

Statement of  
Physical Characteristics

Cricket's Farm,  
Ightham Kent

STATEMENT OF PHYSICAL CHARACTERISTICS

CRICKETS FARM, IGHTHAM, KENT

1 BACKGROUND

1 1 0 69 hectares of land was surveyed on 2nd March, 1992 The site is situated to the north of Ightham and to the west of Borough Green Kent

1 2 The site was free surveyed using 1 2m Dutch soil augers In addition soil pits were examined to obtain more detailed information

Land-Use

1 3 At the time of survey the site was under permanent pasture

2 PHYSICAL FACTORS AFFECTING LAND QUALITY

Relief

2 1 The site lies at approximately 90m A O D Falling very gently southwards Land quality on this site is not influenced by either gradient or altitude

Climate

2 2 Estimates of climatic variables, were obtained by interpolation from grid point data sets for a representative location in the survey area, (Met Office 1989)

Climatic Interpolation

Grid Reference	TQ 604 576
Altitude (m A O D )	90
Accumulated Temperature (°days, Jan-June)	1470
Average Annual Rainfall (mm)	733
Field Capacity Days	150

Moisture Deficit Wheat (mm)	104
Moisture Deficit Potatoes (mm)	95

2 3 The important parameters in assessing an overall climatic limitation are, average annual rainfall, (a measure of the degree of wetness) and accumulated temperature, (a measure of the relative warmth of a locality) At this locality an overall climatic limitation does not exist Climatic factors do however interact with soil factors to influence land quality principally by way of soil wetness and droughtiness limitations

#### Geology and Soils

2 4 British Geological Survey Sheet 287, Sevenoaks (1971) indicates the site to be underlain by Folkstone Beds

2 5 Soil Survey of England and Wales, Sheet 6, Soils of South East England (1983), shows the site to comprise soils of the Fyfield 2 Association described as 'coarse loamy and sandy well drained argillic brown earths'(SSEW 1984)

2 6 Detailed field examination of the soil indicates the presence of one soil group

2 7 Commonly these soils comprise non-stony or slightly stony, good to moderately permeable loamy sands or sandy loam topsoils overlying similar textures, over lower subsoils of fine sand or sandy clay loam

### 3 AGRICULTURAL LAND CLASSIFICATION

3 1 The ALC grading of the site is primarily determined by interactions between soil and climatic factors, namely soil wetness and droughtiness ALC grade 2 has been mapped at this locality and the area and extent is given

<u>Grade</u>	<u>Area (ha)</u>	% of total agricultural land
2	0 69	100
Total Agricultural Area	<u>0 69</u>	
Urban	0 11	
Agricultural Buildings	0 06	
Non Agricultural	0 08	
Total Area of the site	<u>0 94</u>	

3 2 Appendix 1 gives a generalised description of the grades and subgrades identified in this survey

#### Grade 2

3 3 The area is mapped as Grade 2. Profiles typically comprise non-calcareous loamy sand or sandy loam topsoils, overlying similar textures over lower subsoils comprising sandy loams or sandy clay loam which were slight to moderately stony (c 5-20% v/v sandstone). Occasional profiles were found to comprise lower subsoils of loamy sand and fine sand. Commonly these soils are permeable and well drained (wetness Class I) occasional subsoil layers are affected by groundwater and therefore assigned to wetness Class II.

Land of this quality is principally limited by a minor droughtiness limitation resulting from a combination of soil textural characteristics and/or slight stone contents within the profile consequently the land has slightly restricted reserves of available water for plant growth. Grade 2 land is capable of supporting a wide range of both agricultural and horticultural crops. The level of yields is generally high but may be lower and more variable than grade 1.

4 SOIL RESOURCES

Soils for Consideration for Restoration

- 4 1 The distribution of soil resources on the site fall into one unit for both topsoil and subsoil. It should be emphasised that this is not a soil stripping plan but merely a descriptive illustration of soil resources available for restoration on the site. When considering these details it is important to remember that soils were sampled to a maximum depth of 100-120 cm during survey work. In some cases the soil resources will extend below this depth.
- 4 2 One topsoil unit was identified which typically comprises about, 27 cm of dark greyish brown and brown (10YR 3/2, 10YR 3/3, 10YR 4/3) non-calcareous sandy loam, occasional loamy sand. These topsoils are stoneless.
- 4 3 One subsoil unit was identified which typically comprises about, 85 cm of dark brown or greyish brown (10YR 3/3, 10YR 4/2, 10YR 5/2) sandy loams, occasional sandy clay loams yellowish brown and brown (10YR 5/4, 7.5YR 5/4) loamy sands, brownish yellow and yellow (10YR 6/8, 10YR 7/8) fine sands with pale brown and yellow mottles (10YR 6/3, 10YR 6/4, 10YR 7/4, 10YR 7/6). These soils are slight to moderately stony comprising about 5-20% v/v sandstone within the lower subsoil. Soil depths may be greater than 120 cm.

Where described subsoil structures are moderate to weakly developed subangular blocky peds of various sizes. Peds tend to be of friable to very friable consistence with biopores greater than 0.5%, numerous worm channels were observed.

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SOURCES OF REFERENCE

BRITISH GEOLOGICAL SURVEY (1971) Sheet 287 Sevenoaks

MAFF (1988), Agricultural Land Classification of England and Wales Revised guidelines and criteria for grading the quality of agricultural land

METEOROLOGICAL OFFICE (1989) Climatological Datasets for Agricultural Land Classification

SOIL SURVEY OF ENGLAND AND WALES (1983) Sheet 6, Soils of South East England

SOIL SURVEY OF ENGLAND AND WALES (1984), Soils and their use in South East England, Bulletin 15

## APPENDIX 1

### DESCRIPTION OF THE GRADES AND SUBGRADES

The ALC grades and subgrades are described below in terms of the types of limitation which can occur typical cropping range and the expected level and consistency of yield. In practice the grades are defined by reference to physical characteristics and the grading guidance and cut offs for limitation factors in Section 3 enable land to be ranked in accordance with these general descriptions. The most productive and flexible land falls into Grades 1 and 2 and Subgrade 3a and collectively comprises about one third of the agricultural land in England and Wales. About half the land is of moderate quality in Subgrade 3b or poor quality in Grade 4. Although less significant on a national scale such land can be locally valuable to agriculture and the rural economy where poorer farmland predominates. The remainder is very poor quality land in Grade 5 which mostly occurs in the uplands.

Descriptions are also given of other land categories which may be used on ALC maps.

#### **Grade 1 – excellent quality agricultural land**

Land with no or very minor limitations to agricultural use. A very wide range of agricultural and horticultural crops can be grown and commonly includes top fruit, soft fruit, salad crops and winter harvested vegetables. Yields are high and less variable than on land of lower quality.

#### **Grade 2 – very good quality agricultural land**

Land with minor limitations which affect crop yield, cultivations or harvesting. A wide range of agricultural and horticultural crops can usually be grown but on some land in the grade there may be reduced flexibility due to difficulties with the production of the more demanding crops such as winter harvested vegetables and arable root crops. The level of yield is generally high but may be lower or more variable than Grade 1.

#### **Grade 3 – good to moderate quality agricultural land**

Land with moderate limitations which affect the choice of crops, timing and type of cultivation, harvesting or the level of yield. Where more demanding crops are grown yields are generally lower or more variable than on land in Grades 1 and 2.

##### **Subgrade 3a – good quality agricultural land**

Land capable of consistently producing moderate to high yields of a narrow range of arable crops, especially cereals, or moderate yields of a wide range of crops including cereals, grass, oilseed rape, potatoes, sugar beet and the less demanding horticultural crops.

##### **Subgrade 3b – moderate quality agricultural land**

Land capable of producing moderate yields of a narrow range of crops, principally cereals and grass, or lower yields of a wider range of crops or high yields of grass which can be grazed or harvested over most of the year.

#### **Grade 4 – poor quality agricultural land**

Land with severe limitations which significantly restrict the range of crops and/or level of yields. It is mainly suited to grass with occasional arable crops (eg cereals and forage crops) the yields of which are variable. In moist climates yields of grass may be moderate to high but there may be difficulties in utilisation. The grade also includes very droughty arable land.

#### **Grade 5 – very poor quality agricultural land**

Land with very severe limitations which restrict use to permanent pasture or rough grazing except for occasional pioneer forage crops.

#### **Descriptions of other land categories used on ALC maps**

##### **Urban**

Built up or hard uses with relatively little potential for a return to agriculture including housing, industry, commerce, education, transport, religious buildings, cemeteries. Also hard surfaced sports facilities, permanent caravan sites and vacant land, all types of derelict land including mineral workings which are only likely to be reclaimed using derelict land grants.

##### **Non agricultural**

Soft uses where most of the land could be returned relatively easily to agriculture including private parkland, public open spaces, sports fields, allotments and soft surfaced areas on airports/airfields. Also active mineral workings and refuse tips where restoration conditions to soft after uses may apply.

##### **Woodland**

Includes commercial and non commercial woodland. A distinction may be made as necessary between farm and non farm woodland.

##### **Agricultural buildings**

Includes the normal range of agricultural buildings as well as other relatively permanent structures such as glasshouses. Temporary structures (eg polythene tunnels erected for lambing) may be ignored.

##### **Open water**

Includes lakes, ponds and rivers as map scale permits.

##### **Land not surveyed**

Agricultural land which has not been surveyed.

Where the land use includes more than one of the above land cover types eg buildings in large grounds and where map scale permits the cover types may be shown separately. Otherwise the most extensive cover type will usually be shown.