

**Stafford Local Plan  
Objection 1944/32  
Land N. of Eccleshall Rd, Walton, Stone**

**Agricultural Land Classification  
ALC Map and Report  
July 1997**

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**AGRICULTURAL LAND CLASSIFICATION REPORT**  
**Land N. of Eccleshall Rd, Walton, Stone**

**INTRODUCTION**

1. This report presents the findings of a detailed Agricultural Land Classification (ALC) survey on 26.7 hectares of land. The results of this survey supersede any previous ALC information for this land. The land is located to the west of Walton, Stone, between Eccleshall Road and the Stoke-Stafford railway line. The survey was in connection with the Stafford Local Plan.
2. The survey was undertaken on behalf of the Ministry of Agriculture, Fisheries and Food (MAFF) in June 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 grass, either pasture for grazing cattle or for cutting hay.

**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	6.6	28	25
3a	11.2	48	42
3b	5.7	24	21
4	-	-	-
5	-	-	-
Agricultural land not surveyed	2.1	N/A	8
Other land	1.1	N/A	4
<b>Total surveyed area</b>	<b>23.5</b>	<b>100</b>	<b>-</b>
<b>Total site area</b>	<b>26.7</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 wetness and gradient.

8. The area of very good quality land is located in the south of the site. The soils commonly comprise medium clay loam topsoils overlying sandy clay loam upper subsoils passing to medium sandy loams and loamy sands.

9. The area of good quality land is mapped in three units in the south, centre and north of the site. The soils in this area commonly comprise a medium clay loam topsoil overlying a gleyed medium or sandy clay loam subsoil, passing to a sandy clay loam lower subsoil, or a medium clay loam topsoil overlying a medium clay loam upper subsoil passing to a slowly permeable clay lower subsoil.

10. The area of moderate quality land is located to the north of the site. The soils in this area comprise a medium clay loam topsoil overlying gleyed medium or heavy clay loam upper subsoils passing to a slowly permeable clay. In some areas gradients exceed 7°.

## 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 892329	SJ 892336
Grid reference	N/A	SJ 892329	SJ 892336
Altitude	m, AOD	120	90
Accumulated Temperature	day°C (Jan-June)	1335	1374
Average Annual Rainfall	mm	762	755
Field Capacity Days	days	187	187
Moisture Deficit, Wheat	mm	88	93
Moisture Deficit, Potatoes	mm	75	80
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 altitudes between 90 and 120 metres AOD. The land rises gently from the south to a high point west of the former Walton Hill House. North of Walton Hill House the land falls towards Filly Brook. Once north of Filly Brook the land rises gently towards the railway line.

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

18. To the north of Walton Hill House gradients slightly in excess of 7° were measured where the land falls towards Filly Brook. These gradients limit some of the land to Subgrade 3b.

19. Along the course of Filly Brook observations of poaching and saturation in the auger borings provided evidence of soil wetness. At the time of the survey the brook was at bank-full condition following heavy rain. Taken together these observations suggest soils alongside the brook would be no better than Wetness Class IV, limiting this area to Subgrade 3b.

### **Geology and Soils**

20. The solid geology of the area is comprised of Keuper Marl. In the south of the site this is overlain with deposits of boulder clay - British Geological Survey (1974).

21. The soils that have developed on this geology are generally of a sandy clay loam or medium clay loam texture over 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.

#### *Grade 2*

23. Land of very good quality occupies 6.6 hectares (25 %) of the site area and is found in the south of the site in a single unit.

24. The soil has a medium clay loam texture over a sandy clay loam upper subsoil, passing to medium sandy loam, loamy medium sand and loamy coarse sand at depth. The upper subsoil horizons are moderately stony, becoming very stony in the coarse sandy loam

horizon. The absence of gleying or a slowly permeable layer places this soil into Wetness Class I.

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

*Subgrade 3a*

26. Land of good quality occupies 11.2 hectares (42 %) of the site area and is found across the site in three blocks.

27. The soils have a medium clay loam texture over a medium or sandy clay loam upper subsoil overlying a gleyed medium or sandy clay loam lower subsoil, passing at varying depths to slowly permeable clay. The depth to gleying places these soils in Wetness Class II or, when a slowly permeable layer is sufficiently high in the profile, Wetness Class III.

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

*Subgrade 3b*

29. Land of moderate quality occupies 5.7 hectares (21 %) of the site area and is found in the north of the site.

30. North of Walton Hill House the soil has a medium clay loam texture over a gleyed medium or heavy clay loam upper subsoil passing to a slowly permeable clay lower subsoil. The depth to gleying and the slowly permeable layer place these soils in Wetness Class IV.

31. Gradients in excess of 7° were measured in this area.

32. Beside Filly Brook the soils have a gleyed organic sandy clay loam topsoil texture over a gleyed sandy clay loam subsoil, at the time of the survey saturated below 50 cm. The depth to gleying and waterlogging places these soils in Wetness Class IV.

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

*Other Land*

34. Other land occupies 1.1 hectares (4 %) of the site area and is found as farm buildings (some derelict) and trackways.

35. At the time of the survey it was not possible to cross Filly Brook. As no other access was available, the area to the north of the brook remains unsurveyed.

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## **SOURCES OF REFERENCE**

British Geological Survey (1974) Sheet 139, Stafford Drift Edition.  
1:50,000 Scale.  
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