

**CESHIRE REPLACEMENT
MINERALS LOCAL PLAN-
SPRINGBANK FARM**

**Agricultural Land Classification
ALC Map and Report
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**AGRICULTURAL LAND CLASSIFICATION REPORT
CHESHIRE REPLACEMENT MINERALS LOCAL PLAN- SPRINGBANK FARM**

INTRODUCTION

1. This report presents the findings of a detailed, Agricultural Land Classification (ALC) survey on 21.3 hectares of land. The results of this survey supersede any previous ALC information for this land. The land is located to the north of Whitchurch and immediately east of the A41 trunk road. The survey was in connection with the Cheshire Replacement Minerals Local Plan.
2. The survey was undertaken on behalf of the Ministry of Agriculture, Fisheries and Food (MAFF) in February 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 grass.

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	-	-	-
3a	8.0	40	37
3b	1.2	6	6
4	10.8	54	51
5	-	-	-
Agricultural land not surveyed		N/A	-
Other land	1.3	N/A	-
Total surveyed area	20.0	100	-
Total site area	21.3	-	100

7. The agricultural land on this site has been classified as Subgrade 3a (good quality), Subgrade 3b (moderate quality) and grade 4 (poor quality). The key limitations to the agricultural use of this land include gradient, soil wetness and soil droughtiness.

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

9. The area of moderate quality land is mapped in the centre and north of the site. The soils in this area are found on slopes of between 7° and 11° and have a sandy loam topsoil overlying loamy sand and sand to depth.

10. The area of poor quality land is mapped on the moderately steep slopes and in the low lying basin in the centre south and east of the site. The soils are either of a sandy loam topsoil texture over loamy sand and sand or an organic clay loam and peaty texture.

FACTORS INFLUENCING ALC GRADE

Climate

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

12. 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	
		SJ 527 458	SJ 525 458
Grid reference	N/A	SJ 527 458	SJ 525 458
Altitude	m, AOD	90	110
Accumulated Temperature	day°C (Jan-June)	1372	1349
Average Annual Rainfall	mm	736	739
Field Capacity Days	days	170	170
Moisture Deficit, Wheat	mm	91	89
Moisture Deficit, Potatoes	mm	79	76
Overall climatic grade	N/A	Grade 1	Grade 1

13. 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.

14. 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.

15. The combination of rainfall and temperature at this site means that there is no overall climatic limitation. The site is climatically Grade 1.

Site

16. The site lies at an altitude of 78 to 110 metres AOD. The land rises sharply from the low lying basin in the east of the site towards the higher ground near the A41 trunk road in the west.

17. The three site factors of gradient, microrelief and flooding are considered when classifying the land. Gradient imposes a limitation on the agricultural use of the land in the centre, south and north of the site where there are slopes of between 7⁰ and 15⁰.

18. The remaining factors do not impose any limitations on the agricultural use of this land.

Geology and Soils

19. The solid geology of the area is comprised of Middle Keuper Marl. This is overlain with deposits of peat and glacial sands and gravel - British Geological Survey (1967).

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

Agricultural Land Classification

21. 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.

Subgrade 3a

22. Land of good quality occupies 8.0 hectares (37%) of the survey area and is found in the north and west of the site.

23. The soil has a sandy loam texture over loamy sand and sand to depth, with few to common stones within the profile. The moisture balance places these soils in Subgrade 3a. Occasionally, where subsoils contain sandy loam and fine sand, profiles of Grade 2 quality are encountered. These Grade 2 profiles cannot be shown at this scale of mapping.

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

25. This unit includes an old trackway near Old Chads Lane, which cannot be shown separately at this scale of mapping.

Subgrade 3b

26. Land of moderate quality occupies 1.2 (6%) of the survey area and is found in the centre and north of the site.

27. The soil has a sandy loam texture over loamy sand and sand to depth, with few to common stones within the profile. These soils are found on slopes of between 7⁰ and 11⁰.

28. The main limitation to the agricultural use of this land is gradient.

Grade 4

29. Land of poor quality occupies 10.8 hectares (51 %) of the survey area and is found in the centre, south and east of the site. The soils within this grade are of two types.

30. In the centre and south of the site the soils are found on moderately steep slopes of between 11⁰ and 15⁰. The soils have a sandy loam texture over loamy sand and sand to depth, with few to common stones within the profile.

31. The main limitation to the agricultural use of this land is gradient.

32. In the east of the site the soils are found in a low lying basin. The soils have a gleyed organic silty clay loam texture over a peaty soil to depth. At the time of the survey these soils were waterlogged, with the water table just below the surface. These soils were placed in Wetness Class V.

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

Other Land

34. Other land occupies 1.3 hectares (6%) of the survey area and is found as stables in the north east corner of the site.

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SOURCES OF REFERENCE

British Geological Survey (1967) Sheet 122, Nantwich and Drift Edition.
1:63 360 Scale
BGS: London

Ministry of Agriculture, Fisheries and Food (1988) Agricultural Land Classification of England and Wales: Revised guidelines and criteria for grading the quality of agricultural land.
MAFF: London.

Meteorological Office (1989) Climatological Data for Agricultural Land Classification.
Meteorological Office: Bracknell.