

**BROMLEY HEATH ROAD, BRISTOL****Agricultural Land Classification****Report of Survey****1. Introduction**

In December 1989, a detailed Agricultural Land Classification (ALC) survey was carried out over 1.6 hectares of land adjacent to Bromley Heath Road between the new North Avon Link Road and M4 Motorway.

The adjacent 2ha had been surveyed in 1988 in conjunction with a planning application to use the site as a borrow pit for construction of the link road. The survey of the present site was requested by Avon County Council in response to an ad hoc planning application.

The field work was conducted by the Resource Planning Group. Four auger borings and one soil pit were examined.

The ALC provides a framework for classifying land according to the extent to which its physical or chemical characteristics impose long-term limitations on its use for agricultural. The ALC grade of the site is detailed below and illustrated on the accompanying ALC map at a scale of 1:3333. The information is accurate at the scale shown, but any enlargement of the map would be misleading.

**Table 1 : Distribution of ALC Grades.**

Grade	Area (ha)	% of Survey Area	% of Agricultural Area
1	1.6	100	100
	1.6	100	100

**2. Climate**

Estimates of important climatic variables were obtained for the site by interpolation from a 5km grid database in order to assess any overall climatic limitation. The indicative parameters for assessing such a limitation are accumulated temperature (a measure of the relative warmth of a locality) and average annual rainfall (a measure of overall wetness). The results (shown in Table 2) reveal that there is no overall climatic limitation affecting the site. No local climatic factors were noted at the site.

**Table 2 : Climatic Interpolation**

Grid reference	ST 646784
Height (m)	38
Accumulated Temperature ( <sup>o</sup> days)	1502
Average Annual Rainfall (mm)	768
Field capacity (days)	171
Moisture deficit, Wheat (mm)	101
Moisture deficit, Potatoes (mm)	92

### 3. Agricultural Land Classification

**Grade 1:** *The survey area is underlain by sandstone which has given rise to sandy loam soils with moderate structural conditions. These structural conditions exist throughout the profile and the many large biopores aid the movement of water. There was found to be no evidence of wetness and adequate reserves of water could be retained in the profile preventing problems of droughtiness. The survey area is flat and microtopography provides no localised limitation. There were no physical limitations and so the area was classed as grade 1.*

Particle size distribution analysis confirmed the pit topsoil texture.

(No sandstone was found in the top 120cm over the survey area compared with the flaggy sandstone at 60cm under the adjacent earlier application allowing grade 1 compared to grade 2 to be assigned to the area).

SITE NAME BROMLEY HEATH ROAD BRISTOL	PROFILE NUMBER I	SLOPE AND ASPECT 0°	LAND USE Vegetables	Av Rainfall :- 768mm ATO :- 1502 day °C FC Days :- 171 Climatic grade:- 1	PARENT MARIAL
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Horizon Number	Lowest Av Depth	Matrix and Ped Face Colours	Texture	Stoniness: Size, Shape, Type, and Field Method	Mottling Abundance, Contrast Size and Colour	Structure: Development Size and Shape	Pores and Fissures	Structural Condition	Consistence	Roots Abundance Size and Nature	Calcium Carbonate Content	Mangan Concs etc	Horizon Boundary: Distinctness and Form
1	23	7.5YR32	MSL	< 2% > 2cm	None		> 5% < .5mm			Many	-	-	
2	48	5 YR 33	FSL	< 2% > 2cm	None	Moderate coarse, sub-angular blocky	> 5% < .5mm many worm holes	Moderate	Friable	Many	-	-	
3	80	2.5YR34 no pale ped faces	MSL (CL pockets)	-	None	Weakly coarse, sub-angular	> 5% < .5mm many worm holes	Moderate	Friable	-	-	-	
4	120	2.5YR34 no pale ped faces	C	-		Moderate very coarse sub-angular	> 5% < .5mm v. good	Moderate	Firm	-	-	-	

Depth to Slowly Permeable Horizon :-	Available Water	Wheat :-	150.5	Final ALC Grade :-	I
		Potatoes :-	115.5		
Wetness Class :-	Moisture Deficit	Wheat :-	101	Main Limiting Factor(s) :-	
		Potatoes :-	92		
Wetness Grade :-	Balance	Moisture Deficit	Wheat :-		
			49.5		
		Potatoes :-	23	Remarks :-	
RPG0023/WJC	Droughtiness Grade :-		I		