

## 1. PHYSICAL BACKGROUND

1.1 Relief

The majority of the site is a gently sloping plateau with an average altitude of 60m AOD. However an escarpment feature along the southern boundary site is dissected by 3 dry valley features which locally result in slopes which are limiting to the ALC grade. Typically these slopes are between 8° and 10° (limiting the land to subgrade 3b) but in a small area to the north of Town Oak Corner slopes of 14° limits this land to grade 4.

1.2 Climate

The climatic characteristics for the site are as follows:-

Annual average rainfall	685 mm
Moisture deficit (wheat)	106 mm
Moisture deficit (potatoes)	98 mm
FC Days	140

There are no climatic limitations to the ALC grade at this site.

1.3 Soils

The 1:250,000 scale reconnaissance soil survey map (1983) shows the entire site to comprise Wick 3 Association. A more detailed survey at approximately 1 boring per 3 ha indicates there are two major soil types.

1.3.1 The majority of the site is derived from aeolian drift which overlies glacial sands and gravels at variable depths in the subsoil. Profiles typically comprise very slightly stony, fine sandy silt loam topsoils which overlie similar upper subsoils becoming sandier and slightly stony in the lower subsoil.

The depth of the sandy silt loam subsoil is greatest on the eastern side of the site and in the smaller, lower lying pockets of land on the western side of the site.

1.3.2 The remaining area of soils at the southern end of the site are sandier and stonier than the soils described in 1.3.1. Profiles typically comprise coarse loamy or sandy topsoils which are slightly to moderately stony and overlie slightly to very stony sandy subsoils.

1.3.3 All the soils at Roughton are freely draining (wetness class 1).

## 2. AGRICULTURAL LAND CLASSIFICATION

2.1 Appendix 1 shows the breakdown of ALC grades both within and outside the set-a-side area for the entire holding.

### 2.2 Grade 2

The grade 2 land is associated with the finer textured variant of the soils described in paragraph 1.3.1. As a result of the greater depth of aeolian material, these areas have a higher water holding capacity and are therefore less droughty. Slight droughtiness and locally topsoil stone are the overriding limitations to the grade.

### 2.3 Subgrade 3a

The majority of the subgrade 3a land is associated with the more droughty variant of the soils described in paragraph 1.3.1. As a result of the coarse subsoil textures and thinner upper subsoils these soils are moderately droughty.

#### 2.4 Subgrade 3b

The subgrade 3b land is associated with the soils described in paragraph 1.3.2. The combination of coarse soil textures and profile stone result in these profiles being significantly droughty. As well as a droughtiness limitation smaller areas within the section of 3b land are additionally limited by topsoil stone content (>2 cm), sand topsoil textures and/or slopes (see section 1.1).

#### 2.5 Grade 4

As described in section 1.1, a small area to the north of Town Oak Corner is limited to grade 4 by slope.