

**AGRICULTURAL LAND CLASSIFICATION****LAND AT WESTRY FARM, MARCH, CAMBRIDGESHIRE****1.0 INTRODUCTION**

An Agricultural Land Classification survey was carried out over approximately 11 ha (27 acres) of land at Westry Farm, March on the 18 October 1989.

1.2 A total of 10 inspections were made using a dutch auger. In addition a soil pit was dug to assess subsoil conditions in more detail.

1.3 The site is comprehensively under-drained, draining into an adjacent ditch running down the eastern side of the site.

**2.0 PHYSICAL FACTORS AFFECTING LAND QUALITY**Climate

2.1 Climatic information for the site has been interpolated from the 5 km grid datasets produced by the Meteorological Office (Met Office, 1989). The average annual rainfall for the site is 543 mm which is low by national standards. The number of days at which the site is likely to be at field capacity is also low at 93.

2.2 The accumulated temperature for this area is approximately 1447 degrees celsius and the soil moisture deficits for wheat and potatoes are 121 and 117 mm respectively.

2.3 There is therefore no overall climatic limitation to agricultural use on this land.

Relief

2.4 The site is relatively level lying at an altitude of 3m AOD.

## Geology and Soils

- 2.5 The published 1:50,000 geology map for this area (Geol.Surv, 1984) indicates that the site comprises both till and marine/estuarine sand and gravel (March Gravels). The till is shown to occur at the southern end of the site with the sands and gravels to the north and west.
- 2.6 Field observations of the soils reflect the underlying geology but with the till occurring over the majority of the site with influence from the sand and gravel restricted to the western boundary.
- 2.7 The majority of the soils therefore had a medium clay loam topsoil extending to 30-35 cm depth. The subsoil was generally a heavy clay loam with a medium or coarse subangular blocky structure and common ochreous mottles. At approximately 50-60cm depth the soil became calcareous with common chalk fragments in the till. The subsoil was moderately porous throughout.
- 2.8 Toward the west of the site the soils became sandier with a sandy loam topsoil overlying a mottled sandy loam or sandy clay loam subsoil. In two profiles loamy sand was encountered below a depth of 70 cm.

### 3.0 **AGRICULTURAL LAND CLASSIFICATION**

- 3.1 The site has been classified using the guidelines contained in the Agricultural Land Classification of England and Wales (MAFF 1988). A breakdown of the grades found is given below:

Grade	Area (ha)	%
2	7.5	67
3a	3.7	33
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Total	11.2	100
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- 3.2 Although the soils on the site exhibited common distinct mottling, this was considered to be relict mottling. The soils did not have a slowly permeable horizon within the upper 80cm.
- 3.3 The major limitation on the site therefore was considered to be droughtiness as this is a low rainfall area. Calculation of the moisture balance for the profiles indicated that the soils developed on the till were slightly droughty for potatoes and therefore classified as Grade 2. The sandier soils at the east of the site were however more droughty especially for wheat due to the loamy sand at depth, and hence were graded as 3a.

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## References

Geological Survey of Great Britain (1984) 1:50,000 solid and drift edition geology map Sheet No.158 Peterborough.

MAFF (1988). Agricultural Land Classification of England and Wales.

Meteorological Office (1989). Climatological data for Agricultural Land Classification.