SHROPSHIRE STRUCTURE PLAN
MUCH WENLOCK
LAND SOUTH OF VICTORIA 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 SOUTH OF VICTORIA ROAD

INTRODUCTION

1. This report presents the findings of a detailed Agricultural Land Classification (ALC) survey of 9.4 ha of land south of Victoria Road, to the west 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 majority of the agricultural land was under grass. The field in the west of the survey area was under cereal stubble. An area of woodland, in the north of the site, and a walled garden in the west 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	4.3	48	46
3a	2.0	22	21
3b	1.3	14	14
4	1.4	16	15
5	-	-	-
Agricultural land not surveyed	-	-	-
Other land	0.4	-	4
Total agricultural land area	9.0	100	-
Total survey area	9.4	-	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 9 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), Subgrade 3b (moderate quality) and Grade 4 (poor quality). The principal limitations to the agricultural use of this land are soil wetness, gradient and microrelief.

9. An area of very good quality (Grade 2) land is found across the western part of the survey area. Soils comprise silty clay loam or silt loam topsoils, over medium silty clay loam and medium clay loam upper subsoils. Clay content increases with soil depth, with heavy clay loam, heavy silty clay loam and clay textures dominant in the lower subsoils. Soil wetness is the principal limitation to the agricultural use of this land.

10. Land of good quality (Subgrade 3a), is found in the east of the survey area. Soils comprise slightly stony medium clay loam topsoils, over slightly stony medium clay loam upper subsoils and clay lower subsoils. Soil wetness is the principal limitation to the agricultural use of this land.

11. An area of moderate quality (Subgrade 3b) land is found in the south of the site. In this area, gradient is the overriding limitation to the agricultural use of this land.

12. An area of poor quality (Grade 4) land is found in the south of the site. In these areas, uneven microrelief is the overriding limitation to the agricultural use of the land.

FACTORS INFLUENCING ALC GRADE

Climate

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

14. 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	SO620998	SO617995
Altitude	m, AOD	160	195
Accumulated Temperature	day°C (Jan-June)	1311	1271
Average Annual Rainfall	mm	755	768
Field Capacity Days	days	177	179
Moisture Deficit, Wheat	mm	85	80
Moisture Deficit, Potatoes	mm	69	63
Overall climatic grade	N/A	Grade 2	Grade 2

15. 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.

16. 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.

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

Site

18. The site lies at an altitude of 160-215m AOD, and is bounded to the north by Victoria Road and a dismantled railway line, to the east by Bourton Road, and to the south by agricultural land.

19. A ridge of higher land lies in the south of the site, from which land slopes towards the west, north and east.

20. In places, slopes between 7 and 11° were recorded. These constitute a gradient limitation. In the south-east of the site, an area of complex changes in slope angle and direction constitutes a microrelief limitation.

Geology and soils

21. The published solid geological information for this area (BGS, 1952) maps the site as being underlain by Lower Ludlow shales and Amestry Limestone. Drift geological information for this area (BGS, 1974) indicates that there is no drift on this site.

22. The most detailed published soils information for this area (SSEW, 1983) shows the site to comprise soils of the Munslow association. This association, which occur over siltstones and fine grained sandstones, includes soils broadly described as 'typical brown earths' (SSEW 1984).

23. Upon detailed field examination, soil profiles broadly consistent with the above description were found across the site.

AGRICULTURAL LAND CLASSIFICATION

24. 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

25. Land of very good quality occupies 4.3 ha. (46%) of the total survey area, and is found in the south of the site. The principal limitation to the agricultural use of this land is soil wetness.

26. Within the Grade 2 mapping unit, soils comprise very slightly or slightly stony silty clay loams or silt loam topsoils, over very slightly stony medium silty clay loam and medium clay loam upper subsoils. Clay content increases with soil depth, with heavy clay loam, heavy silty clay loam and clay textures dominant in the lower subsoils. In some cases evidence of gleying was noted in lower subsoils. These soils are all placed in Wetness Class I, and Grade 2.

Subgrade 3a

27. Land of good quality occupies 2 ha. (21%) 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.

28. Within the Subgrade 3a mapping unit, soils comprise slightly stony medium clay loam topsoils over slightly stony medium clay loam upper subsoils and clay lower subsoils. Observed depths to gleying and slowly permeable layers in relation to the local climatic regime, place these soils into Wetness Class II and Subgrade 3a.

Subgrade 3b

29. Land of moderate quality occupies 1.3 ha. (14%) of the total survey area, and is found in places where slopes exceed 7°. The principal limitation to the agricultural use of this land is gradient.

Grade 4

30. Land of poor quality occupies 1.4 ha (15%) of the total survey area, and is found in the south of the site. The principal limitation to the agricultural use of this land is uneven microrelief. Much of this land shows evidence of previous earth-workings, which result in complex changes in slope angle and direction over short distances. The presence of uneven microrelief on relatively steep slopes is therefore considered to constitute a limitation compatible with land of Grade 4 quality.

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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.

059/98

program: ALC012 LIST OF BORINGS HEADERS 15/04/99 MUCH WENLOCK SITE C

SAMPLE NO.	GRID REF	USE	ASPECT	GRDNT	GLEY	SPL	WETNESS CLASS	WETNESS GRADE	WHEAT AP	WHEAT MB	POTS AP	POTS MB	M.REL	DRT	FLOOD	EROSN EXP	FROST DIST	CHEM LIMIT	ALC	COMMENTS
1	SO61609970	STU	NE	01	~~000~~		1	2	145	62	134	68	1					WE	2	
1P	SO61609970	STU	NE	02	069		1	2	132	49	131	65	1					WE	2	
2	SO61709970	CER	NW	02	085	085	1	2	153	70	129	63	1					WE	2	
4	SO61909970	GRA	SE	02	065	065	2	3A	125	42	115	49	1					WE	3A	
6	SO61709960	CER	NE	10	~~000~~		1	2	000 ?	0	000 ?	0		Y				GR	3B	
6A	SO61659965	CER	NE	02	065		1	2	161	78	131	65	1					WE	2	
7	SO61809960	CER	E	05	065		1	2	162	79	135	69	1					WE	2	
8	SO61909960	GRA	NE	02	~~000~~		1	2	148	65	123	57	1					WE	2	
9	SO61709950	CER	NE	01	~~000~~		1	2	133	50	132	66	1					WE	2	
10	SO61809950	GRA	NE	05	~~000~~		1	2	176	93	140	74	1					WE	2	

SAMPLE	DEPTH	TEXTURE	COLOUR	MOTTLES COL	MOTTLES ABUN	MOTTLES CONT	PED COL.	GLEY	STONES >2	STONES >6	STONES LITH	STONES TOT	STRUCT/ CONSIST	SUBS STR	SUBS POR	SUBS IMP	SUBS SPL	SUBS CALC
1	0-30	zl	10YR32 00						0	0	HR	3						
	30-60	mzcl	10YR43 00						0	0	HR	1		M				
	60-75	mzcl	75YR46 00						0	0	HR	1		M				
	75-100	c	75YR46 00						0	0	HR	1		M				
1P	0-29	zl	10YR42 00						0	0	HR	8						
	29-60	mzcl	10YR53 43						0	0	HR	1	MDCAB	FR M				
	60-69	mzcl	75YR43 00	75YR52 00	C				0	0	HR	1	MDVCAB	FR M				
	69-90	c	75YR54 00	75YR51 58	C			Y	0	0	HR	1	WKMSAB	FM M				
2	0-25	zl	10YR41 00	10YR56 00	C				0	0	HR	2						
	25-45	mzcl	10YR54 00						0	0	HR	2		M				
	45-55	mcl	10YR54 00						0	0	HR	2		M				
	55-85	hcl	10YR54 00						0	0		0		M				
	85-110	c	75YR43 00	75YR51 58	C			Y	0	0		0		M			Y	
4	0-25	mcl	10YR42 00						0	0	HR	2						
	25-65	mcl	10YR54 00						0	0	HR	2		M				
	65-100	c	75YR54 00	25Y 61 64	M			Y	0	0	HR	5		M			Y	
6	0-34	zl	25Y 32 00						0	0	HR	5						
	34-80	zl	25Y 56 00						0	0	HR	1		P				
6A	0-28	zl	10YR32 00						0	0	HR	3						
	28-65	mzcl	10YR44 00						0	0	HR	5		M				
	65-90	hzcl	25Y 53 00	10YR56 00	C			Y	0	0	HR	1		M				
	90-120	c	25Y 52 00					Y	0	0	HR	1		M				
7	0-32	zl	10YR42 00	10YR58 00	F				0	0	HR	2						
	32-65	mzcl	10YR54 00						0	0	HR	2		M				
	65-85	mcl	10YR54 00	10YR56 00	C			Y	0	0	HR	2		M				
	85-110	mzcl	10YR53 00	25Y 64 00	M			Y	0	0		0		M				
8	0-30	mzcl	10YR42 00						0	0	HR	2						
	30-68	mzcl	10YR54 00						0	0	HR	2		M				
	68-110	hzcl	10YR54 56						0	0	HR	2		M				

SAMPLE	DEPTH	TEXTURE	COLOUR	MOTTLES COL	MOTTLES ABUN	MOTTLES CONT	PED COL.	GLEY	STONES >2	STONES >6	STONES LITH	STONES TOT	STRUCT/ CONSIST	SUBS STR	SUBS POR	SUBS IMP	SUBS SPL	SUBS CALC
9	0-35	mzcl	25Y 32 00						0	0	HR	1						
	35-50	zl	25Y 56 00						0	0	HR	1		M				
	50-85	mzcl	25Y 56 00						0	0	HR	1		M				
10	0-25	zl	25Y 42 00						0	0	HR	1						
	25-40	zl	25Y 43 00						0	0	HR	1		M				
	40-80	mzcl	25Y 43 00						0	0	HR	1		M				
	80-120	mzcl	05Y 53 00						0	0	HR	1		M				