

**AGRICULTURAL LAND CLASSIFICATION
PROPOSED LAND RAISING ON LAND ADJACENT TO
BIRCHBROOK ROAD, LYMM**

**V T Redfern
Resource Planning Team
ADAS Statutory Group
WOLVERHAMPTON**

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**AGRICULTURAL LAND CLASSIFICATION REPORT FOR
PROPOSED LAND RAISING ON LAND ADJACENT TO
BIRCHBROOK ROAD, LYMM**

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
1	2.2	31
2	0.8	11
3a	3.8	53
3b	0.3	4
Other land	0.1	1

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

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

2 INTRODUCTION

2.1 The site was surveyed by the Resource Planning Team in April 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 7.2 ha site is situated to the north of Rush Green. The site is bounded to the north by the River Bollin and to the east by Birchbrook Road. The land immediately to the north and west of the site is predominantly in agricultural use.

2.3 The survey was requested by MAFF in connection with an ad hoc development proposal for land raising.

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 ley grass and cereals.

3 CLIMATE

3.1 The following interpolated data are relevant for the site (SJ700886) :

Average Annual Rainfall (mm)	842
Accumulated Temperature above 0°C January to June (day °C)	1437

3.2 There is no overall climatic limitation on the site.

3.3 Other relevant data for classifying land include:

Field Capacity Days (days)	199
Moisture Deficit Wheat (mm)	90
Moisture Deficit Potatoes (mm)	78

4 SITE

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

4.2 According to the NRA, there is a risk of winter flooding about once in five years. However, no indication of duration was given. The cropping regime (ley grass, cereals, oilseed rape) would indicate that flooding is not a severe limitation to agriculture on this site.

4.3 Gradient and microrelief 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 Lower Keuper Saliferous beds and Lower Keuper Marl - British Geological Survey Sheet 98 Stockport 1 Inch. This is overlain by First Terrace deposits and alluvium.

5.2 The underlying geology influences the soils which have a sandy texture in the south and west of the site and a silty clay loam texture in the north of the site.

6 AGRICULTURAL LAND CLASSIFICATION

6.1 Grade 1 - occupies 2.2 ha (31%) of the survey area and is found in the west and south of the site.

6.1.1 These soils typically have an organic loamy sand texture overlying loamy sand and sand, with few or no stones within the profile.

- 6.1.2 There are no limitations to the agricultural use of this land.
- 6.2 Grade 2 - occupies 0.8 ha (11%) of the survey area and is found in the east of the site.
- 6.2.1 The soils typically have a silty clay loam texture overlying silty clay loam to depth. There is no slowly permeable layer and observations of gleying place these soils in Wetness Class I.
- 6.2.2 The main limitation to the agricultural use of this land is soil wetness.
- 6.3 Subgrade 3a - occupies 3.8 ha (53%) of the survey area.
- 6.3.1 The soil has a silty clay loam texture over silty clay loam to depth. There is no slowly permeable layer and observations of gleying place these soils in Wetness Class II.
- 6.3.2 The main limitation to the agricultural use of this land is soil wetness.
- 6.4 Subgrade 3b - occupies 0.3 ha (4%) of the survey area.
- 6.4.1 The soil typically has a silty clay loam texture overlying silty clay loam to depth. Observations of gleying and the depth to the slowly permeable layer place these soils in Wetness Class IV.
- 6.4.2 The main limitation to the agricultural use of this land is soil wetness.
- 6.5 Other land occupies - 0.1 ha (1%) of the site and comprises an area planted with trees.

6.6 SUMMARY OF AGRICULTURAL LAND CLASSIFICATION GRADES

Grade/Sub-grade	Area in Hectares	% of Survey Area	% of Agricultural Land
1	2.2	31	31
2	0.8	11	11
3a	3.8	53	54
3b	0.3	4	4
Other land	0.1	1	
Totals	7.2	100	100

LAND AT BIRCHBROOK ROAD, LYMM

SOIL RESOURCES REPORT

1 Introduction

- 1.1 The soils on the site were investigated using a Dutch auger with borings made on a 100m grid. Three soil units were identified on the site and these are described below.

2 Soil Units

- 2.1 Unit 1 comprises 4.1 ha (57%) of the site and occurs over the northern half of the site, adjacent to the River Bollin. The soils have a silty clay loam texture and gleying occurs within the subsoil. A typical profile description is as follows:

0-32 cm dark grey 10YR41; silty clay loam; moderately developed fine subangular blocky; friable; many roots;

33-120cm greyish brown 10YR52; yellowish brown 10YR56; common mottles; silty clay loam; moderately developed medium to coarse subangular blocky; friable; few roots.

- 2.2 Unit 2 occupies 2.4 ha (33%) and occurs on the southern half of the site. The soils consist of organic loamy sand over loamy sand and sand and are stoneless. A typical profile description is as follows:

0-41 cm very dark grey 10YR31; organic loamy medium sand; moderately developed medium subangular blocky; friable; common roots;

42-48 cm brown 75YR53; loamy medium sand; (horizon too narrow to obtain structure); few roots;

49-120cm strong brown 75YR56; medium sand; weakly developed fine subangular blocky; very friable; few roots.

- 2.3 Unit 3 occupies 0.7 ha (10%) and comprises an area of the site where there has been some tipping of material in the past. The stone content of the soil did not allow augering and therefore a soil description cannot be given. However, the topsoil has a medium sandy loam texture and could be stripped with Unit 2.

2.4 Summary of Soil Units

Unit	Area (ha)	% of Survey Area
1	4.1	57
2	2.4	33
3	0.7	10
Totals	7.2	100

Land at Birchbrook Road Lymm

Whilst undertaking the survey work the farmer informed me that part of the site is prone to standing water; this occurs at times when the level of the river Bollin rises above the outfall of the field drains. The farmer did not indicate the frequency with which this occurs, however this is a ground water problem rather than a flood risk. The area of the site affected is indicated on the enclosed map. The approximate location of the drain outfall, as indicated by the farmer is also shown. The farmer also informed me that a previous owner had dumped material on part of the site; this area is also shown on the map. It was not possible to auger in this area due to the stone content of the soil.

V.P. Redfern