

**LAND AT PUXTON, SOMERSET  
AGRICULTURAL LAND CLASSIFICATION**

**Report of Reconnaissance Survey**

**1. INTRODUCTION**

The site, an area of approximately 143 ha of land east of the villages of Puxton and Hewish was graded using the Agricultural Land Classification (ALC) system in January 1994. The survey was carried out on behalf of MAFF as part of its statutory role in response to an application regarding a proposed golf course and holiday villa development.

The field work was carried out by ADAS (Resource Planning Team, Taunton Statutory Unit) at a reconnaissance scale. The information is correct at this scale but any enlargement would be misleading. A total of 15 auger borings and one soil profile pit were examined. Borings were distributed throughout the site on land proposed for "hard" development (holiday villas).

The published provisional 1" to the mile ALC map of this area (MAFF, 1971) shows the entire site to be Grade 3. The current survey supersedes any previous surveys and was undertaken to provide a more detailed representation of the agricultural land quality using the Revised Guidelines and Criteria (MAFF, 1988). These guidelines provide a framework for classifying land according to the extent to which its physical or chemical characteristics impose long term limitations to agricultural use. The grading takes account of the top 120 cm of the soil profile. A description of the grades used in the ALC system can be found in Appendix 2.

The site occupies an area of flat land, 5-6 metres Above Ordnance Datum. Alluvium underlies the entire site which has given rise to a similar uniformity in soils. The Newchurch 2 Soil Association is prevalent across the site. These have been described by the soil survey of England and Wales (1983) as being deep stoneless mainly calcareous clayey soils found in areas where groundwater is controlled by ditches and pumps and there is a slight flooding risk. At the time of survey, most of the land was under permanent grass with a few fields under arable stubble. The area, although climatic grade 1, experiences a relatively wet climate, with between 182 and 189 Field Capacity Days.

**2. AGRICULTURAL LAND CLASSIFICATION**

Of the 15 auger borings examined, 12 were found to be Grade 4 and 3 to be Subgrade 3b.

**Grade 4**

This relates to poorly drained (Wetness Class IV) soils with heavy clay loam topsoils overlying deep slowly permeable clay subsoils. Signs of wetness above, and the shallow depth to, slowly permeable clay, indicates that a severe wetness limitation affects these soils.

### **Subgrade 3b**

Generally, these soils are similar to the Grade 4 soils with the main difference being a lighter, medium clay loam topsoil.

### **Urban and Non Agricultural Land and Farm Buildings**

Approximately 33 ha of land came under the non agricultural category. This comprised a small area of scrub south of Willow Farm and the golf course north of Goosey Drove. Urban land consisted of two tracks, and some farm buildings were recorded at Puxton Village.

## **APPENDIX 1**

### **REFERENCES**

MAFF (1971) Agricultural Land Classification Map Sheet 165 provisional 1:63,360 scale.

MAFF (1988) Agricultural Land Classification of England and Wales (revised guidelines and criteria for grading the quality of land).

METEOROLOGICAL OFFICE (1989) Published climatic data extracted from the agroclimatic dataset compiled by the Meteorological Office.

SOIL SURVEY OF ENGLAND AND WALES (1983) Sheet 5 Soils of South West England 1:250,000 scale.

GEOLOGICAL SURVEY OF ENGLAND AND WALES (1974) Solid and Drift edition, sheet 264 Bristol, 1:50,000 scale.

SITE NAME Puxton		PROFILE NO. Pit 1		SLOPE AND ASPECT 0°		LAND USE PGR		Av Rainfall: 852 mm ATO: 1552 deg FC Days: 189 Climatic Grade: 1			PARENT MATERIAL Alluvium		
JOB NO. 5/94		DATE 27 Jan 94		GRID REFERENCE ASP11 ST 413 643		DESCRIBED BY G Clark					SOIL SAMPLE REF: GC/145		
Horizon Number	Lowest Av Depth (cm)	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	20	2.5Y42	ZC	0% visual	10YR58 Root mottles common distinct	-	-	-	-	Many fine/v. fine	None	None	Clear/smooth
2	80+	2.5Y51	C	0% visual	10YR58 Common Distinct	SCAB	<0.5%	Moderate	Firm	Common fine/v fine	Slightly calc	None	-

Profile Gleyed From: 20 cm

Depth to Slowly Permeable Horizon: 20 cm

Wetness Class: IV

Wetness Grade: 4

Available Water Wheat: 140 mm

Potatoes: 116 mm

Moisture Deficit Wheat: 98 mm

Potatoes: 90 mm

Moisture Balance Wheat: +42 mm

Potatoes: +26 mm

Droughtiness Grade: 1 (calculated to 120 cm)

Final ALC Grade: 4

Main Limiting Factor(s): Wetness

Remarks:

Pit dug to 80 cm