

**STAFFORDSHIRE AND STOKE-ON-  
TRENT STRUCTURE PLAN  
Site 8: Birchmoor**

**Agricultural Land Classification  
ALC Map and Report  
July 1998**

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**AGRICULTURAL LAND CLASSIFICATION REPORT  
STAFFORDSHIRE AND STOKE-ON-TRENT STRUCTURE PLAN  
Site 8: Birchmoor**

**INTRODUCTION**

1. This report presents the findings of a detailed Agricultural Land Classification (ALC) survey on 35.3 hectares of land. The results of this survey supersede any previous ALC information for this land. The land is located at Stonydelph to the east of Tamworth. The site is bordered to the west by housing, to the east by the M42, to the north by the B5000 and to the south by motorway services and retail developments. 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 June and July 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 cereals, set-aside land and pasture.

**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
2	16.6	54	47
3a	8.0	26	23
3b	6.2	20	17
Agricultural land not surveyed	-	N/A	-
Other land	4.5	N/A	13
<b>Total surveyed area</b>	<b>30.8</b>	<b>100</b>	<b>-</b>
<b>Total site area</b>	<b>35.3</b>	<b>-</b>	<b>100</b>

7. The agricultural land on this site has been classified as Grade 2 (very good quality), Subgrade 3a (good quality) and Subgrade 3b (moderate quality). The key limitations to the agricultural use of this land are soil droughtiness and soil wetness.

8. The area of very good quality land is mapped in the northern half of the site. The soils commonly comprise a sandy clay loam topsoil, overlying a sandy clay loam upper subsoil, onto medium sandy loam and loamy medium sand lower subsoils, and occasionally heavy clay loam.

9. The areas of good quality land are mapped in the centre of the site near Dormer House, and in the south of the site, adjacent to Green Lane. The soils typically comprise either a medium sandy silt loam, medium clay loam or sandy clay loam topsoil, overlying either a heavy clay loam or sandy clay loam upper subsoil, passing to a heavy clay loam and clay lower subsoil.

10. Areas of moderate quality land are mapped mainly in the south the site. The soils typically comprise either a medium clay loam or heavy clay loam topsoil, overlying a heavy clay loam and clay subsoil.

## 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	SK 245 017
Altitude	m, AOD	98
Accumulated Temperature	day°C (Jan-June)	1366
Average Annual Rainfall	mm	659
Field Capacity Days	days	146
Moisture Deficit, Wheat	mm	101
Moisture Deficit, Potatoes	mm	90
Overall climatic grade	N/A	Grade 1

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 no overall climatic limitation. The site is climatically Grade 1.

### **Site**

16. The site lies at an altitude of 90 to 105 metres AOD. The topography is rolling in nature. The land falls from a high point at the sports ground in the north west corner of the site, to its lowest point in the centre of the site where there is a thin strip of damp scrubby land. It then rises gently to the south.

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

18. These 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 Carboniferous Upper Coal Measures, Grey Marls with Fireclays and Brown Sandstone. There is no overlying drift geology shown for the site - British Geological Survey (1954).

20. The soils that have developed in the north of the site are generally of a sandy clay loam topsoil texture overlying sandy loam and loamy sand, often with a stony layer within the subsoil on the tops of the rises. In the south of the site the soils are generally of either a sandy clay loam or heavy clay loam topsoil texture, overlying heavy clay loam and clay subsoils.

### **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.

#### *Grade 2*

22. Land of very good quality occupies 16.6 hectares (47 %) of the site area and is found in the northern half of the site.

23. The soils commonly comprise a sandy clay loam topsoil, overlying sandy clay loam or medium sandy loam upper subsoils, passing to loamy medium sand lower subsoils, or occasionally onto heavy clay loam at depth. On the higher land the subsoils are moderately to very stony, but otherwise the profiles have few stones within them. The moisture balance places these soils in Grade 2.

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

### *Subgrade 3a*

25. Land of good quality occupies 8.0 hectares (23 %) of the site area and is found in two similar units, in the centre of the site near Dormer House, and in the south of the site, south of Green Lane.

26. The soil has either a sandy silt loam or sandy clay loam topsoil texture, over either a sandy clay loam or heavy clay loam upper subsoil, onto silty clay at depth. Observations of the depths to gleying and the slowly permeable layer place these soils in Wetness Class III.

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

### *Subgrade 3b*

28. Land of moderate quality occupies 6.2 hectares (17 %) of the site area and is found as two similar units.

29. The soils comprise a medium or heavy clay loam topsoil, passing to a heavy clay loam upper subsoil over a clay lower subsoil or sometimes directly to clay. Observations of the depths to gleying and the slowly permeable layer place these soils in Wetness Class IV.

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

### *Other Land*

31. Other land occupies 4.5 hectares (13 %) of the site area and is found as housing and gardens alongside Green Lane, a sports ground in the north west corner of the site, an overgrown strip of land along the north eastern border of the site and a thin strip of damp scrub and trees in the centre of the site.

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## **SOURCES OF REFERENCE**

British Geological Survey (1954) Sheet 154, Lichfield Solid and Drift Edition.  
1:63 360 Scale.  
BGS: London.

Ministry of Agriculture, Fisheries and Food (1988) Agricultural Land Classification of  
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