AGRICULTURAL LAND CLASSIFICATION

STAFFORDSHIRE MINERALS PLAN
PENK VALLEY

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WOLVERHAMPTON

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AGRICULTURAL LAND CLASSIFICATION REPORT FOR PENK VALLEY STAFFORDSHIRE MINERALS 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	2.2	4.4
3a	17.2	34.5
3b	30.2	60.5
Other land		
Woodland	0.3	0.6

1.2 The main limitations to the agricultural use of the land on this site are soil wetness, soil droughtiness, flooding and stoniness.

2. INTRODUCTION

2.1 The site was surveyed by the Resource Planning Team in October 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 49.9 ha site is situated to the north of the A5. It is bounded to the east by the River Penk. The site is surrounded by land in agricultural use.

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

2.4 At the request of the Land Use Planning Unit of MAFF 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 survey the land was predominantly under permanent pasture, with a small area in fallow following the harvesting of maize and one field recently resown with grass.

3. CLIMATE

3.1 The following interpolated data are relevant for the site (SJ 905117):

Average Annual Rainfall (mm)	689
Accumulated Temperature above 0°C January to June (day °C)	1378

3.2 There is no overall climatic limitation on the site.

3.3 Other relevant data for classifying land include:

Field Capacity Days (days)	163
Moisture Deficit Wheat (mm)	95
Moisture Deficit Potatoes (mm)	84

4. SITE

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

4.2 Flooding is a limitation over the low lying areas of the site between the river and the terrace. The extent of this limitation was assessed from site observations and information obtained from a tenant farmer. The frequency and duration of flooding limit this area to Subgrade 3b. Gradient is a limitation on the slope between the river terrace and the floodplain. Microrelief is a limitation over a small area of the site where it appears that some excavation has taken place on the river terrace.

5. GEOLOGY AND SOILS

5.1 The solid geology of the area is comprised of Triassic Keuper Marl and Sandstone, overlain by Fluvio-Glacial Gravel and Alluvium (British Geological Survey, Sheet 153 Wolverhampton, 1: 63 360).

5.2 The underlying geology influences the soils which consist of clay loams over clay, or clay loams over sand.

6. AGRICULTURAL LAND CLASSIFICATION

6.1 Grade 2 occupies 2.2 ha (4.4 %) of the survey area.

6.1.1 These soils typically have a clay loam texture overlying sandy loam and loamy sand. They are not gleyed and do not have a slowly permeable layer and are placed in Wetness Class I. These soils have a Drought Grade of 1. The percentage of stones in the topsoil greater than 2 cm diameter is more than 5%.

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

6.2 Subgrade 3a occupies 17.2 ha (34.5 %) of the survey area.

6.2.1 There are three areas on the site within this subgrade. The first is along the terrace in the south west of the site. These soils typically have a sandy loam texture overlying clay loam, sandy loam and sand. These soils have a Wetness Class of I and a Drought Grade of I, however the percentage of stones in the topsoil larger than 2 cm diameter is greater than 10%. Further north the soils typically have a clay loam texture over sand. These soils have a Drought Grade of 3a. At the northern end of the site the soils consist typically of clay loam to depth, with a slowly permeable layer in the subsoil placing these soils into Wetness Class 3.

6.2.2 The main limitations to the agricultural use of land in this subgrade are droughtiness, stoniness and wetness.

6.3 Subgrade 3b occupies 30.2 ha (60.5%) of the survey area and occurs along the eastern side of the site.

6.3.1 These soils typically consist of a clay loam texture over clay, and clay loam over sand. Where clay loam overlies clay the soil is gleyed and the clay forms a slowly permeable layer at about 35 cm, placing these soils into Wetness Class IV. Where the clay loam overlies sand soil droughtiness is the limiting factor.

6.3.2 Within this subgrade there are soils of 3a quality however the land has been down graded due to flood risk.

6.3.3 The main limitations to the agricultural use of this land are soil wetness, soil droughtiness and flooding.

6.4 Other land on the site comprises an area of woodland occupying 0.3 ha (0.6 %) of the survey area.

6.5 SUMMARY OF AGRICULTURAL LAND CLASSIFICATION GRADES

Grade/Subgrade	Area (Ha)	% of survey area	% of agricultural land
2	2.2	4.4	4.4
3a	17.2	34.5	34.7
3b	30.2	60.5	60.9
Other land			
Woodland	0.3	0.6	
Totals	49.9	100.0	100.0