# AGRICULTURAL LAND CLASSIFICATION
# AND SOIL RESOURCES
# CONDOVER, SHROPSHIRE

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# AGRICULTURAL LAND CLASSIFICATION REPORT FOR

# CONDOVER, SHROPSHIRE

## 1. SUMMARY

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

| Grade/Sub grade | ha | % of site |
|---|---|---|
| 2 | 2.5 | 23 |
| 3a | 5.9 | 55 |
| 3b | 2.3 | 22 |

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

1.3 The main limitation to the agricultural use of land in Subgrades 3a and 3b is soil wetness.

## 2. INTRODUCTION

2.1 The site was surveyed by the Resource Planning Team in January 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 10.7 ha site is situated to the south of Shrewsbury, north of the existing Condover sand and gravel pit. It is bounded to the east and west by agricultural land, to the north by woodland and the Bomere Pool and to the south by the sand and gravel pit workings. The site is in agricultural use.

2.3 The survey was requested by MAFF in connection with the proposed extension to the existing Condover Sand and Gravel Pit.

2.4 At MAFF Land Use Planning Unit's request this was a detailed grid survey at 1 : 10,000 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 survey the site was under barley with a small strip of land on the western boundary under turnips.

## 3. CLIMATE

3.1 *The following interpolated data are relevant for the site.*

| | |
|---|---|
| Average Annual Rainfall | 695 mm |
| Accumulated Temperature above $0^0$c, January to June. | 1394 day $^0$C |

3.2 There is no overall climatic limitation on the site.

3.3 Other relevant data for classifying land include:

| | |
|---|---|
| Field Capacity Days | 153 days |
| Moisture Deficit Wheat | 99mm |

## 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 the Keele Beds of the Upper Carboniferous Coal Measures - British Geological Survey Sheet 152, Shrewsbury, 1 inch. This is overlain by deposits of sand and gravel.

5.2 The solid have a clay loam texture overlying clay.

## 6. AGRICULTURAL LAND CLASSIFICATION

6.1 Grade 2 - occupies 2.5 ha (23%) of the survey area and is found in the south east of the site.

6.1.1 These soils typically have a clay loam topsoil texture, overlying clay loam or sandy clay loam to depth. Stones in the topsoil are few to common.

6.1.2 The main limitation to the agricultural use of this land is topsoil stone content.

6.2 Sub - grade 3a - occupies 5.9 ha (55%) of the survey area.

6.2.1 The soil has a clay loam topsoil texture over a heavy clay loam subsoil and clay below 50cm. These soils are placed in Wetness Class III.

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

6.3 Subgrade 3b - occupies 2.3 ha (22%) of the survey area and is found in the north east of the site.

6.3.1 These soils typically have a heavy clay loam topsoil texture overlying clay below 35 cm. These solid are placed in Wetness Class IV.

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

## 6.4 SUMMARY OF AGRICULTURAL LAND CLASSIFICATION GRADES

| Grade/Subgrade | Area in Hectares | % of Survey Area | % of Agricultural Land |
|---|---|---|---|
| 2 | 2.5 | 23 | 23 |
| 3a | 5.9 | 55 | 55 |
| 3b | 2.3 | 22 | 22 |
| **Totals** | **10.7** | **100** | **100** |

## 7. INTRODUCTION

7.1c1 The site was surveyed by the Resource Planning Team in January 1994. Soil units group soils of similar texture thus reflecting separate handling and storage requirements. Soil pits were dug to ascertain details on factors such as subsoil structure and stone volumes.

7.2 Four soil units were identified

7.3 Unit 1 - occupies 3.4 ha (32%) of the site and is found across the north western quadrant of the site and along a strip running along the north eastern boundary of the site. Typical profiles have 30 - 35 cm of clay loam topsoil over heavy clay loam subsoil's to a depth of around 50cm, overlying clay to depth. Topsoils have a few stones, typically around 2% by volume. A representative profile for this type of soil is given below:-

0 - 25 cm 75 YR 4/6, medium clay loam; moderately developed, medium, subangular/blocky structure; few hard subrounded stones, porus.

25 - 45 cm 75 YR 5/3, heavy clay loam with many 75 YR 4//6 - 5/6 ochreous mottles; moderately developed, coarse, sub angular, blocky structure; few stones, porous.

45 - 100 cm 5YR 4/4 clay; moderately developed, coarse, prismatic structure; low porosity; 5% hard subrounded stones.

7.4 **Unit 2** - occupies 3.6 ha (34%) of the site and is found across the south western quadrant of the site. Typical profiles have 30 -35 cm of medium clay loam topsoils overlying medium clay loam or sandy clay loam subsoils to a depth of 50 - 60 cm, which in turn overlie clay to depth. The profiles have few stones throughout, upto 2% by volume. A representative profile for this type of soil is given below:-

0 - 34 cm 75 YR 4/6, medium clay loam; moderately developed, medium, subangular, blocky structure, 2% stones; porous.

34 - 49 cm 10YR 6/3 Sandy clay loam, moderately developed, medium, subangular, blocky structure, 2% stones, porous.

49 - 100 cm 5YR 5/4 - 4/4 clay, moderately developed, coarse, prismatic structure, slightly stony, low porosity.

7.5 **Unit 3** - occupies 1.5 ha (14%) of the site and is found over the north eastern quadrant of the site, typical soil profiles have heavy clay loam topsoil textures to depths of around 30 - 35 cm overlying clay subsoils to depth. Soils are

slightly stony throughout with up to 5% stones by volume. A typical profile for this type of soil is given below:-

0 - 30 cm. 75 yr 4/3. Heavy clay loam; moderately developed, coarse, subangular blocky structure. 5% hard subrounded stones.

30 - 100 CM 5YR 4/4 clay, moderately developed, coarse, prismatic structure; 5% hard subrounded stones, low porosity.

7.6 Unit 4 - occupies 2.2 ha (20%) of the site and is found in the south eastern quadrant of the site, typical profiles have clay loam toposoils to depths of 30 - 35 cm overlying medium clay loam or Sandy clay loam subsoils to depth. The soils are slightly stony throughout with only 2% by volume. A typical profile for this soil type is given below:-

0 - 30 cm 75 YR 4/3, medium clay loam, moderately developed, medium, subangular blocky structure, 2% stones, porous.

30 - 100 cm 75 YR 4/6, sandy clay loam, moderately developed, medium, subangular blocky structure. 2% hard subrounded stones, porous.

## 7.7 SUMMARY OF SOIL RESOURCES

| Unit | Area in hectares | % of survey area | % of Agricultural Area |
|---|---|---|---|
| 1 | 3.4 | 32 | 32 |
| 2 | 3.6 | 34 | 34 |
| 3 | 1.5 | 14 | 14 |
| 4 | 2.2 | 20 | 20 |
| Totals | 9.7 | 100 | 100 |

**Resource Planning Team**
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