

AGRICULTURAL LAND CLASSIFICATION

LAND AT CLEMENT STREET, SUTTON AT HONE, DARTFORD

Background

The site lies approximately midway between Sutton at Hone and Hextable, just to the south of Dartford in Kent. The site is bounded to the south by Clement Street, to the east by a track and greenhouse and on all other margins by fencing.

The site was surveyed using a 110cm Dutch auger with samples being taken at approximately 25m intervals due to the relatively small size of the area surveyed.

Land Use

At time of survey (March 1989) the north and east of the site were under rough grassland. Areas to the south and west of the site were bare ground, with evidence of surface disturbance.

Physical Factors Affecting Land Quality

Relief

The site lies at approximately 25m OD, sloping very gently to the south. Gradient was not a significant factor in relation to agricultural land quality at this site.

Climate

The average annual rainfall for this area is c.610mm, with soils being at Field Capacity for 118 days/annum. The median accumulated temperature above zero degrees C for the period January to June (a measure of the relative warmth of an area) is 1477 day degrees. Soil moisture deficits for this site are relatively high, being 123 for wheat and 119 for potatoes. The area is not believed to be frost prone or exposed.

Geology and Soils

British Geological Survey Sheet 271 shows all of the site to be underlain by Cretaceous Upper Chalk. The Soil Survey of England and Wales Sheet 6 (1:250 000) shows the site to belong to the Frilsham association (typical argillic brown earths).

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Appendix 1 gives a generalised description of the grades used in this classification.

Grade 3a

This grade occurs at the north and east of the site. Profiles are typically composed of fine sandy silt loam or silty clay loam topsoils, generally overlying similar textures in the subsoil. Profiles are chiefly limited by topsoil stone contents in the order of 10 to 15%, which exclude this land from a higher grade.

Grade 3b

This grade occurs at the south and west of the site. Profiles are typically composed of silty clay loam topsoils overlying sandy or silty clay loam in the subsoil. Profiles are limited primarily by relatively high topsoil stone contents (in the order of 15 to 35%). This, in combination with the high subsoil stone contents present, further results in the profiles being subject to a similar degree of limitation in terms of their moderate liability to drought stress.

Areas of Grades

Total area of site	0.33ha
Urban	0.06ha
Total area of agricultural land	0.27ha
Grade 3a	0.17ha (63% total agricultural)
Grade 3b	0.10ha (37% total agricultural)

References

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

Met Office 1989 Climatological data for Agricultural Land
Classification

Met Office 1980 Meteorological Survey of West Kent (old OS Sheet
171)

British Geological Survey 1977 Sheet 271 (Dartford) 1:50 000

Soil Survey of England and Wales 1983 Sheet 6 Soils of South East
England 1:250 000 (plus accompanying memoir)

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APPENDIX 1

DESCRIPTION OF THE GRADES AND SUBGRADES

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.