

**SHROPSHIRE STRUCTURE PLAN  
SHIFNAL  
LAND EAST OF LAWTON ROAD**

**Agricultural Land Classification  
ALC Map and Report**

**July 1999**

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**AGRICULTURAL LAND CLASSIFICATION REPORT  
SHROPSHIRE STRUCTURE PLAN  
SHIFNAL, LAND EAST OF LAWTON ROAD**

**INTRODUCTION**

1. This report presents the findings of a detailed Agricultural Land Classification (ALC) survey of 8.7 ha of land on the eastern edge of Shifnal, Shropshire. The survey was carried out during July 1999.
2. The survey was undertaken by the Farming and Rural Conservation Agency (FRCA)<sup>1</sup> on behalf of the Ministry of Agriculture, Fisheries and Food (MAFF). The 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 land use on the survey area was cereals and rough, scrubby grassland. The areas mapped as 'Other land' includes part of an industrial area and trackways.

**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)	% surveyed area	% site area
1	-	-	-
2	4.2	58	49
3a	2.8	39	32
3b	0.2	3	2
4	-	-	-
5	-	-	-
Agricultural land not surveyed	-	N/A	-
Other land	1.5	N/A	17
Total agricultural land area	7.2	100	-
Total site area	8.7	-	100

<sup>1</sup> 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. In total 10 borings and 2 soil pits were described.
8. Grade 2 (very good quality) land occurs in the western half of the survey area. Soil droughtiness is the main limitation to the agricultural use of this land.
9. Subgrade 3a (good quality) land occurs in the eastern half of the survey area. Soil wetness is the main limitation to the agricultural use of this land.
10. Subgrade 3b (moderate quality) land occurs in the extreme north west corner of the survey area in a damp hollow. Soil wetness is the main limitation to the agricultural use of this land.

## 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 the standard interpolation procedures (Met. Office, 1989).

**Table 2: Climatic and altitude data**

Factor	Units	Values
Grid reference	N/A	SJ 757 076
Altitude	m, AOD	90
Accumulated Temperature	day°C (Jan-June)	1383
Average Annual Rainfall	mm	715
Field Capacity Days	days	169
Moisture Deficit, Wheat	mm	94
Moisture Deficit, Potatoes	mm	81
Overall climatic grade	N/A	Grade 1

13. The climatic criteria are considered first when classifying land. 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 (ATO, January to June), as a measure of the relative warmth of a locality.
15. The combination of rainfall and temperature at this site mean that climate does not pose a limitation to the agricultural use of the land. The site area is climatically Grade 1.

## Site

16. The topography of the survey area is gently undulating in nature, with the highest land in the south of the survey area and a dip in the land running north to south running roughly through the centre of the survey area.
17. Gradient, microrelief and flooding do not pose any limitation to the agricultural use of the land.

## Geology and soils

18. The solid geology of both sites is composed entirely of Lower Mottled Triassic Sandstone - British Geological Survey (1958). The drift geology is composed of Glacial Boulder Clay and Glacial Sand and Gravel - British Geological Survey (1959).
19. The soils that have developed at the survey area are shown by the Soil Survey of England and Wales (1983) to be Clifton and Salwick Series. Soils of the Clifton Series have either a clay loam or sandy clay loam topsoil, over sandy loam or sandy clay loam upper subsoil, over a clay loam subsoils. The subsoils are slowly permeable and the upper horizons are seasonally waterlogged (Wetness Class IV). Soils of the Salwick Series have either a sandy loam or sandy clay loam topsoil, over either a sandy loam or clay loam upper subsoil, over a lower subsoil of clay loam. Commonly found on sloping land, these slowly permeable soils shed more water by surface run-off and have generally better drained upper horizons (Wetness Class III).

## AGRICULTURAL LAND CLASSIFICATION

20. The details of the classification of the survey area 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 4.2 ha (58 %) of the surveyed area and occurs in the western half of the survey area. The topsoils typically have a medium sandy loam texture. This overlies either a medium sandy loam, loamy medium sand or sandy clay loam upper subsoil, passing to either a loamy medium sand or medium sand lower subsoil. However, occasionally the lower subsoil passes to heavy clay loam and clay. There are few to common stones within the profile. The depths to gleying and the slowly permeable layer place these soils in Wetness Class I. The moisture balance places these soils in Grade 2. The main limitation to the agricultural use of this land is soil droughtiness.

### **Subgrade 3a**

22. Land of good quality occupies 2.8 ha (39 %) of the surveyed area and occurs in the eastern half of the survey area. The topsoils are typically sandy clay loam, overlying either a sandy clay loam or heavy clay loam upper subsoil. This passes to a slowly permeable heavy clay loam and clay lower subsoil. Sandy lenses sometimes occur within the subsoil. The depths to gleying and a slowly permeable layer place these soils in Wetness Class III and Subgrade 3a. The main limitation to the agricultural use of this land is soil wetness.

### **Subgrade 3b**

23. Land of moderate quality occupies 0.2 ha (3 %) of the surveyed area and occurs in the extreme north west of the survey area. This land formed a hollow created by a retaining wall along the western boundary, beyond which the land was higher, and land rising up to the trackway to the east. To the east the land rose up towards the trackway. The land was covered with dense grassland with some trees and shrubs. The soils typically comprise a sandy clay loam topsoil overlying a slowly permeable heavy clay loam upper subsoil. This passes to an organic sandy loam lower subsoil. The depths to gleying and the slowly permeable layer place these soils in Wetness Class IV and Subgrade 3b. The main limitation to the agricultural use of this land is soil wetness.

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## SOURCES OF REFERENCE

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BGS: London.

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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) *Soils and their Use in Midland and Western England*  
SSEW: Harpenden

SAMPLE NO.	GRID REF	ASPECT		GRDNT	GLEY	—WETNESS—		-WHEAT-		-POTS-		M.REL		EROSN EXP	FROST DIST	CHEM LIMIT	ALC	COMMENTS
		USE				CLASS	GRADE	AP	MB	AP	MB	DRT	FLOOD					
1	SJ75400780	CER	E	01	000	1	1	128	34	098	17	1					1	
1A	SJ75370775	SCR	W	01	039	1	1	138	44	089	8	2				DR	2	
1B	SJ75350781	SCR	W	01	037 037	4	3B	197	103	109	28	1				WE	3B	DIP
2	SJ75400770	CER	E	01	000	1	1	091	-3	075	-6	3A				DR	3A	
3	SJ75500770	CER	E	02	050 080	2	1	135	41	107	26	1					1	
4	SJ75600770	CER	E	01	035 070	3	3A	122	28	104	23	2				WE	3A	
5	SJ75400760	SCR	W		000 070	2	1	130	36	110	29	1					1	SPL
6	SJ75500760	SCR	W		063	1	1	100	6	084	3	2				DR	2	
7	SJ75600760	CER	W	02	045 050	3	3A	097	3	102	21	3A				WE	3A	
8	SJ75700760	CER			029	2	2	114	20	094	13	2				WE	2	
1P	SJ75570760	CER	W	01	026 050	3	3A	110	16	095	14	2				WE	3A	
2P	SJ75500760	SCR	W		039	1	1	115	21	101	20	2				DR	2	

SAMPLE	DEPTH	TEXTURE	COLOUR	---MOTTLES---			PED COL.	---STONES---			STRUCT/ CONSIST	SUBS					
				COL	ABUN	CONT		GLY	>2	>6		LITH	TOT	STR	POR	IMP	SPL
1	0-29	msl	75YR32 00					0	0	HR	3						
	29-40	lms	75YR44 00					0	0	HR	3		M				
	40-50	msl	75YR44 00					0	0	HR	2		M				
	50-60	c	05YR34 00	00MN00	00	F		0	0		0		P				
	60-80	sc1	05YR44 00					0	0		0		M				
	80-100	msl	05YR44 00					0	0		0		M				
	100-110	lms	05YR44 00					0	0		0		M				
110-120	ms	05YR44 00					0	0		0		M					
1A	0-39	msl	75YR32 00					0	0	HR	3						
	39-57	lms	10YR53 54	10YR58	00	C		Y	0	0	HR	1		M			
	57-67	lms	10YR52 53	10YR58	00	C		Y	0	0	HR	1		M			
	67-80	msl	10YR51 52					Y	0	0	HR	1		M			
80-120	msl	10YR31 52	10YR46	00	C		Y	0	0	HR	1		M				
1B	0-37	sc1	75YR32 00					0	0	HR	1						
	37-65	hc1	05YR34 00	75YR58	00	M	00MN00	00	Y	0	0	HR	1		P		Y
	65-120	oms1	75YR31 00					Y	0	0	HR	1		M			X
2	0-29	msl	75YR32 00					3	0	HR	5						
	29-70	lms	75YR44 00					0	0	HR	5		M				
	70-120	ms	05YR44 46					0	0		0		M				
3	0-39	msl	75YR32 00					3	0	HR	8						
	39-50	sc1	75YR44 00					0	0	HR	5		M				
	50-80	sc1	05YR46 00	75YR58	00	C		Y	0	0	HR	1		M			
	80-120	c	05YR44 00	75YR58	00	M		Y	0	0	HR	1		P			Y
4	0-35	sc1	75YR32 00					3	0	HR	8						
	35-70	sc1	75YR53 00	75YR58	00	C		Y	0	0	HR	8		M			
	70-110	c	05YR34 00					Y	0	0		0		P			Y
5	0-40	msl	75YR32 00					1	0	HR	3						
	40-70	sc1	05YR44 00					0	0	HR	2		M				
	70-100	hc1	05YR34 00					0	0	HR	2		M				Y



SAMPLE	DEPTH	TEXTURE	COLOUR	-----MOTTLES-----			PED COL.	----STONES----			STRUCT/ CONSIST	SUBS					
				COL	ABUN	CONT		GLY	>2	>6		LITH	TOT	STR	POR	IMP	SPL
6	0-39	ms1	75YR32 00					2	0	HR	5						
	39-55	1ms	75YR44 00					0	0	HR	2		M				
	55-63	1ms	75YR43 00					0	0	HR	2		M				
	63-120	ms	10YR63 00	10YR46	00	C		Y	0	0	HR	1		M			
7	0-45	sc1	75YR32 00					5	0	HR	10						
	45-50	hc1	05YR44 00	75YR58	00	C		Y	0	0	HR	5		M			
	50-80	c	05YR34 00	75YR58	00	C		Y	0	0	HR	5		P		Y	
8	0-29	sc1	75YR32 00					5	0	HR	8						
	29-60	ms1	75YR53 00	75YR58	46	C		Y	0	0	HR	10		M			
	60-75	1ms	75YR44 00					Y	0	0	HR	10		M			
	75-100	sc1	05YR44 00	75YR58	00	C		Y	0	0	HR	8		M			
1P	0-26	mc1	10YR42 00					3	0	HR	5						
	26-50	hc1	05YR54 00	75YR58	00	C	10YR54	00	Y	0	0	HR	5	MDVCPR	FM	P	
	50-90	hc1	05YR44 00	00MN00	00	C	10YR54	00	Y	0	0	HR	5	MDVCPR	FM	P	Y
	90-100	1ms	05YR44 00					Y	0	0	HR	3		M			<del>Y</del>
	100-110	c	05YR44 00	00MN00	00	C		Y	0	0		0		P			Y
PSD = msl just	2P → 0-39	ms1	75YR32 00					3	0	HR	5						
	39-57	ms1	75YR53 00	75YR56	00	C		Y	0	0	HR	5	MDCAB	FR	M		
	57-70	1ms	10YR42 00	10YR46	00	C		Y	0	0	HR	2	MDCAB	FR	G		
	70-90	ms	10YR62 00					Y	0	0	HR	2	WKMAB	VF	M		
	90-120	ms	75YR56 00					Y	0	0	HR	2			M		