

1. PHYSICAL BACKGROUND

1.1 Relief

The site is gently sloping, falling from an average altitude of 20m AOD to a minimum altitude of approximately 15 m AOD in the north eastern corner of the site. Gradient and altitude do not constitute limitations to the ALC grade of the site.

1.2 Climate

The climatic characteristics for the site are as follows:-

Annual average rainfall	696 mm
Moisture deficit (wheat)	108 mm
Moisture deficit (potatoes)	100 mm

FC Days	140
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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 site to comprise mainly Wickham 2 Association with a small area of Isleham 2 Association in the north east corner of the site. A more detailed soil survey at approximately 1 boring per 3 ha indicates there are 3 major soil types.

- 1.3.1 The heaviest soils are located in the western half of the site. Profiles typically comprise heavy clay loam topsoils overlying silty clay loam or clayey upper subsoils with chalky drift at depth. Profiles are typically free draining (wetness class 1) although some profiles may be gleyed at depth.

- 1.3.2 The majority of the soils on the eastern half of the site are free draining and have lighter soil textures than those described in section 1.3.1. Profiles typically comprise very slightly to slightly stony medium sandy loam topsoils which overlie similar upper subsoils. Towards the centre of the site these profiles typically overlie chalky drift with a clay loam texture at depth, whereas towards the eastern side, profiles become sandy and slightly to moderately stony at depth.
- 1.3.3 The soils in a small area of low lying land in the north eastern corner of the site are affected by a high ground water table and are not drained effectively (wetness class IV). The profiles are very varied and include an area of disturbed land at the site of an infilled old pond.

2. AGRICULTURAL LAND CLASSIFICATION

2.1 Irrigation

The majority of the site may be irrigated and the ALC grading takes into account the reduction in drought risk afforded by the availability of this irrigation water.

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

2.3 Grade 1

The area of grade 1 is located in the central to south eastern part of the site and is associated with the soils described in section 1.3.2. The availability of irrigation water compensates for the slight droughtiness of these soils and therefore there is no limitation to the grade.

2.4 Grade 2

Two areas of grade 2 land are delineated.

- 2.4.1 The largest area, towards the western half of the site is associated with the soils described in section 1.3.1. The heavy topsoil textures

and locally slightly impeded drainage result in slight workability imperfections. In addition the 2 fields in the south western corner of site do not receive irrigation water and therefore are slightly droughty. Workability and droughtiness are the overriding limitations to the ALC grade.

2.4.2 The smaller area of grade 2 on the eastern edge of the site is associated with the slightly stony topsoil variant of the soils described in section 1.3.2. Typical topsoil stone content (>2 cm) of 6-8% prevent this land from being grade 1.

2.5 Subgrade 3a

The land in the north eastern corner of the site, associated with the soils described in section 1.3.3, have been graded 3a. The high ground water table result in wetness being the overriding limitation to the grade.