AGRICULTURAL LAND CLASSIFICATION
GROVE FARM, SCHOOL ROAD, ELMSTEAD MARKET

1.0 BACKGROUND

1.1 This 1.07 ha site was inspected on 4th April 1995 at the request of the MAFF Land Use Planning Unit. The survey was undertaken by members of the Cambridge Resource Planning Team to provide information on agricultural land quality in connection with proposals to develop a gypsy caravan site. The site lies in a rural area to the south of Elmstead Market and currently comprises part of a larger nine hectare field. It is flanked to the west by School Road, to the south by Palegate Wood and to the north by the driveway to Grove Farm. A total of 8 soil borings were made on site at approximately 50 metre intervals and this data was supplemented by information from a soil profile pit. At the time of survey the land was under winter cereals which form part of an arable rotation including fodder turnips and potatoes.

2.0 PHYSICAL FACTORS AFFECTING LAND QUALITY

Climate

2.1 Climatic criteria are considered first when classifying land since climate can be overriding in the sense that severe limitations will restrict land to low grades irrespective of favourable site or soil conditions.

2.2 Climatic information relevant to the assessment of land quality was obtained by interpolating data in the 5 km grid point climatological dataset compiled the Meteorological Office (Met Office, 1989). The relevant variables are listed in Table 1 overleaf.

Table 1

Grid Reference	TM 061237
Altitude (m, AOD)	32
Accumulated Temperature (° days, Jan-June)	1433
Average Annual Rainfall	572
Field Capacity Days	97
Moisture Deficit (wheat) mm	127
Moisture Deficit (potatoes) mm	124

2.3 The main parameters used in the assessment of 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. In this instance, climate does not represent an overall limitation to agricultural land quality. In addition, no local climatic factors such as exposure or frost risk are significant.

2.4 However, climatic factors, specifically field capacity days and soil moisture deficits, do interact with soil factors to influence soil wetness and droughtiness limitations. At this locality, the climate is very dry in national terms.

Relief

2.5 The site lies at an approximate altitude of 32 m AOD and occupies very gently sloping land with a slight southerly aspect. Neither altitude nor relief constitute limiting factors to agricultural land quality.

Geology and Soils

2.6 No detailed geology map exists for the site, however the generalised 1:253 440 scale drift edition geology map sheet number 16 (Geol. Surv. 1931) identifies glacial loams in the vicinity of the site which overlie glacial sands and gravels.

2.7 No detailed soil map exists for the site, however the generalised 1:250 000 scale soils map sheet number 4 (Soil Survey 1983) identifies the Tendring soil association in the vicinity of the site.

2.8 Field survey investigations confirm the above findings identifying one main soil type which correlates closely with the description for Tendring series soils. Typical profiles are moderately well drained (wetness class II), non calcareous, and comprise very slightly stony sandy silt loam topsoils overlying very slightly to slightly stony sandy silt loam upper subsoils. Lower subsoils which typically occur between 50-65 cm depth, mainly comprise moderately or occasionally very stony sandy clay loam, clay loam or clay textures which extend to one metre. These lower subsoils are believed to represent the surface of the underlying gravel deposit.

3.0 AGRICULTURAL LAND CLASSIFICATION

3.1 Since the site is served by an adequate and assured irrigation water supply from a purpose built reservoir close to Grove Farm, this factor has been taken into account when determining ALC grade.

3.2 The entire site is graded 2 and comprises of coarse loamy over fine loamy soils which become progressively stonier below 50/65 cm depth. The presence of gravel within the lower subsoil results in a slight to moderate droughtiness constraint which is partially offset by the presence of an adequate and assured irrigation water supply. Although individual profiles of less stony and more water retentive soils in the north east and south west corners of the site approach grade 1 they have not been delineated separately. Overall the land remains limited by minor summer droughtiness constraints. A brief description of each of the ALC grades is provided in Appendix 1.