Cound Extension
Agricultural Land Classification &
Statement of Site Physical Characteristics
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R D METCALFE
Resource Planning Team
Northern Region
FRCA Wolverhampton

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AGRICULTURAL LAND CLASSIFICATION & STATEMENT OF SITE PHYSICAL CHARACTERISTICS COUND EXTENSION SITE

INTRODUCTION

1. This report presents the findings of a detailed mineral site survey on 5.3 hectares of land. The results of this survey supersede any previous ALC information for this land. The land is located to the north west of a former sand pit at Coundarbour. The survey was in connection with a consultation from Shropshire County Council relating to a review of conditions for the site. This report refers only to the area of proposed working.

2. The survey was undertaken on behalf of the Ministry of Agriculture, Fisheries and Food (MAFF) in October 1998 by the Resource Planning Team of the Farming and Rural Conservation Agency (FRCA)- Northern region of FRCA.

3. The land has been graded in accordance with the publication "Agricultural Land Classification of England and Wales - Revised guidelines and criteria for grading the quality of agricultural land" (MAFF 1988) .

4. At the time of survey the agricultural land on this site was under stubble.

SUMMARY

5. The findings of the survey are shown on the enclosed ALC map. The map has been drawn at a scale of 1:10000 with an average auger boring density of 1 per hectare. The ALC map is only accurate at this base map scale and any enlargement would be misleading.

6. The area and proportions of the ALC grades and subgrades on the surveyed land are summarised in Table 1.

Table 1: Area of grades and other land

Grade/Other land	Area (hectares)	% surveyed area	% site area
1	-	-	-
2	4.5	85	85
3a	0.8	15	15
3b	-	-	
4	-	-	
5		-	
Agricultural land not surveyed	-	N/A	-
Other land	-	N/A	
Total surveyed area	5.3	100	-
Total site area	5.3	-	100

7. The agricultural land on this site has been classified as Grade 2 (very good quality) and Subgrade 3a (good quality). The key limitation to the agricultural use of this land is soil droughtiness.

8. The area of very good quality land is located on the lower land in the north west of the site. The soils have a sandy loam topsoil overlying sandy loam, loamy sand and sand subsoils to depth.

9. The area of good quality land is mapped towards the eastern boundary of the proposed working adjoining the former workings. The soil has a loamy sand topsoil overlying loamy sand and sand subsoils.

FACTORS INFLUENCING ALC GRADE

Climate

10. Climate affects the grading of land through the assessment of an overall climatic limitation and also through interactions with soil characteristics.

11. The key climatic variables used for grading this site are given in Table 2 and were obtained from the published 5km grid datasets using standard interpolation procedures (Meteorological Office, 1989).

Table 2: Climatic and altitude data

Factor	Units	Values
Grid reference	N/A	SJ549063
Altitude	m, AOD	50
Accumulated Temperature	day°C (Jan-June)	1435
Average Annual Rainfall	mm	674
Field Capacity Days	days	143
Moisture Deficit, Wheat	mm	102
Moisture Deficit, Potatoes	mm	92
Overall climatic grade	N/A	Grade 1

12. The climatic criteria are considered first when classifying land as climate can be overriding in the sense that severe limitations will restrict land to low grades irrespective of favourable site or soil conditions.

13. The main parameters used in the assessment of an overall climatic limitation are average annual rainfall (AAR), as a measure of overall wetness, and accumulated temperature (AT0, January to June), as a measure of the relative warmth of a locality.

14. The combination of rainfall and temperature at this site means that there is no overall climatic limitation.

Site

15. The site lies at an altitude of 55 to 65 metres AOD. The land gently rises from the lower lying area in the north of the site towards the former workings at the eastern boundary.

16. The three site factors of gradient, microrelief and flooding are considered when classifying the land.

17. These factors do not impose any limitations on the agricultural use of this land.

Geology and Soils

18. The solid geology of the area is comprised of Lower Mottled Sandstone. This is overlain with deposits of sand and gravel - British Geological Survey (1952 and 1974).

19. The soils that have developed on this geology are generally of either a sandy loam or loamy sand texture over sand.

Agricultural Land Classification

20. The details of the classification of the site are shown on the enclosed ALC map and the area statistics of each grade are given in Table 1, page 1.

Grade 2

21. Land of very good quality occupies 4.5 hectares (85%) of the site area and is found as a single unit in the northern western part of the site.

22. The soil has a sandy loam texture over loamy sand and sand to depth with few to common stones within the profile. Occasionally sandy clay loam is present below 90cm. The moisture balance places these soils in Grade 2.

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

Subgrade 3a

24. Land of good quality occupies 0.8 hectares (15%) of the site area and extends across the eastern boundary of the site adjoining the former workings.

25. The soil has a loamy sand texture overlying sand with few stones present. The moisture balance places these soils in Subgrade 3a.

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

SOIL UNITS

27. From the auger boring and pit information obtained by the detailed mineral survey two soil units can be identified. The location and extent of the soil units are shown on the accompanying soil resource map. The soil units are not necessarily intended to be used for soil stripping but are illustrative of the soil resources available for restoration. The depths and volumes quoted should be treated with caution due to the natural variability of the soils on this site.

Soil Unit 1

28. Soil Unit 1 occupies 4.8 hectares (85%) of the site area and is found across most of the site.

29. The soil has sandy loam texture to a depth of between 30 and 45cm, overlying either sandy loam or loamy sand to between 45 and 80cm and sand to a depth of 120cm. Both the topsoil and subsoil are slightly stony.

30. Table 3 describes a typical profile for Soil Unit 1.

Table 3: Soil Unit 1 - Profile description of Soil Unit 1

Horizon	Depth (cms)	Description
Topsoil	0-30	Medium sandy loam, dark yellowish brown (10YR 3/4), slightly stony, weakly developed fine subangular blocky structure, friable consistence, many roots.
Upper Subsoil	30-75	Medium sandy loam, brown (75YR 4/4), slightly stony, weakly developed coarse subangular blocky structure, friable consistence, common roots.
Lower Subsoil	75-120	Coarse sand, strong brown (75YR 4/6), stoneless, single grain structure, loose consistence, few roots.

Soil Unit 2

31. Soil Unit 2 occupies 0.8 hectares (15%) of the site area and is found close to the eastern boundary adjoining the former working.

32. The soil has a loamy sand texture to a depth of between 30 and 45cm, overlying loamy sand to 60 cm in places and sand extending to 120cm. These soils are very slightly stony.

33. Table 4 describes a typical profile for Soil Unit 2.

Table 4: Profile description for Soil Unit 2

Horizon	Depth (cms)	Description
Topsoil	0-40	Loamy medium sand, dark yellowish brown (10YR 3/4), weakly developed medium subangular blocky, very slightly stony, very friable consistence, common roots.
Upper Subsoil	40-60	Loamy medium sand, dark yellowish brown (10YR 4/4), weakly developed fine subangular blocky, slightly stony, very friable consistence, few roots.
Lower Subsoil	60-120	Medium sand, strong brown (75YR 4/6), single grain, stoneless, loose consistence, few roots.

Available Soil Resources

34. Table 5 summarises the available soil resources. As stated in para 27, the depths and volumes quoted should be treated with caution due to the natural variability of the soils on this site.

Table 5: Available Soil Resources

Soil Unit	Horizon	Texture	Depth (cms)	Area (ha)	Volume (m^3)	Notes
1	Topsoil	MSL	0-30	4.8	14440	
1	Upper Subsoil	MSL	30-48	4.8	8640	
1	Lower Subsoil	CS	48-120	4.8	34560	
2	Topsoil	LMS	0-40	0.8	3200	
2	Upper Subsoil	LMS	40-60	0.8	1600	
2	Lower Subsoil	MS	60-120	0.8	4800	

All horizons are variable in the size of the sand fraction.

Resource Planning Team
Northern Region
FRCA Wolverhampton

SOURCES OF REFERENCE

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