

**AGRICULTURAL LAND CLASSIFICATION
CHURCH HILL QUARRY BURTON DASSETT**

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AGRICULTURAL LAND CLASSIFICATION REPORT FOR CHURCH HILL QUARRY BURTON DASSETT

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	1.3	11
3b	10.1	85
4	0.4	4

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

2 INTRODUCTION

- 2.1 The site was surveyed by the Resource Planning Team in November 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 11.8 hectare site is situated to the east of Burton Dassett on the north east side of Church Hill. The site is surrounded by agricultural land. A former haul road runs south west from the site towards the M40 Motorway.
- 2.3 The survey was requested by MAFF in connection with a request for an Agricultural Land Classification survey following restoration to agricultural use.
- 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 was under grass and the former haul road was down to oilseed rape.

3 CLIMATE

3.1 The following interpolated data are relevant for the site (SP 401 516):

Average Annual Rainfall (mm)	703
Accumulated Temperature above 0°C January to June (day °C)	1331

3.2 There is no overall climatic limitation on the site

3.3 Other relevant data for classifying land include:

Field Capacity Days (days)	155
Moisture Deficit Wheat (mm)	97
Moisture Deficit Potatoes (mm)	85

4 SITE

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

4.2 Gradient imposes a limitation on the agricultural use of the land over parts of the south east and north eastern areas of the site.

5 GEOLOGY AND SOILS

5.1 The solid geology of the area is comprised of Middle and Lower Lias clays - British Geological Survey Sheet 201 Banbury 1:50000.

5.2 The underlying geology gives rise to soils with a clay loam or clay texture.

6 AGRICULTURAL LAND CLASSIFICATION

6.1 Subgrade 3a - occupies 1.3 ha (11%) of the area and is found at the northern boundary of the site.

6.1.1 The soil has a medium clay loam texture to about 50 cm overlying heavy clay loam and clay extending to at least 100 cm. In this part of the site augering to depth was possible without hitting stone. Some of the profiles are deep and of Grade 2 quality where no slowly permeable layer and gleying are observed. Supplementary boring in this area revealed the presence of stone at depth and hence the area has been mapped as Subgrade 3a.

6.1.2 The main limitation to the agricultural use of this area is soil wetness and the limitation by the medium clay loam texture on soil workability.

6.2 Subgrade 3b - occupies 10.1 ha (85%) of the site and includes the haul road.

6.2.1 In the main part of the site the soil has a medium clay loam texture. In many places augering to depth was prevented by the presence of stones in the subsoil.

6.2.2 A soil pit was dug within this area and showed the profile to have medium clay loam to at least 55cm overlying heavy clay loam to 58 cm in clay. The subsoil has a moderate coarse prismatic structure with a firm or very firm consistence and low porosity. Mottles were common and roots were few or absent below 55 cm. The topsoil stone content was in total 15% with stones greater than 2 cm being about 5% and those greater than 6 cm being greater than 5%. Within the subsoil large stones, about 5%, were present (greater than 20 cm). Compaction appears to be a problem within the subsoil and may be ameliorated by subsoiling.

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

6.2.4 Part of the land running across the centre of the main site has been classified as Subgrade 3b where gradient exceeds 7° and imposes a limitation on the agricultural use of the land.

6.2.5 The haul road has been classified as Subgrade 3b. Topsoil textures include clay and heavy clay loam overlying clay by 35 cm. These soils are placed in Wetness Class IV and hence Subgrade 3b. Prior to working this area was classified as Subgrade 3a where topsoil textures were medium clay loam. It is possible that there has been some soil mixing during working operations and hence the change in soil texture and grading.

6.3 Grade 4 - occupies 0.4 ha (4%) of the area and includes a small area with a gradient limitation (slope exceeds 11°).

6.5 SUMMARY OF AGRICULTURAL LAND CLASSIFICATION GRADES

Grade/Sub-grade	Area in Hectares	% of Survey Area
3a	1.3	11
3b	10.1	85
4	0.4	4
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Totals	11.8	100.0
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