Bubbenhall Quarry Extension
Warwickshire
Agricultural Land Classification
and
Soil Resources

September 1996

Resource Planning Team
ADAS Statutory Group
WOLVERHAMPTON

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AGRICULTURAL LAND CLASSIFICATION REPORT FOR BUBBENHALL QUARRY EXTENSION, WARWICKSHIRE

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 (hectares)	% of surveyed area
2	2.8	100
Total Survey Area	2.8	100

1.2 The main limitation to the agricultural use of land in Grade 2 is soil droughtiness, and in the extreme west of the site, soil wetness.

2. INTRODUCTION

2.1 The site was surveyed by the Resource Planning Team in September 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 2.8 ha site is situated south of Coventry, east of the A445 road. The site abuts the existing quarry along its western boundary. Land immediately to the north, south and east of the site is predominantly in agricultural use.

2.3 The survey was requested by MAFF in connection with the proposed extension to Bubbenhall Quarry.

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 had been ploughed.

3. CLIMATE

3.1 The following interpolated data are relevant for the site :

Factor	Units	Values
Grid Reference	N/A	SP 369 712
Altitude	m, AOD	85
Accumulated Temperature	day °C	1391
Average Annual Rainfall	mm	666
Field Capacity Days	days	146
Moisture Deficit, Wheat	mm	101
Moisture Deficit, Potatoes	mm	91
Climatic Grade	N/A	1

3.2 There is no overall climatic limitation on the site.

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 Triassic Mudstone - British Geological Survey Sheet 184 Warwick 1:50 000. This is overlain by deposits of sand and gravel.

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

6. AGRICULTURAL LAND CLASSIFICATION

6.1 Grade 2 - occupies 2.8 ha (100%) of the survey area.

- Across the majority of the site, these soils typically have a sandy loam topsoil texture overlying sandy loam and loamy sand to depth or loamy sand and sand to depth, with few or no stones within the profile. The moisture balance places these soils in Grade 2.

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

- In the west of the site across the small triangle of land, the soils are mixed, with sandy loam or clay loam topsoil textures overlying mixed sandy loam and clay loam subsoils. In some profiles the moisture balance places the profiles into Grade 2 and in others, observations of gleying place the soils into Wetness Class II.

- The main limitations to the agricultural use of this land are both soil droughtiness and soil wetness.

SOIL RESOURCES REPORT FOR BUBBENHALL QUARRY EXTENSION,WARWICKSHIRE.

7. INTRODUCTION

7.1 The 2.8 ha site was surveyed by the Resource Planning Team in September 1996. The soils on the site were investigated using a Dutch auger and by examining soil pits to 120cm to identify sub structural conditions.

7.2 Two soil units have been identified across the site and these are desecribed below.

8. SOIL UNITS

8.1 Soil Unit 1 comprise 2.6 ha (93%) of the survey area. The soils generally have sandy loam topsoil textures overlying loamy sand and sand subsoils, the profiles are stoneless to very slightly stony. A typical profile description for Unit 1 is as follows:

0-30 cm; Brown, 75YR4/3 medium sandy loam; 2% hard stone; moderately developed medium subangular blocky structure; friable consistence; common fine fibrous roots.

30-45 cm; Brown, 75YR4/4 medium sandy loam; 2% hard stone; moderately developed coarse angular blocky structure; friable consistence; common fine fibrous roots.

45-75 cm; Reddish brown 05YR4/3 loamy medium sand; stoneless; weakly developed, coarse, subangular blocky structure; friable consistence; few fine fibrous roots.

75-120 cm; Reddish brown 05YR4/4 loamy medium sand; <1% hard stone; weakly developed coarse subangular block structure; friable consistence; few fine fibrous roots.

8.2 Soil Unit II covers 0.2 ha (7%) of the survey area. The soils appear to be of a mixed nature with sandy loam and clay loam topsoil textures overlying mixed sandy loam and clay loam subsoil textures. No representative soil profile has been described for this area due to the mixed nature of these soils.

8.3 This area has been identified as a separate soil unit due to the inclusion of heavier textured soils in comparison to those soils identified for Soil Unit 1, and due to the mixed nature of these soils.

8.4 The soil from Unit II should not be stripped and stored with those from soil unit I.

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