AGRICULTURAL LAND CLASSIFICATION
NORTH OF KIRKGATE, TYDD ST GILES

1.0 BACKGROUND

1.1 Land on this 66 ha site was inspected in June 1991 in connection with proposals to create a golf course. A total of 67 auger borings were made at 100 m intervals across the site, and this information was supplemented by data from 2 soil pits. At the time of survey the site was under mixed arable cropping including wheat, peas and brassicas, with a smaller area of grassland to the north of Manor House.

2.0 PHYSICAL FACTORS AFFECTING LAND QUALITY

Altitude and Relief

2.1 The site occupies level or very gently sloping land between 2 and 3 metres AOD. Neither altitude nor relief constitute limiting factors to agricultural land use.

Climate

2.2 The site is eligible climatically for grade 1. The relevant climate parameters are as follows:

Average Annual Rainfall	583 mm
Accumulated Temperature	1440°C
Field Capacity Days	104
Moisture Deficit (wheat)	122 mm
Moisture Deficit (potatoes)	118 mm

Geology

2.3 The geology of this areas is mapped on the 1:50 000 scale solid and drift edition geology map sheet 145/129. This shows the entire site to be comprised of marine aluminium (the Terrington Beds) overlying Ampthill Clay.

Soils

2.4 The 1:25 000 scale soils map 'Soils of Eastern England' (SSEW 1983) indicates that the entire site is comprised of the Wisbeach Soil Association. A subsequent map published at a more detailed 1:50 000 scale (SSLRC 1989) indicate that Romney Soils are also present to the south of Eaudyke Bank. Detailed field survey broadly confirmed these findings.

3.0 AGRICULTURAL LAND CLASSIFICATION

3.1 The site is predominantly graded 1, with smaller areas of grades 2 and 3a. A breakdown of ALC grades in hectares and percentage terms is provided below.

AGRICULTURAL LAND CLASSIFICATION

Grade	ha	%
1	44.7	68.0
2	13.6	20.7
3a	5.2	7.9
Non-Agricultural	0.2	0.3
Urban	2.0	3.1
TOTAL	65.7	100.0

Grade 1

3.2 Land graded 1 occurs extensively on site. Typical profiles comprise fine sandy silt loam, silt loam or occasionally medium clay loam topsoils which overlie fine sandy silt loam, fine sandy loam and loamy fine sand at depth.

3.3 Subsoil porosity is these lighter textured soils is moderately high with pores in excess of 0.5 mm typically accounting for between 0.5% and 2% of soil volume. As a result the soils are well drained (wetness class 1) and easily worked. This, coupled with their high plant available water capacity results in an ability to produce high yields of a very wide range of crops. Although individual profiles within the mapping unit are, or approach grade 2, these are too small to delineate separately.

Grade 2

3.4 This occurs in smaller areas to the south of the mapping unit where slightly heavier soil varients occurs. Typical profiles are moderately well drained (wetness class II) and comprise silt loam or medium silty clay loam textures which may contain lenses of, or overlie heavy silty clay loam or silty clay at moderate depth. This in turn may overlie lighter fine sandy loam or loamy fine sand below 90 cm.

3.5 Subsoil porosity is generally moderately high in the lighter textured silt loam/silty clay loam, horizons with pores in excess of 0.5 mm typically accounting for between 0.5% and 1% of soil volume. In the heavy silty clay loam and silty clay horizons subsoil porosity was lower - typically accounting for approximately 0.5% of soil volume. These profiles were assessed as being slightly less permeable than those graded 1, resulting in minor winter wetness and workability imperfections.

Grade 3a

3.6 This occurs in small areas to the north and southeast of the site where soils contain slowly permeable heavier textures at shallow depth. Typical profiles comprise medium silty clay loam, occasionally silt loam topsoils overlying slowly permeable silty clay upper subsoils which may in turn overlie lighter textured medium silty clay loam or fine sandy loam horizons at greater depth. Due to the presence of heavier, slowly permeable silty clay textures beneath the topsoil, these profiles are assessed as imperfectly drained, and are limited by moderate wetness and workability imperfections.

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