

**STAFFORDSHIRE AND STOKE-ON-
TRENT STRUCTURE PLAN
S.E. OF GRINDLEY LANE, BLYTHE
BRIDGE
Agricultural Land Classification
ALC Map and Report
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**AGRICULTURAL LAND CLASSIFICATION REPORT
S.E. OF GRINDLEY LANE, BLYTHE BRIDGE**

INTRODUCTION

1. This report presents the findings of a detailed Agricultural Land Classification (ALC) survey on 115.8 hectares of land. The results of this survey supersede any previous ALC information for this land. The land is located between Grindley Lane and Stallington Lane, Blythe Bridge, Staffordshire. The survey was in connection with the Staffordshire and Stoke-on-Trent Structure Plan.
2. The survey was undertaken on behalf of the Ministry of Agriculture, Fisheries and Food (MAFF) in December 1997 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 either pasture for dairying or cultivation of winter cereals.

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
3a	100.2 114.3	87.6	86
3b	13.8	12	12
4	0.9	1	1
Other land	1.8	N/A	1
Total surveyed area	114.0	100	
Total site area	115.8		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 limitation to the agricultural use of this land is soil wetness.

8. The area of good quality land is found across most of the site. The soils commonly comprise medium clay loam topsoils overlying either medium clay loam or sandy clay loam upper subsoils passing to either sandy clay loam, heavy clay loam or, occasionally, clay at depth. Within this area scattered borings were of very good quality, but were not sufficiently distinct to map as a separate unit.

9. The area of moderate quality land is mapped in several blocks within the site. The soils in this area commonly comprise a medium clay loam topsoil overlying either a heavy clay loam or clay subsoil.

10. The area of poor quality land is mapped in the south of the site, where adverse microrelief severely restricted the potential agricultural use of the land.

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
Grid reference	N/A	SJ 943 400
Altitude	m, AOD	200
Accumulated Temperature	day°C (Jan-June)	1239
Average Annual Rainfall	mm	839
Field Capacity Days	days	207
Moisture Deficit, Wheat	mm	68
Moisture Deficit, Potatoes	mm	49
Overall climatic grade	N/A	Grade 2

13. 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 an overall climatic limitation to Grade 2.

Site

16. The site lies at an altitude of 180 to 210 metres AOD. The land rises gently from the east of the site towards the west. A brook flows through the centre of the site.
17. The three site factors of gradient, microrelief and flooding are considered when classifying the land.
18. In the south of the site microrelief limited a small area of land to Grade 4.
19. Gradient and flooding do not impose any limitations on the agricultural use of this land.

Geology and Soils

20. The solid geology of the area is comprised of Keuper Marl and Keuper Soft Flags-British Geological Survey (1902). Information on drift deposits is not available.
21. The soils that have developed on this geology are generally of a medium clay loam texture over sandy clay loam with heavy clay loam or clay at depth.

Agricultural Land Classification

22. 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

23. Land of good quality occupies 99.3 hectares (86 %) of the site area and extends across the majority of the site.
24. Across much of the area mapped as Subgrade 3a, the soil has a medium clay loam texture over either medium clay loam or sandy clay loam passing to either sandy clay loam or heavy clay loam to depth. The depth to gleying places these soils in either Wetness Class II or III.
25. In part of the area mapped as Subgrade 3a the subsoil passes to a slowly permeable heavy clay loam or clay at depth. The depth to gleying and the slowly permeable layer places these soils in Wetness Class III.

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

Subgrade 3b

27. Land of moderate quality occupies 13.8 hectares (12 %) of the site area and is found across the site in several discrete blocks.

28. The soil has a medium clay loam texture which lies over heavy clay loam, passing to a slowly permeable heavy clay loam or clay. The depth to gleying and the slowly permeable layer places these soils in Wetness Class IV.

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

Grade 4

30. Land of poor quality occupies 0.9 hectares (1 %) of the site area and is found in the south of the site.

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

Other Land

32. Other land occupies 1.8 hectares (1 %) of the site area and is found as farm buildings in the south of the site and woodland and ponds in the centre of the site.

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SOURCES OF REFERENCE

**British Geological Survey (1902) Sheet 123, Stoke-on-Trent Solid 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.**