

AGRICULTURAL LAND CLASSIFICATION

MORVILLE HEATH, Nr BRIDGNORTH

SHROPSHIRE MINERALS LOCAL PLAN

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**AGRICULTURAL LAND CLASSIFICATION REPORT FOR
MORVILLE HEATH, Nr BRIDGNORTH, SHROPSHIRE MINERALS
LOCAL PLAN**

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
2	14.7	67
3a	6.2	28
3b	1.0	4
Other Land		
Open Water	0.1	1

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

1.3 The main limitations to the agricultural use of land in Subgrade 3a are topsoil stone content and soil wetness.

1.4 The main limitation to the agricultural use of land in Subgrade 3b is topsoil stone content.

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 22.0 ha site is situated to the west of Bridgnorth. The land immediately to the north, south and east of the site is predominantly in agricultural use. The land immediately to the west is currently being worked for sand and gravel.

2.3 The survey was requested by MAFF in connection with the Shropshire Minerals Local Plan.

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 and sugar beet, the remainder being fallow.

3. CLIMATE

3.1 The following interpolated data are relevant for the site (SO 684 932):

Average Annual Rainfall (mm)	713
Accumulated Temperature above 0°C January to June (day °C)	1391

3.2 There is no overall climatic limitation on the site.

3.3 Other relevant data for classifying land include:

Field Capacity Days (days)	171
Moisture Deficit Wheat (mm)	95
Moisture Deficit Potatoes (mm)	83

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 the Silurian Downton Series marls and micaceous sandstone (British Geological Survey, Sheet 167 Dudley 1:50000). This is overlain with deposits of Quaternary boulder clay and sand and gravel.

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

6. AGRICULTURAL LAND CLASSIFICATION

6.1 Grade 2 - occupies 14.7 ha (67 %) of the survey area and is found in the west of the site.

6.1.1 These soils typically have a sandy loam texture overlying sandy loam, loamy sand and sand to depth, with few to common stones within the profile. Occasionally there may be lenses of sandy silt loam or sandy clay loam. The moisture balance places these soils in Grade 2. There are soil profiles of Grade 1 quality within this unit, but they are of an insufficient extent to map separately.

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

6.2 Subgrade 3a occupies 6.2 ha (28 %) of the survey area and is found in the east of the site.

6.2.1 These soils typically have a sandy clay loam texture over heavy clay loam (with or without clay or sand lenses) to depth, with few to common stones within the profile. The southern area of this grade tends to have a mixed lower subsoil with common stones. Observations of gleying and the depth to the slowly permeable layer places these soils in to Wetness Class III.

6.2.2 The main limitation to the agricultural use of this land is topsoil stone content greater than 2cm in size (in the south of the site) and soil wetness.

6.3 Subgrade 3b occupies 1.0 ha (4 %) of the survey area.

6.3.1 The soil typically has a sandy clay loam texture overlying either sandy clay loam to depth or sandy loam, loamy sand and sand to depth. These profiles have many topsoil stones and subsoils are very stony.

6.3.2 The main limitation to the agricultural use of this land is topsoil stone content greater than 2 cm in size.

6.4 Other land includes open water which occupies 0.1 ha (1 %) of the survey area and is found in the north east of the site as pond.

6.5 **SUMMARY OF AGRICULTURAL LAND CLASSIFICATION GRADES**

Grade/Subgrade	Area (Ha)	% of survey area
2	14.7	67
3a	6.2	28
3b	1.0	4
Other Land		
Open Water	0.1	1
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Totals	22.0	100
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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 13.1 ha (60 %) of the survey area.

7.2.1 The topsoil of this unit is typically 35 to 40 cm deep and has a dark brown (10 YR 33) medium sandy loam texture with few stones.

7.2.2 Below this topsoil, the upper subsoil is of a dark yellowish brown (10 YR 44) medium sandy loam with few stones.

7.2.3 The lower subsoil is typically of a brown (75 YR 44) loamy medium or fine sand with few stones over a brown (75YR44) medium sand.

7.2.4 Occasionally there are horizons of reddish brown (5 YR 44) sandy clay loam at depth.

7.2.5 A typical profile for Unit I is described below :

0 to 40 cm	10 YR 33	Medium sandy loam, moderately well developed medium subangular blocky, few hard stones and common roots.
40 to 68 cm	10 YR 44	Medium sandy loam, moderately well developed coarse angular blocky, friable consistence, porous, few hard stones and few roots.
68 to 120 cm	75 YR 44/53	Loamy fine sand, moderately well developed coarse subangular blocky, friable consistence , porous, few hard stones and few roots.

7.3 Soil Unit II - occupies 6.6 ha (30 %) of the survey area.

7.3.1 The topsoil of this unit is typically 35 cm deep and has a brown (10 YR 43) sandy clay loam texture with few stones.

7.3.2 Below this topsoil, the upper subsoil is of a dark reddish brown (5 YR 44) heavy clay loam texture, gleyed with few to common stones.

7.3.3 The lower subsoil is of a reddish brown (5 YR 44/53) heavy clay loam, gleyed with few stones.

7.3.4 A typical profile is described below :

0 to 35 cm	10 YR 43	Sandy clay loam, moderately well developed medium angular blocky, few hard stones and common roots.
35 to 55 cm	5 YR 44	Heavy clay loam, moderately well developed coarse subangular blocky, firm consistence, gleyed, porous, few hard stones and few roots.
55 to 120 cm	5 YR 44/53	Heavy clay loam, strongly developed coarse angular blocky and prismatic, very firm consistence, gleyed, non porous and few hard stones.

7.4 Soil Unit III - occupies 2.3 ha (10 %) of the survey area.

7.4.1 The topsoil of this unit is typically 30 to 40 cm deep and has a dark brown (10 YR 33) sandy clay loam texture with many stones.

7.4.2 Below this topsoil, the subsoil is of a brown (75 YR 43) sandy clay loam texture with abundant stones.

7.4.3 A typical profile is described below :

0 to 32 cm	10 YR 33	Sandy clay loam, moderately well developed fine subangular blocky, abundant hard stones and common roots.
32 to 95 cm	75 YR 43	Sandy clay loam, moderately well developed fine subangular blocky, friable consistence, porous, abundant hard stones and few roots.

7.5 SUMMARY OF SOIL UNITS

Unit	Area in hectares	% of survey area
1	13.1	60
2	6.6	30
3	2.3	10
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TOTAL	22.0	100
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