

**TUXTON FARM, NEAR PLYMPTON, DEVON  
AGRICULTURAL LAND CLASSIFICATION**

**Report of Survey**

**1. Introduction**

In January 1989, a detailed Agricultural Land Classification (ALC) survey was carried out over a 37.07 hectare site around Tuxton Farm, near Plympton, Devon, in response to a non-agricultural planning application. Field survey work was conducted by the Resource Planning Group (South West Region) using MAFF's revised guidelines and criteria for grading the quality of agricultural land.

The site lies adjacent to and south of the A38, at the Deep Lane interchange (SX565547). The highest land occurs as a narrow plateau top in the northwest of the site, at approximately 100m, and slopes steeply to the north-east and east. The lowest point occurs at 55m the extreme south-east, adjacent to Tuxton Wood. A narrow flat section of land runs along the eastern boundary at the base of the steep slopes. Topographically it appears as one side of a stream floodplain but is in fact at a higher level than the opposite bank; local information suggests that the area was partly infilled and regraded in the past, perhaps during the construction of the A38

The site was surveyed at a density of 1 boring per hectare, except in those areas of steep slopes. The distribution of the ALC grades and sub-grades is outlined in Table 1, and illustrated in the accompanying ALC map at a scale of 1:5,000.

**Table 1: The Distribution of Grades and Sub-grades**

Grade	Area (ha)	% of Survey Area	% of Agricultural Area
3A	19.06	51.5	54.2
3B	12.01	32.4	34.2
4	4.10	11.1	11.6
Woodland	1.14	3.1	-
Non-Agric	0.06	-	-
Agric Bldgs	0.70	1.9	-
<b>Total</b>	<b>37.07 ha</b>	<b>100%</b>	<b>100%</b>

**2. Climate**

Estimates of important climatic variables have been obtained by interpolation from a 5km grid database and are detailed in Table 2 below. The main parameters used in assessing an overall climatic limitation are average annual rainfall (as a measure of overall wetness) and accumulated temperature (as a measure of the relative warmth of

a locality). Together these parameters reveal that a climatic limitation does affect the whole of the site and, as a result, land cannot be graded higher than Grade 2.

No evidence of exposure was found at the site.

**Table 2: Climatic Interpolations\***

Accumulated Temperature (ATO)	:	1540° days
Average Annual Rainfall (AAR)	:	1231 mm
Field Capacity Days (FC Days)	:	238 days
Moisture Deficit, Wheat (MD Wheat)	:	83 mm
Moisture Deficit, Potatoes (MD Pots)	:	71 mm

\* For grid reference SX565547 at 75m altitude.

### 3. Agricultural Land Classification

**Subgrade 3A:** much of the central and southern area has been placed in this sub-grade, forming one large map unit. An additional, smaller area of 3A has been identified along the northern fringe. In total, 19.06 hectares of sub-grade 3A have been mapped.

The soils that have developed on these flat to gently sloping areas (<7° slopes) typically possess topsoil textures of Medium Clay Loam which progressively increase in clay content down the soil profile, changing into Heavy Clay Loam and eventually Clay textures. Depth to Clay is variable, but typically occurs below 50cm.

Minor percentages of very small stones (2%; 2mm-2cm) occur in the topsoil, and increase to 10-15% in the lower subsoil.

Soils on the plateau area in the north are somewhat shallower than elsewhere, becoming impenetrable at depths around 50cm. This has no effect on the overall classification, as the generally low moisture deficits over the site do not make even these shallow soils droughty. The profiles show no evidence of soil wetness. Subsoils reveal good structure and percentage pore content.

The most limiting factor in this sub-grade is soil workability. As a result of the high Field Capacity Day value, the topsoil textures prevent the soils being graded higher than 3A.

**Sub-grade 3B:** the majority of this sub-grade that has been identified has been downgraded on the basis of steep gradient, with slopes in the range 7-11°. The eastern "floodplain" site has been downgraded on workability. The topsoil textures in this narrow belt are Heavy Clay Loams which, at the existing Field Capacity Level, may be graded no higher than 3B.

**Grade 4:** three limited areas of this grade have been identified. The two northern map units have been mapped purely on the basis of steep slopes (11-18°), whereas the southernmost area possesses steep slopes and a very variable microrelief.

APPENDIX II

SOIL PIT DESCRIPTION

Topsoil: 0-35 cm  
10YR5/4  
Medium Clay Loam  
1-2% vsst (visual)

Subsoil 1: 35-60 cm  
Heavy Clay Loam (gradual change from topsoil)  
10YR5/4/6  
5% sst (visual)  
Moderately developed; Medium to Fine Subangular Blocky; Friable  
2% fine to very fine pores

Subsoil 2: 60-90+ cm  
Clay  
10YR6/4/6 grading into 2.5Y6/4 with depth  
5% sst (visual)  
Moderately developed; Medium to Coarse Subangular Blocky; Friable  
to Firm  
2% biopores