

LADYWOOD OCCS ILKESTON DERBYSHIRE

VALIDATION OF SOILS AND AGRICULTURAL LAND CLASSIFICATION REPORT PREPARED BY MR R WALKINGTON, ADAS CONSULTANCY LEEDS, FOR MILLER MINING

1.0 INTRODUCTION

This site lies approximately 1 km north east of Dale village and approximately 3 km south west of Ilkeston, centred on National Grid reference SK 445395. It was found to cover a total of 34.9 hectares, slightly larger than indicated by ADAS Consultancy.

A survey to validate the report prepared by ADAS Consultancy was carried out in September 1993. Soils were examined by hand auger borings at a density of one boring per 2 hectares predetermined by the National Grid. Soil pits were also dug to examine structure in the main soils types occurring on the site.

1.1 CLIMATE AND RELIEF

Grid Reference	:	SK 445395
Altitude (m)	:	70
Accumulated temperature above 0° (January-June)	:	1376 day °C
Average Annual Rainfall (mm)	:	673
Climatic Grade	:	1
Field Capacity Days	:	153
Moisture Deficit (mm) Wheat	:	100
Moisture Deficit (mm) Potatoes	:	91

The above figures are slightly different from those in the ADAS Consultancy report and can probably be attributed to a different site altitude having been used. The highest point shown on the 1/10000 map of the site is 91 m AOD and the lowest is 61 m AOD. ADAS Consultancy, however, quote figures of 115 m and 80 m AOD respectively. These differences do not have any effect on land quality.

1.2 GEOLOGY AND SOILS

Coal Measures underlie the whole site and undisturbed soils are formed on these or on locally derived drift deposits. Undisturbed soils are mainly heavy, consisting of medium to heavy clay loam topsoils over heavy clay loam and clay subsoils or, very occasionally, sandstone.

Restored soils consisting of medium to heavy textured topsoils over similar textured compacted subsoil material occur on the southern edge of the north western part of the site. In places, as stated in the ADAS Consultancy report, topsoils in this area lie directly over shaley overburden material. The occurrence of lighter textured restored soils in the field north of Bassett Farm was also as stated.

The validation survey confirmed that in general the distribution of soil types and the mean thicknesses of topsoils and subsoil horizons within each mapping unit are similar to those described in the ADAS Consultancy report. The soil stripping and storage proposals should therefore be adequate to ensure restoration to a similar quality as long as the recommended restoration and aftercare procedure is followed.

2.0 AGRICULTURAL LAND CLASSIFICATION

The validation survey confirms the general distribution of ALC grades described by ADAS Consultancy with the following modifications. The subgrade 3a land in the northern part of the western area contains soils which are slowly permeable directly below the topsoil. A classification of subgrade 3b with a wetness limitation would probably be better for this area. The area of grade 2 in the north western area may be somewhat smaller than shown on the Consultancy map. Observations in the northern part of this area indicated the presence of both shallow droughty soils over sandstone and poorly drained medium over heavy textured soils, both of which fall within subgrade 3b. In the south eastern part of the site, the area of grade 2 land mapped by ADAS Consultancy to the north of Bassett Farm was found to occur south of the farm track, rather than to the north. The area mapped by them as grade 2 consists in fact of poorly drained (wetness class IV) medium clay loam topsoils over slowly permeable clay subsoils. The relocated area of grade 2 consists of medium clay loam topsoils over well to moderately well drained (wetness class I and II) permeable sandy clay loam subsoils. These modifications are shown on the attached map, and revised figures for the distribution of ALC grades are provided in Appendix 1.

3.0 CONCLUSION

The validation survey carried out in September 1993 confirmed that with the exception of some minor differences in altitude and the occurrence and distribution of ALC grades, the reports and maps prepared by ADAS Consultancy are a fair representation of the soils and land quality on the Ladywood site. The Consultancy report does in fact identify a slightly larger area of best and most versatile land than was found in the Statutory validation survey.

RPT

Leeds Statutory Group

September 1993

Appendix 1

LADYWOOD OPENCAST COAL SITE

DISTRIBUTION OF ALC GRADES DETERMINED BY VALIDATION SURVEY

ALC	Ha	%
2	4.1	11.8
3a	1.4	4.0
3b	21.5	61.6
4	1.2	3.4
5	5.8	16.6
Urban	0.9	2.6
TOTAL	34.9	100.00

NB The above figures are based on a validation survey undertaken at an auger boring density of one per two hectares.