

**SHREWSBURY AND ATCHAM
LOCAL PLAN**

LAND OFF SUNDORNE ROAD

**Agricultural Land Classification
ALC Map and Report
January 1999**

**Anya J Spalding
Resource Planning Team
Northern Region
FRCA Wolverhampton**

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**AGRICULTURAL LAND CLASSIFICATION REPORT
SHREWSBURY AND ATCHAM LOCAL PLAN
LAND OFF SUNDORNE ROAD**

INTRODUCTION

1. This report presents the findings of a detailed Agricultural Land Classification (ALC) survey on 10.9 hectares of land, which comprises of two blocks separated by Sundorne Recreation Ground. The results of this survey supersede any previous ALC information for this land. The land is located to the north east of Shrewsbury, centred on grid references SJ 513 146 and SJ 521 146. The block to the west of the recreation ground, centred on grid reference SJ 513 146, is bounded to the west by residential development, to the north by Sundorne Road, to the south by a disused canal and to the east by Sundorne Recreation Ground. The block to the east of the recreation ground, centred on grid reference SJ 521 146, is bounded to the north by Sundorne Road, to the south by a disused canal and to the west by the A49 and to the east by a lane leading to Pimley Manor. The survey was in connection with the Shrewsbury and Atcham Borough Local Plan.

2. The survey was undertaken on behalf of the Ministry of Agriculture, Fisheries and Food (MAFF) in January 1999 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 the western site was under grass and the eastern site was under stubble.

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	1.0	10	9
2	-	-	-
3a	-	-	-
3b	8.6	83	79
4	0.7	7	6
5	-	-	-
Agricultural land not surveyed	-	-	-
Other land	0.6	-	6
Total surveyed area	10.3	100	
Total site area	10.9		100

7. The agricultural land on this site has been classified as Grade 1 (excellent good quality), Subgrade 3b (moderate quality) and Grade 4 (poor quality). The key limitations to the agricultural use of this land are soil droughtiness and soil wetness.

8. Excellent quality land is found in the south west corner of the eastern block of the site. The soils commonly comprise a sandy clay loam topsoil, overlying a variety of subsoil textures including sandy clay loam, coarse sandy loam, medium sand onto a medium sandy silt loam to depth.

9. Moderate quality land is found throughout the majority of the site. The soils commonly comprise a medium clay loam topsoil, overlying either a medium clay loam or a heavy clay loam onto clay at depth. Occasionally clay subsoils are present.

10. Poor quality land is found in the north west corner of the western block of the site. The soils are varied and include a medium clay loam topsoil over clay to depth. At the time of the survey there appeared to have been some disturbance of the land. Brick fragments and other material were present within the soil.

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	Values
Grid reference	N/A	SJ 513 146	SJ 521 146
Altitude	m, AOD	60	60
Accumulated Temperature	day°C (Jan-June)	1420	1420
Average Annual Rainfall	mm	662	652
Field Capacity Days	days	138	136
Moisture Deficit, Wheat	mm	106	106
Moisture Deficit, Potatoes	mm	97	97
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 an altitude of 60 metres AOD. The topography of the site is generally flat in nature.

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

18. These factors do not impose any limitations on the agricultural use of this land.

Geology and Soils

19. The solid geology of the area comprises of Carboniferous Upper Coal Measures - British Geological Survey (1952). Throughout the majority of the site the drift geology comprises of Boulder Clay, with Alluvium found in the south west corner of the eastern block - British Geological Survey (1974).

20. The soils that have developed on this geology are generally of either a sandy clay loam or a clay loam topsoil passing to horizons of either sandy clay loam or clay loam to depth.

Agricultural Land Classification

21. 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 1

22. Land of excellent quality occupies 1.0 hectares (9%) and is found in the south west corner of the eastern block of the site.

23. The soils commonly comprise a sandy clay loam topsoil, overlying a variety of subsoil textures including sandy clay loam, coarse sandy loam, medium sand onto a medium sandy silt loam to depth. The depth to gleying and the absence of a slowly permeable layer place these soils in Wetness Class I. The moisture balance places these soils in Grade 1.

24. There are no or very minor limitations to the agricultural use of this land.

Subgrade 3b

25. Land of moderate quality occupies 8.6 hectares (79 %) of the site area and is found throughout the majority of the site.

26. The soils commonly comprise a medium clay loam topsoil, overlying either a medium clay loam or a heavy clay loam onto clay at depth. Occasionally clay subsoils are present. The depths to gleying and the slowly permeable layer places these soils in Wetness Class IV.

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

Grade 4

28. Land of poor quality occupies 0.7 hectares (6 %) of the site area and is found in the north west corner of the western block of the site.

29. The soils are varied and include a medium clay loam topsoil over clay to depth. The depths to gleying and the slowly permeable layer places these soils in Wetness Class IV. At the time of the survey there was groundwater present close to the surface. Surface water was also present in hollows throughout the western block.

30. The main limitation to the agricultural use of this land is soil wetness. There was also evidence of disturbance to the land with brick fragments and other material present within the soil.

Other land

31. Other land occupies 0.6 hectares (6 %) of the site area and is found as part of the Territorial Army Centre.

Resource Planning Team
Northern Region
FRCA Wolverhampton

SOURCES OF REFERENCE

British Geological Survey (1952) Sheet 152, Shrewsbury, Solid Edition.
1:63 360 Scale.
BGS: London.

British Geological Survey (1974) Sheet 152, Shrewsbury, Drift Edition.
1:63 360 Scale.
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.

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

SAMPLE NO.	GRID REF	ASPECT USE	---WETNESS---			-WHEAT-		-POTS-		M.REL		EROSN EXP	FROST DIST	CHEM LIMIT	ALC COMMENTS
			GRDNT	GLEYS	SPL	CLASS	GRADE	AP	MB	AP	MB				
1P	SJ52101460	STU S	01	033	033	4	3B	103	-3	108	29	3A		WE	3B
2	SJ52001470	GRA		030	040	3	3A	126	20	118	21	2		WE	3A
2P	SJ52101440	STU N	02	092		1	1	154	48	108	11	1			1
3	SJ52101470	GRA	01	028	035	4	3B	126	20	118	21	2		WE	3B
3P	SJ51351455	GRA SE		027	027	4	3B	079	-27	079	-18	3B		WE	3B
4	SJ52201470	STU	01	030	040	3	3A	126	20	118	21	2		WE	3A
5A	SJ52251470	GRA		025	050	3	3A	125	19	117	20	2		WE	3A
6	SJ52101460	STU	01	028	040	3	3A	126	20	118	21	2		WE	3A
7	SJ52201460	STU SE	01	030	030	4	3B	112	6	120	23	2		WE	3B
8	SJ51301450	GRA		017	025	4	3B	135	29	115	18	2		WE	3B
8A	SJ51351455	GRA	01	028	035	4	3B	125	19	117	20	2		WE	3B
9	SJ51401450	GRA	01	020		2	2	123	17	115	18	2		WE	2
9A	SJ51401445	GRA		028	028	4	3B	099	-7	109	12	3A		WE	3B
10	SJ52101450	STU		030	030	4	3B	109	3	117	20	3A		WE	3B
11	SJ52201450	STU E	02	032	032	4	3B	109	3	116	19	3A		WE	3B
12	SJ52101440	STU N	02	092		1	1	156	50	111	14	1			1

SAMPLE	DEPTH	TEXTURE	COLOUR	---MOTTLES---			PED COL.	---STONES---			STRUCT/ CONSIST	SUBS					
				COL	ABUN	CONT		GLE	>2	>6		LITH	TOT	STR	POR	IMP	SPL
1P	0-33	mc1	10YR42 00					0	0	HR	2						
	33-80	c	05YR43 00	75YR51	56	M		Y	0	0	0	STCAB	VM	P			Y
2	0-30	mc1	10YR43 00					0	0		0						
	30-40	hc1	10YR53 00	10YR56	00	C		Y	0	0	0			M			
	40-100	c	05YR43 00	10YR56	00	C		Y	0	0	0			M			Y
2P	0-30	sc1	10YR42 00					0	0	HR	4						
	30-60	sc1	10YR43 00					0	0	HR	4	WKCAB	FR	M			
	60-75	ms1	10YR43 00					0	0	HR	8	WKMA	FR	G			
	75-92	ms	75YR44 00					0	0	HR	0	WKCAB	FR	G			
	92-120	fsz1	75YR53 00	75YR51	56	M		Y	0	0	HR	0	MDCAB	FR	M		
3	0-28	mc1	10YR42 00					0	0		0						
	28-35	hc1	10YR53 00	10YR56	00	C		Y	0	0	0			M			
	35-100	c	05YR43 00	10YR56	00	C		Y	0	0	0			M			Y
3P	0-27	mc1	10YR41 00					0	0		0						
	27-50	c	75YR53 00	75YR51	56	M	10YR52	00	Y	0	0	0	WKCAB	VM	P		Y
4	0-30	mc1	10YR42 00					0	0		0						
	30-40	hc1	10YR51 00	10YR56	00	M		Y	0	0	0			M			
	40-100	c	05YR44 00					Y	0	0	0			M			Y
5A	0-25	mc1	10YR42 00					0	0		0						
	25-33	hc1	10YR52 00	10YR56	00	C		Y	0	0	0			M			
	33-50	hc1	10YR51 00	10YR56	00	C		Y	0	0	0			M			
	50-100	c	05YR44 00					Y	0	0	0			M			Y
6	0-28	mc1	10YR42 00					0	0		0						
	28-40	hc1	10YR51 00	10YR56	00	M		Y	0	0	0			M			
	40-100	c	05YR44 00					Y	0	0	0			M			Y
7	0-30	mzc1	10YR42 00					0	0	HR	2						
	30-55	c	75YR53 43	75YR56	61	M		Y	0	0	0			M			Y
	55-80	c	05YR43 00	05YR52	56	M		Y	0	0	0			M			Y

SAMPLE	DEPTH	TEXTURE	COLOUR	---MOTTLES---			PED COL.	---STONES---				STRUCT/ CONSIST	SUBS					
				COL	ABUN	CONT		GLE	>2	>6	LITH		TOT	STR	POR	IMP	SPL	CALC
8	0-17	mc1	10YR42 00					0	0		0							
	17-25	mc1	10YR42 00	10YR56 00	C			Y	0	0	0		M					
	25-60	c	75YR42 00	10YR56 00	C			Y	0	0	0		M			Y		
	60-85	c	05YR43 00					Y	0	0	0		M			Y		
	85-105	hc1	10YR53 00	10YR56 00	C			Y	0	0	0		M			Y		
	105-110	c	05YR44 00					Y	0	0	0		M			Y		
8A	0-28	mc1	10YR42 00					0	0	HR	2							
	28-35	mc1	10YR52 00	10YR56 00	C			Y	0	0	0		M					
	35-100	c	05YR48 00	10YR56 00	C			Y	0	0	0		M			Y		
9	0-20	mc1	10YR42 00					0	0	HR	2							
	20-35	mc1	10YR41 00	10YR56 00	C			Y	0	0	HR	2	M					
	35-40	hc1	05YR43 00	10YR56 00	C			Y	0	0	0		M					
	40-90	hc1	05YR44 00					Y	0	0	0		M					
9A	0-25	mc1	10YR42 00					0	0		0							
	25-28	c	05YR43 00					0	0		0		M					
	28-33	c	10YR53 00	10YR56 00	M			Y	0	0	0		M			Y		
	33-55	c	05YR44 00					Y	0	0	0		M			Y		
	55-65	mc1	10YR32 00					Y	0	0	0		M			Y		
10	0-30	mc1	10YR42 00					0	0	HR	2							
	30-45	c	10YR53 00	75YR61 56	M			Y	0	0	0		M			Y		
	45-80	c	75YR54 00	75YR61 56	M			Y	0	0	0		M			Y		
11	0-32	mc1	75YR42 00	75YR56 52	M			Y	0	0	HR	2						
	32-66	c	75YR54 00	75YR56 52	M			Y	0	0	HR	2	M			Y		
	66-80	c	05YR53 43	75YR56 52	M			Y	0	0	0		M			Y		
12	0-30	sc1	10YR42 00					0	0	HR	5							
	30-60	sc1	10YR43 00					0	0	HR	5	WK	CAB	FR	M			
	60-75	cs1	10YR43 00					0	0	HR	10	WK	MAB	FR	G			
	75-92	ms	75YR44 00					0	0	HR	5	WK	CAB	FR	G			
	92-120	fsz1	75YR53 00	75YR51 56	M			Y	0	0	HR	0	MDC	CAB	FR	M		