

**STAFFORDSHIRE AND STOKE-ON-
TRENT STRUCTURE PLAN
Site 7: Priory Farm**

**Agricultural Land Classification
ALC Map and Report
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**AGRICULTURAL LAND CLASSIFICATION REPORT
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INTRODUCTION

1. This report presents the findings of a detailed Agricultural Land Classification (ALC) survey on 238.2 hectares of land. The results of this survey supersede any previous ALC information for this land. The land is located to the east of Tamworth centred at grid reference SK 249 035. The site is bordered to the east by the M42, to the north by the Coventry Canal, to the west by Amington Golf Course and to the south by the B5000, Tamworth Road. 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 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 cereals, oil seed rape, potatoes, stubble, grass and set aside.

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	29.2	24	12
3a	50.8	41	21
3b	43.4	35	18
4	-	-	-
5	-	-	-
Agricultural land not surveyed	20.4	N/A	9
Other land	94.4	N/A	40
Total surveyed area	123.4	100	-
Total site area	238.2	-	100

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, soil wetness and gradient.

8. The areas of very good quality land are mapped mainly to the west of Robey's Lane extending north and south of Priory Farm. The soil profiles typically have either a sandy clay loam or sandy loam topsoil overlying a variety of subsoil textures including sandy clay loam, sandy loam, loamy sand and sand.

9. Areas of good quality land are mapped to the east of Robey's Lane extending south to Tamworth Road and east towards the M42. Two profiles are found. In the first profile, to the south east of Alvecote Wood and on the southern boundary of the site, the topsoil has either a clay loam or silty clay loam texture overlying upper subsoils of sandy clay loam, medium clay loam and silty clay loam. Lower subsoil textures include sandy clay loam, medium clay loam, silty clay loam and clay. In the second profile, to the east of Priory Farm extending towards the eastern boundary of the site, the topsoils have either a sandy clay loam or sandy loam topsoil. Upper subsoil textures include sandy clay loam, sandy loam and loamy sand.

10. Areas of moderate quality land are mapped in the north west sector of the site, south east and the north west of Alvecote Wood and in the south of the site close to Tamworth Road. The topsoil textures include sandy clay loam, medium clay loam and heavy clay loam overlying subsoils of sandy clay loam, medium clay loam, heavy clay loam and clay. Gradient is limiting in the north of the site and to the north west of Alvecote Wood, where there are slopes of between 7° and 11° which fall to the west towards a drain between the agricultural land and the golf course.

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 247 037
Altitude	m, AOD	100
Accumulated Temperature	day°C (Jan-June)	1362
Average Annual Rainfall	mm	652
Field Capacity Days	days	143
Moisture Deficit, Wheat	mm	102
Moisture Deficit, Potatoes	mm	92
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 75 to 100 metres AOD. The topography of the site is undulating in nature.

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

18. Gradient is limiting to the north west of Alvecote Wood and in the north of the site, where there are slopes of between 7° and 11°.

19. Microrelief 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 Upper Coal Measures with Grey Marls with fireclays and sandstone and of Etruria Marl Group - British Geological Survey (1954) and British Geological Survey (1982). No overlying drift geology is mapped for the site.

21. The soils that have developed over this geology typically comprise of either a sandy clay loam or sandy loam topsoil, overlying a variety of subsoil textures including sandy clay

and sandy loam. Alternatively, clay loam topsoils and subsoils are present, often with a stony layer within the topsoil and subsoil.

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.

Grade 2

23. Land of very good quality occupies 29.2 hectares (12 %) of the site area and is mapped mainly to the west of Robey's Lane extending north and south of Priory Farm.

24. The soil profiles typically have either a sandy clay loam or sandy loam topsoil overlying a variety of subsoil textures including sandy clay loam, sandy loam, loamy sand and sand. The moisture balance places these soils in Grade 2.

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

Subgrade 3a

26. Land of good quality occupies 50.8 hectares (21 %) of the site area and is mapped to the east of Robey's lane extending south to Tamworth Road and east towards the M42.

27. Two profiles are found. In the first, located to the south east of Alvecote Wood and on the southern boundary of the site, the topsoil has either a clay loam or silty clay loam texture overlying upper subsoils of sandy clay loam, medium clay loam and silty clay loam. Lower subsoil textures include sandy clay loam, medium clay loam, silty clay loam and clay. The depth to gleying and the slowly permeable layer places these soils in Wetness Class III.

28. In the second profile, located to the east of Priory Farm and towards the eastern boundary of the site, the topsoils have either a sandy clay loam or sandy loam topsoil. Upper subsoil textures include sandy clay loam, sandy loam or loamy sand. The moisture balance places these soils in Subgrade 3a.

29. The main limitations to the agricultural use of this land are soil droughtiness and soil wetness.

Subgrade 3b

30. Land of moderate quality occupies 43.4 hectares (18 %) of the site area and is mapped in the north west sector of the site, south east and the north west of Alvecote Wood and in the south of the site close to Tamworth Road.

31. The topsoil textures include sandy clay loam, medium clay loam and heavy clay loam overlying subsoils of sandy clay loam, medium clay loam, heavy clay loam and clay. The depths to gleying and the slowly permeable layer places these soils in Wetness Class IV.

32. In the north of the site, where the land falls to the west towards a drain between the agricultural land and the golf course and to the north west of Alvecote Wood, where the land falls eastwards towards Robey's Lane, the limiting factor is gradient, where there are slopes of between 7° and 11°.

33. The main limitations to the agricultural use of this land are soil wetness and gradient.

Other Land

34. Other land occupies 94.4 hectares (40 %) of the site area and is found as the Amington Golf Course, Alvecote Priory, woodland, two farmsteads known as Priory Farm, drains, disused land, a go-karting track, sand and gravel quarry and Robey's Lane.

Agricultural land not surveyed

35. Agricultural land not surveyed occupies 20.4 hectares (9%) of the site and is used as grazing for horses. Access was restricted for this area of the site.

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SOURCES OF REFERENCE

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

British Geological Survey (1982) Sheet 155, Coalville Solid and Drift
1:50 000 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.