AGRICULTURAL LAND CLASSIFICATION
BROMSGROVE DISTRICT LOCAL PLAN
NORTON FARM (Brom 5)

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AGRICULTURAL LAND CLASSIFICATION REPORT FOR BROMSGROVE DISTRICT LOCAL PLAN NORTON FARM (Brom 5)

1 SUMMARY

1.1 The Agricultural Land Classification (ALC) Survey for this site shows that the following proportions of ALC grades are present:

Grade/Subgrade	ha	% of site
1	15.9	41
2	6.3	16
3a	2.9	7
3b	1.4	4
Other land:		
Urban	9.4	24
Agricultural	3.0	7
Agricultural Buildings	0.3	1

1.2 The main limitation to the agricultural use of land in Grades 1 and 2 is soil droughtiness.

1.3 The main limitations to the agricultural use of land in Subgrade 3a are soil droughtiness and soil wetness.

1.4 The main limitation to the agricultural use of land in Subgrade 3b is gradient.

2 INTRODUCTION

2.1 The site was surveyed by the Resource Planning Team in July and September 1995. An Agricultural Land Classification survey was undertaken according to the guidelines laid down in the "Agricultural Land Classification of England and Wales - Revised Guidelines and Criteria for Grading the Quality of Agricultural Land" (MAFF 1988).

2.2 The 39.2 ha site is situated to the North of Bromsgrove. The land immediately to the north is predominantly in agricultural use, whilst other land around the site is urban.

2.3 The survey was requested by MAFF in connection with the Bromsgrove District Local Plan.

2.4 At MAFF Land Use Planning Unit's request this was a detailed grid survey at 1:10000 with a minimum auger boring density of 1 per hectare. The attached map is only accurate at the base map scale and any enlargement would be misleading.

2.5 At the time of the survey the site was predominantly under cereals with a small area of old orchard.

3 CLIMATE

3.1 The following interpolated data are relevant for the site (SO965725) :

Average Annual Rainfall (mm)	722
Accumulated Temperature above 0°C January to June (day °C)	1360

3.2 There is no overall climatic limitation on the site

3.3 Other relevant data for classifying land include:

Field Capacity Days (days)	171
Moisture Deficit Wheat (mm)	93
Moisture Deficit Potatoes (mm)	80

4 SITE

4.1 Three site factors of gradient, micro relief and flooding are considered when classifying land.

4.2 Gradients of between 7° and 11° limit an area in the east of the site to Subgrade 3b.

4.3 Microrelief and flooding do not impose any limitations on the agricultural use of the land.

5 GEOLOGY AND SOILS

5.1 The solid geology of the area is comprised of Bromsgrove Sandstone consisting of sandstone and siltstone with red mudstone bands - British Geological Survey Sheet 183 Redditch 1 Inch.

5.2 The underlying geology influences the soils which have a sandy clay loam or sandy loam texture.

6 AGRICULTURAL LAND CLASSIFICATION

6.1 Grade 1 - occupies 15.9 ha (41%) of the survey area and is found predominantly in the centre of the site.

6.1.1 These soils typically have a sandy clay loam texture overlying sandy loam and loamy sand with few or no stones within the profile. The moisture balance places these soils in Grade 1.

6.2 Grade 2 - occupies 6.3 ha (16%) of the survey area and occurs in three areas, in the north, the west and the south of the site.

6.2.1 In the north and west the soil has a sandy loam texture over loamy sand and sand with few or no stones within the profile. The moisture balance places these soils into Grade 2.

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

6.2.3 In the south of the site the soils are of either a clay loam or sandy loam texture over sandy loam or clay loam. Augering below about 60cm was prevented either by the presence of a weathering parent material along the ridge top, or a very dry clay as encountered towards the south west boundary.

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

6.3 Subgrade 3a - occupies 2.9 ha (7%) of the survey area and occurs in two areas, near the farm buildings and along the south western boundary.

6.3.1 Along the south western boundary the soil typically has a clay loam texture overlying clay loam to depth. Observations of gleying and the depth to the slowly permeable layer place these soils in Wetness Class III.

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

6.3.3 Near the farm buildings the soils consist of a sandy clay loam texture over a weathering parent material.

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

6.4 Subgrade 3b - occupies 1.4 ha (4%) of the survey area and occurs in the north east of the site.

6.4.1 The gradients in this area are between 7° and 11° and place this land in Subgrade 3b.

6.4.2 The main limitation to the agricultural use of this land is gradient.

6.5 Other land on the site includes urban, which occupies 9.4 ha (24%) and comprises the hospital and associated buildings. Non-agricultural land occupies 3.0 ha (7%) and consists of abandoned orchards around the hospital. The derelict agricultural buildings at Norton Farm occupy 0.3 ha (1%) of the site.

6.6 SUMMARY OF AGRICULTURAL LAND CLASSIFICATION GRADES

Grade/Sub-grade	Area in Hectares	% of Survey Area	% of Agricultural Land
1	15.9	41	60
2	6.3	16	24
3a	2.9	7	11
3b	1.4	4	5
Other land:			
Urban	9.4	24	
Non agricultural	3.0	7	
Agricultural buildings	0.3	1	
Totals	**39.2**	**100**	**100**

PROFILE	GRIDREF	EASTING	NORTHING	LANDUSE	GRADIENT	GLEYED	SPL	WETCLASS	WETGRADE	APWHEAT	APPOTS	MBWHEAT	MBPOTS	DROUGHT	ALCGRADE	MAIN LIMIT	COMMENTS
1	SO	9680	7280	FLW				1	1	143	96	50	16	1	1		
1P	SO	9678	7271	FLW	3			1	1	98	81	5	1	2	2	DR	
2	SO	9670	7270	FLW				1	1	80	83	-13	3	3A	3A	DR	Agd 55 cm
2P	SO	0656	7238	FLW				1	1	170	114	77	34	1	1		
3	SO	9680	7270	FLW				1	1	155	108	62	28	1	1		
3P	SO	9632	7226	FLW		30	45	3	3A	92	102	-1	22	3A	3A	WE	
9	SO	9650	7260	CER				1		128	112	35	32	1	1		
10	SO	9660	7260	FLW				1	1	158	111	65	31	1	1		
11	SO	9670	7260	CER	4			1	1	51	51	-42	-29	3B	3B	GR	Agd 30cm. Dry
16	SO	9630	7250	PGR				1		115	105	22	25	2	2	DR	100CM CH
17	SO	9640	7250	FLW				1	1	101	111	8	31	2	2	DR	Agd 70cm.
18	SO	9650	7250	CER	1			1	1	126	109	33	29	1	1		
19	SO	9660	7250	CER	1			1	1	128	115	35	35	1	1		
20	SO	9670	7250	FLW				1	1	145	109	52	29	1	1		
21	SO	9620	7240	PGR				1	1	160	113	67	23	1	1		Borderline
22	SO	9630	7240	CER	1			1	1	114	98	21	18	2	2	DR	
23	SO	9640	7240	WHT	2			1	1	136	115	43	35	1	1		Agd 90cm.
24	SO	9650	7240	CER	1			1	1	145	117	52	37	1	1		
25	SO	9660	7240	CER	1			1	1	160	113	67	33	1	1		
26	SO	9670	7240	CER	2			1	1	155	119	62	39	1	1		
27	SO	9630	7230	WHT	2			1	1	57	57	-36	-23	3B	3B	DR	Imp 30cm. Stone
28	SO	9640	7230	FLW	1	65	65	2	2	109	113	16	33	2	2	WE	
29	SO	9650	7230	WHT	2			1	1	112	106	19	26	2	2	DR	
30	SO	9660	7230	CER	2			1	1	104	112	11	32	2	2	DR	Agd 70cm.
31	SO	9640	7220	WHT				1	1	121	118	28	38	2	2	DR	Agd 80cm.
32	SO	9650	7220	WHT	2			1	1	83	89	-10	9	3A	3A	DR	Mudstone 40cm.
33	SO	9660	7220	CER	5			1	1	159	112	66	32	1	1		
34	SO	9670	7220	CER	2	35		2	1	124	118	31	38	1	1		Borderline
35	SO	9650	7210	WHT	2			1	1	133	112	40	32	1	1		
36	SO	9660	7210	WHT	2			1	1	85	91	-8	11	3A	3A	DR	Mudstone 30cm.
37	SO	9660	7200	FLW				1	1	118	116	25	36	2	2	DR	Agd 80cm.

SITE NAME	PROFILE NO.	SLOPE AND ASPECT	LAND USE		PARENT MATERIAL
Site 5 Norton Farm	Pit 1 (Near Asps 1 & 3)	3° South East	FLW	Av Rainfall: 722 mm ATO: 1360 day °C FC Days: 171 Climatic Grade: 1 Exposure Grade: 1	Bromsgrove Sandstone
JOB NO.	DATE	GRID REFERENCE	DESCRIBED BY		SOIL SAMPLE REFERENCES
W46/95	July 1995	SO 9678 7271	VR/SH		None

Horizon No.	Lowest Av. Depth (cm)	Texture	Matrix (Ped Face) Colours	Stoniness: Size,Type, and Field Method	Mottling Abundance, Contrast, Size and Colour	Mangan Concs	Structure: Ped Development Size and Shape	Consistence	Structural Condition	Porosity	Roots: Abundance and Size	Calcareous	Horizon Boundary: Distinctness and form
1	27	MSL	7.5YR4/3	3% HR >2 cm (S&V) 6% HR Total	None	None	-	-	-	-	-	-	-
2	42	MSL/ LMS	7.5YR4/4	-	None	None	MDF/MAB	FR	G*1	G	-	-	-
3	120	MS	5YR6/6	10% HR Total (V)	None	None	WKMAB*2	FR/FM	G	G	-	-	-

Profile Gleyed From: Not gleyed

Slowly Permeable Horizon From: No SPL

Wetness Class: I

Wetness Grade: 1

Available Water Wheat: 98 mm

Potatoes: 81 mm

Moisture Deficit Wheat: 93 mm

Potatoes: 80 mm

Moisture Balance Wheat: 5 mm

Potatoes: 1 mm

Droughtiness Grade: 2 (Calculated to 120 cm)

Final ALC Grade: 2

Main Limiting Factor(s): Drought

Remarks:
*1 Close to Moderate.
*2 Difficult to ascertain - where not adhering the structure is crumb.

SITE NAME	PROFILE NO.	SLOPE AND ASPECT	LAND USE		PARENT MATERIAL
Site 5 Norton Farm	Pit 2 (Near Asps 25 & 30)	Level	FLW	Av Rainfall: 722 mm ATO: 1360 day °C FC Days: 171 Climatic Grade: 1 Exposure Grade: 1	Bromsgrove Sandstone
JOB NO.	DATE	GRID REFERENCE	DESCRIBED BY		SOIL SAMPLE REFERENCES
W46/95	July 1995	SO 0656 7238	VR/SH		None

Horizon No.	Lowest Av. Depth (cm)	Texture	Matrix (Ped Face) Colours	Stoniness: Size, Type, and Field Method	Mottling Abundance, Contrast, Size and Colour	Mangan Concs	Structure: Ped Development Size and Shape	Consistence	Structural Condition	Porosity	Roots: Abundance and Size	Calcareous	Horizon Boundary: Distinctness and form
1	30	SCL	7.5YR4/2	3% HR >2 cm (S&V) 6% HR Total	None	None	-	-	-	-	FF	-	-
2	55	MCL	5YR4/4	-	None	None	STCSAB	FR	M	G	FF	-	-
3	120	MSL	5YR4/6	-	None	None	MDF/MSAB	FR	G/M	G	FVF	-	-

Profile Gleyed From: Not gleyed

Slowly Permeable Horizon From: No SPL

Wetness Class: I

Wetness Grade:

Available Water	Wheat:	170 mm
	Potatoes:	114 mm
Moisture Deficit	Wheat:	93 mm
	Potatoes:	80 mm
Moisture Balance	Wheat:	77 mm
	Potatoes:	34 mm

Droughtiness Grade: 1 (Calculated to 120 cm)

Final ALC Grade: 1

Main Limiting Factor(s):

Remarks:

*1 Close to Moderate.

SITE NAME	PROFILE NO.	SLOPE AND ASPECT	LAND USE		PARENT MATERIAL
Site 5 Norton Farm	Pit 3 (Near Asps 27 & 28)	Level	FLW	Av Rainfall: 722 mm ATO: 1360 day °C FC Days: 171 Climatic Grade: 1 Exposure Grade: 1	Bromsgrove Sandstone
JOB NO.	DATE	GRID REFERENCE	DESCRIBED BY		SOIL SAMPLE REFERENCES
W46/95	July 1995	SO 9632 7226	VR/SH		None

Horizon No.	Lowest Av. Depth (cm)	Texture	Matrix (Ped Face) Colours	Stoniness: Size, Type, and Field Method	Mottling Abundance, Contrast, Size and Colour	Mangan Concs	Structure: Ped Development Size and Shape	Consistence	Structural Condition	Porosity	Roots: Abundance and Size	Calcareous	Horizon Boundary: Distinctness and form
1	30	MCL	5YR3/3	0% (V)	None	None	-	-	-	-	FF	-	-
2	70 +	MCL	2.5YR4/6 (2.5YR4/2)	0% (V)	None	None	STCPR	FM	P	P	FF	-	-

Profile Gleyed From: 30 cm

Slowly Permeable Horizon From: 45 cm

Wetness Class: III

Wetness Grade: 3a

Available Water Wheat: 92 mm

Potatoes: 102 mm

Moisture Deficit Wheat: 93 mm

Potatoes: 80 mm

Moisture Balance Wheat: -1 mm

Potatoes: 22 mm

Droughtiness Grade: 3a (Calculated to 70 cm)

Final ALC Grade: 3a

Main Limiting Factor(s): Wetness

Remarks: