

**PROPOSED GOLF COURSE
MANOR PARK FARM, CHADWICK END
KNOWLE, SOLIHULL
Agricultural Land Classification Survey
ALC Map and Report
February 1997**

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**AGRICULTURAL LAND CLASSIFICATION REPORT
PROPOSED GOLF COURSE
MANOR PARK FARM, CHADWICK END, KNOWLE SOLIHULL**

INTRODUCTION

1. This report presents the findings of a detailed Agricultural Land Classification (ALC) survey on 63.2 hectares of land. The site is located to the south of Knowle and east of the A4141. The survey was undertaken by the Resource Planning Team at Wolverhampton (Northern ADAS Statutory Centre) during February 1997.
2. The survey was commissioned by the Ministry of Agriculture, Fisheries and Food (MAFF) from its Land Use Planning Unit in Crewe. The survey was in connection with the renewal of a planning permission for the proposed development of a Golf Course on the Site. The results of this survey supersede any previous ALC information for this land.
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 was largely under winter cereal or permanent grassland. Part of the site had had a recent maize crop.

SUMMARY

5. The findings of the survey are shown on the attached ALC map. At the request of the Land Use Planning Unit this was a detailed grid survey at a scale of 1:10 000 with a minimum auger boring density of 1 per hectare. The ALC map is only accurate at the 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 below.

Table 1: Area of grades and other land

Grade/Other land	Area (hectares)	% site area	% surveyed area
2	20.7	32.8	35.0
3a	10.5	16.6	17.7
3b	27.6	43.7	46.6
4	0.4	0.6	0.7
Other Land	4.0	6.3	-
Total surveyed area	59.2	-	100.0
Total site area	63.2	100.0	-

7. The agricultural land on this site has been classified as Grade 2 (very good quality), Subgrade 3a (good quality), Subgrade 3b (moderate quality) and Grade 4 (poor quality), the key limitation being soil wetness.

8. The area of very good quality land is located in the west of the site and on higher ground in the east and north-east of the site. The soils commonly comprise either a medium clay loam or sandy clay loam topsoil over sandy clay loam or heavy clay loam subsoil overlying either clay or loamy sand and sand at depth.

9. The area of good quality land is located in the south of the site. The soils commonly comprise either a medium clay loam or sandy clay loam topsoil over sandy clay loam or heavy clay loam upper subsoil over clay.

10. The area of moderate quality land is mapped in a band through the centre of the site. The soils in this area commonly comprise either a medium or heavy clay loam topsoil overlying a gleyed and slowly permeable clay subsoil. Along the line of Cuttle Brook the soil typically comprises an organic sandy clay loam overlying a saturated peaty loam.

11. The area of poor quality land has been mapped to the north of the site alongside the Cuttle Brook, where the organic soils were saturated and standing water was present at the time of the survey.

FACTORS INFLUENCING ALC GRADE

Climate

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

11. The key climatic variables used for grading this site are given in Table 2 below and were obtained from the published 5km grid datasets using standard interpolation procedures (Met. Office, 1989).

14. 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.

Table 2: Climatic and altitude data

Factor	Units	Values
Grid reference	N/A	SP 201 748
Altitude	m, AOD	105
Accumulated Temperature	day°C	1370
Average Annual Rainfall	mm	720
Field Capacity Days	days	165
Moisture Deficit, Wheat	mm	93
Moisture Deficit, Potatoes	mm	82

15. 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.

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

Site

17. The site lies at altitudes in the range 95-120m AOD. The land rises to the east of the brook with gentle undulations.

18. Three site factors of gradient, microrelief and flooding are considered when classifying the land.

19. In the north of the site a small area of land with gradients between 8° and 11° is limited to Subgrade 3b. An area of land showing ridge and furrow cultivation is classified as Subgrade 3b.

Geology and soils

20. The solid geology of the area is comprised of Mercia Mudstone. This is overlain with deposits of glacial sand and gravels, till, alluvium and head - British Geological Survey (1989).

19. The soils that have developed on this geology are generally of a clay loam or sandy clay loam texture over clay or sands at depth, depending on the nature of the drift.

Agricultural Land Classification

22. The details of the classification of the site are shown on the attached ALC map and the area statistics of each grade are given in Table 1.

Grade 2

23. Land of very good quality occupies 20.7 hectares (32.8%) of the site area and is found in three parts of the site, at the western site boundary; close to Chadwick Lane and near Chadwick Manor Hotel

24. To the west of the brook the soil has a sandy clay loam texture over loamy sand and sand to depth and is slightly stony in the topsoil and upper subsoil.

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

26. In the north-east and east of the site the soil has a sandy clay loam texture, over a slightly stony and gleyed sandy clay loam subsoil, over sandy loam or loamy sand to depth. The depth to gleying places these soils into Wetness Class II.

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

Grade 3a

28. Land of good quality occupies 10.5 hectares (16.6%) of the site area and is found in the south of the site.
29. The soil has a medium clay loam texture over a gleyed sandy clay loam subsoil, over gleyed and slowly permeable clay. The depth to gleying and the slowly permeable layer place these soils in Wetness Class III.
30. The main limitation to the agricultural use of this land is soil wetness.

Grade 3b

31. Land of moderate quality occupies 27.6 hectares (43.7%) of the site area and is found across the centre of the site.
32. Alongside the brook the soil has an organic sandy clay loam texture, over peaty loam with slowly permeable clay present at varying depth. The wetness of the organic soils and the depth to the slowly permeable layer place these soils in Wetness Class IV.
33. The remainder of the moderate quality land, extending south eastwards from the brook, has either a medium clay loam or sandy clay loam texture, over a gleyed and slowly permeable heavy clay loam or clay subsoil. The depth to gleying and slowly permeable layer place these soils in Wetness Class IV.
34. The main limitation to the agricultural use of this land is soil wetness.

Grade 4

35. Land of poor quality occupies 0.4 hectares (0.6%) of the site area and is found close to Cuttle Pool Lane.
36. This soil has a gleyed organic heavy clay loam topsoil over slowly permeable clay, placing this soil in Wetness Class V.
37. The main limitation to the agricultural use of this land is soil wetness.
38. Other land occupies 4.0 hectares (6.3%) of the site area and is found as trackways, areas of woodland and ponds.

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SOURCES OF REFERENCE

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1:50,000 Scale.

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