

**SHROPSHIRE STRUCTURE PLAN
MUCH WENLOCK
LAND NORTH OF SOUTHFIELD ROAD**

**Agricultural Land Classification
ALC Map and Report**

May 1999

**Resource Planning Team
Northern Region
FRCA Wolverhampton**

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AGRICULTURAL LAND CLASSIFICATION REPORT
SHROPSHIRE STRUCTURE PLAN
MUCH WENLOCK, LAND NORTH OF SOUTHFIELD ROAD

INTRODUCTION

1. This report presents the findings of a detailed Agricultural Land Classification (ALC) survey of 5.6 ha of land north of Southfield Road, to the north of Much Wenlock, Shropshire. The survey was carried out in April 1999.
2. The survey was undertaken by the Farming and Rural Conservation Agency (FRCA)¹ on behalf of the Ministry of Agriculture, Fisheries and Food (MAFF). This survey was carried out in connection with MAFF's statutory input to the Shropshire Structure Plan. This survey supersedes any previous ALC information for this land.
3. The work was conducted by members of the Resource Planning Team in the Northern Region of FRCA. The land has been graded in accordance with the published MAFF ALC guidelines and criteria (MAFF, 1988). A description of the ALC grades and subgrades is given in Appendix I.
4. At the time of survey the site was under winter cereals. For the purpose of this survey, an area of allotments in the south of the site were mapped as 'Other land'.

SUMMARY

5. The findings of the survey are shown on the enclosed ALC map. The map has been drawn at a scale of 1:10 000. It is accurate at this scale but 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)	% Total agricultural land area	% Total survey area
1	-	-	-
2	1.0	21	18
3a	1.0	21	18
3b	2.8	58	50
4	-	-	-
5	-	-	-
Agricultural land not surveyed	-	-	-
Other land	0.8	-	14
Total agricultural land area	4.8	100	-
Total survey area	5.6	-	100

¹ FRCA is an executive agency of MAFF and the Welsh Office

7. The fieldwork was conducted at an average density of 1 boring per hectare of agricultural land. A total of 7 borings and 1 soil pit was described.
8. 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 principal limitations to the agricultural use of this land are gradient and soil wetness.
9. Land of very good quality (Grade 2) is found in the north of the survey area. Soils comprise medium silty clay loam topsoils and upper subsoils, over medium silty clay loam and heavy clay loam lower subsoils. Soil wetness is the principal limitation to the agricultural use of this land.
10. Land of good quality (Subgrade 3a), is found on higher land in the west of the survey area. Soils comprise medium silty clay loam topsoils and upper subsoils. These overlie either medium silty clay loam lower subsoils, or soft siltstone. Soil wetness is the principal limitation to the agricultural use of this land.
11. Land of moderate quality (Subgrade 3b), is found across the site, where slopes are between 7 and 11°. Gradient imposes an overriding limitation to the agricultural use of this land.

FACTORS INFLUENCING ALC GRADE

Climate

10. 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 and were obtained from the published 5km grid datasets using the standard interpolation procedures (Met. Office, 1989).

Table 2: Climatic and altitude data

Factor	Units	Values	Values
Grid reference	N/A	SJ621003	SJ619002
Altitude	m, AOD	165	190
Accumulated Temperature	day°C (Jan-June)	1304	1276
Average Annual Rainfall	mm	759	768
Field Capacity Days	days	177	178
Moisture Deficit, Wheat	mm	84	81
Moisture Deficit, Potatoes	mm	68	64
Overall climatic grade	N/A	Grade 2	Grade 2

12. 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.

13. 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.
14. The combination of rainfall and temperature at this site means that this land experiences a climatic limitation consistent with Grade 2. As a result land cannot be graded higher than Grade 2.

Site

15. The site lies at an altitude of 165-190m AOD, and slopes to the south -east. The site is bordered to the south-east by houses and allotments, to the south-west by a track and elsewhere, by agricultural land and woodland.
16. Over much of the site, slopes between 7 and 11°, imposes a gradient limitation, which precludes land from being graded any higher than Subgrade 3b.

Geology and soils

17. The solid geological information for this area (BGS, 1952) maps the site as being underlain by Lower Ludlow shales. Drift geological information for this area (BGS, 1974) indicates that there is no drift on this site.
18. The most detailed published soils information for this area (SSEW, 1983) shows the site to comprise soils of the Yeld association. This association, which occur over shales and associated limestones, includes soils described as 'fine silty and calcareous fine loamy' (SSEW 1984).
19. Upon detailed field examination, soil profiles broadly consistent with the above description were found across the site.

AGRICULTURAL LAND CLASSIFICATION

20. 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, page 1.

Grade 2

21. Land of very good quality occupies 1 ha. (18%) of the total survey area, and is found in the north of the site. The principal limitation to the agricultural use of this land is soil wetness.
22. Within the Grade 2 mapping unit, soils comprise stoneless medium silty clay loam topsoils overlying stoneless medium silty clay loam upper subsoils, and medium silty clay loam and heavy clay loam lower subsoils. All profiles were found to extend to at least 120cm. Gleying is evident below 40cm in the subsoils, these soils are placed in Wetness Class I and Grade 2.

Subgrade 3a

23. Land of good quality occupies 1 ha. (18%) of the total survey area, and is found in the east of the survey area. The principal limitation to the agricultural use of this land is soil wetness.
24. Within the Subgrade 3a mapping unit, soils comprise stoneless medium silty clay loam topsoils overlying stoneless medium silty clay loam upper subsoils. Soil depth is variable, and these upper subsoils may overlie stoneless medium silty clay loam lower subsoils, or soft mottled siltstone. Observed depths of gleying and slowly permeable layers in relation to the local climatic regime, place these soils into Wetness Classes II and III, and Subgrade 3a.

Subgrade 3b

25. Land of moderate quality occupies 2.8 ha. (50%) of the total survey area, and is found across the survey area. The principal limitation to the agricultural use of this land is gradient.
26. Within the Subgrade 3b mapping unit, slopes between 7° and 11° impose a gradient limitation.

William Fearnough
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SOURCES OF REFERENCE

British Geological Survey (1952) *Sheet No. 152, Shrewsbury. (1:63 630).*
BGS: London.

British Geological Survey (1974) *Sheet No. 152, Shrewsbury. (1:63 630).*
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.

Met. Office (1989) *Climatological Data for Agricultural Land Classification.*
Met. Office: Bracknell.

Soil Survey of England and Wales (1983) *Sheet 3, Soils of Midland and Western England. (1:250 000).*
SSEW: Harpenden.

Soil Survey of England and Wales (1984) *Soils and their use in Midland and Western England.*
SSEW: Harpenden.

APPENDIX I

DESCRIPTIONS OF THE GRADES AND SUBGRADES

Grade 1: Excellent Quality Agricultural Land

Land with no or very minor limitations to agricultural use. A very wide range of agricultural and horticultural crops can be grown and commonly includes top fruit, soft fruit, salad crops and winter harvested vegetables. Yields are high and less variable than on land of lower quality.

Grade 2: Very Good Quality Agricultural Land

Land with minor limitations which affect crop yield, cultivations or harvesting. A wide range of agricultural or horticultural crops can usually be grown but on some land of this grade there may be reduced flexibility due to difficulties with the production of the more demanding crops such as winter harvested vegetables and arable root crops. The level of yield is generally high but may be lower or more variable than Grade 1 land.

Grade 3: Good to Moderate Quality Land

Land with moderate limitations which affect the choice of crops, the timing and type of cultivation, harvesting or the level of yield. When more demanding crops are grown, yields are generally lower or more variable than on land in Grades 1 and 2.

Subgrade 3a: Good Quality Agricultural Land

Land capable of consistently producing moderate to high yields of a narrow range of arable crops, especially cereals, or moderate yields of a wide range of crops including cereals, grass, oilseed rape, potatoes, sugar beet and the less demanding horticultural crops.

Subgrade 3b: Moderate Quality Agricultural Land

Land capable of producing moderate yields of a narrow range of crops, principally cereals and grass, or lower yields of a wider range of crops or high yields of grass which can be grazed or harvested over most of the year.

Grade 4: Poor Quality Agricultural Land

Land with severe limitations which significantly restrict the range of crops and/or the level of yields. It is mainly suited to grass with occasional arable crops (e.g. cereals and forage crops) the yields of which are variable. In moist climates, yields of grass may be moderate to high but there may be difficulties in utilisation. The grade also includes very droughty arable land.

Grade 5: Very Poor Quality Agricultural Land

Land with severe limitations which restrict use to permanent pasture or rough grazing, except for occasional pioneer forage crops.

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program: ALC012

LIST OF BORINGS HEADERS 04/05/99 MUCH WENLOCK SITE A

SAMPLE NO.	GRID REF	ASPECT		GRDNT	GLEYS	—WETNESS—		—WHEAT—		—POTS—		M.REL		EROSN EXP	FROST DIST	CHEM LIMIT	ALC	COMMENTS
		USE				CLASS	GRADE	AP	MB	AP	MB	DRT	FLOOD					
1	SJ62000030	CER	E	03	028	2	3A	151	69	125	59	1				WE	3A	
1P	SJ61950015	CER	SE	05	48	3	3A	087	5	087	21	2				WE	3A	
2	SJ62100030	CER	SE		040	1	2	151	69	125	59	1				WE	2	
3	SJ62000020	CER	SE	08	025 35	4	3B	090	8	090	24	2				GR	3B	CK SPL
4	SJ62100020	CER	E	07	034	2	3A	152	70	126	60	1				GR	3B	
4A	SJ62150025	CER	E	03	040	1	2	140	58	124	58	1				WE	2	
5	SJ61900010	CER	E	07	035 57	3	3A	148	66	121	55	1				GR	3B	WC 3-2
6	SJ62000010	CER	E	07	50	3	3A	090	8	090	24	2				GR	3B	

SAMPLE	DEPTH	TEXTURE	COLOUR	-----MOTTLES-----			PED COL.	-----STONES-----			STRUCT/ CONSIST	SUBS					
				COL	ABUN	CONT		GLE	>2	>6		LITH	TOT	STR	POR	IMP	SPL
1	0-28	mzc1	10YR32 00					0	0	0							
	28-50	mzc1	25Y 53 00	10YR56 00	C		Y	0	0	0						M	
	50-110	mzc1	05Y 54 00	10YR56 00	C		Y	0	0	0						M	
1P	0-28	mzc1	25Y 51 00					0	0	0							
	28-48	mzc1	05Y 53 00					0	0	0	WKCSA	FR	M				
2	0-30	mzc1	05Y 32 00					0	0	0							
	30-40	mzc1	05Y 53 00	25Y 56 00	F			0	0	0						M	
	40-110	mzc1	05Y 53 00	25Y 56 00	C		Y	0	0	0						M	
3	0-25	mzc1	05Y 42 00					0	0	0							
	25-50	mzc1	05Y 63 00	10YR56 00	C		Y	0	0	0						M	
4	0-34	mzc1	25Y 41 00					0	0	0							
	34-50	mzc1	05Y 53 00					Y	0	0						M	
	50-90	mzc1	05Y 53 00	10YR56 00	C		Y	0	0	0						M	
	90-110	hc1	05Y 61 00	10YR56 00	C		Y	0	0	0						M	
4A	0-27	mzc1	25Y 31 00					0	0	0							
	27-40	mzc1	05Y 53 00					0	0	0						M	
	40-78	mzc1	05Y 53 00					Y	0	0						M	
	78-100	hc1	05Y 53 00					Y	0	0						M	
5	0-28	mzc1	25Y 31 00					0	0	HR 5							
	28-35	mzc1	05Y 53 00	25Y 56 00	F			0	0	0						M	
	35-57	mzc1	05Y 53 00	25Y 56 00	C		Y	0	0	0						M	
	57-110	hc1	05Y 52 00	10YR56 00	C		Y	0	0	0						M	
6	0-27	mzc1	05Y 44 00					0	0	0							
	27-50	mzc1	05Y 53 00					0	0	0						M	