) of the survey area.

6.3.1 The soil typically has a sandy clay loam or clay loam texture overlying rubble. These profiles have many topsoil stones / bricks and subsoils are very stony.

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

6.4 Other land includes non agricultural (radio controlled plane area) which occupies 0.1 ha (0.2 %) ; Urban (airfield remains) which occupies 2.3 ha (4.0 %) and Open Water which occupies 0.2 ha (0.3%) of the survey area;

6.5 **SUMMARY OF AGRICULTURAL LAND CLASSIFICATION GRADES**

Grade/Subgrade	Area (Ha)	% of survey area	% agricultural land
3a	10.4	17.0	18
3b	46.8	77.0	80
4	0.9	1.5	2
Other Land			
Non Agricultural	0.1	0.2	
Urban	2.3	4.0	
Open Water	0.2	0.3	
Totals	60.7	100	100

7. SOIL UNITS

7.1 Soils have been classed in to three soil units, each reflecting differences in their physical characteristics. Each unit identifies soils with similar handling and storage requirements.

7.2 Soil Unit I - occupies 10.7 ha (18 %) of the survey area.

7.2.1 The topsoil of this unit is typically 35 to 45 cm deep and has a brown (75 YR 43) medium clay loam texture with few to common stones.

7.2.2 Below this topsoil, the upper subsoil is of a reddish brown (5 YR 44) medium sandy loam or sandy clay loam with few stones.

7.2.3 The lower subsoil is typically of a reddish brown (5 YR 44) clay. Occasionally there may be lenses of sand in the lower subsoil.

7.2.5 A typical profile for Unit I is described below :

0 to 35 cm	75 YR 43	Medium clay loam, moderately well developed medium subangular blocky, common hard stones and common roots.
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35 to 45 cm	5 YR 44	Medium sandy clay loam, moderately well developed coarse angular blocky, friable consistence, porous, few hard stones and common roots.
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45 to 120 cm	5 YR 44	Clay, moderately well developed coarse prismatic to angular blocky, firm consistence, low porosity, few hard stones.
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7.2.6 Any areas of rubble or building foundations (i.e. urban) re excavated during soil stripping should be separated and stored with Unit III.

7.3 Soil Unit II - occupies 48.6 ha (80 %) of the survey area.

7.3.1 The topsoil of this unit is typically 25 cm deep and has a dark greyish brown (25 Y 42 and 10 YR 42) medium or heavy clay loam texture with few to many stones.

7.3.2 Below this topsoil, the upper subsoil is of a greyish brown (25 Y 52) clay or heavy clay loam texture, gleyed with few stones.

7.3.3 The lower subsoil is of a reddish brown (5 YR 44) clay, gleyed with few stones.

7.3.4 A typical profile is described below :

0 to 25 cm	10 YR 42	Heavy clay loam, weakly developed medium granular, few hard stones and common roots.
25 to 60 cm	25 Y 42	Clay, weakly developed coarse angular blocky, firm consistence, gleyed, low porosity, few hard stones and few roots.
60 to 120 cm	5 YR 44	Clay, massive, very firm consistence, gleyed, low porosity and few hard stones.

7.3.5 Any areas of rubble or building foundations (i.e. urban) re excavated during soil stripping should be separated and stored with Unit III.

7.4 Soil Unit III - occupies 1.4 ha (2 %) of the survey area. This unit occupies land that has had a history of excessive disturbance and mixing. Any areas of rubble or building foundations re excavated elsewhere on site during soil stripping should be stored with this unit.

7.4.1 The topsoil of this unit is typically 30 cm deep and has a dark brown (10 YR 33) or reddish brown (5 YR 44) sandy clay loam texture with many stones over rubble.

7.5 SUMMARY OF SOIL UNITS

Unit	Area in hectares	% of survey area
1	10.7	18
2	48.6	80
3	1.4	2
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TOTAL	60.7	100
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