

AGRICULTURAL LAND CLASSIFICATION

LAND AT OLDLANDS FARM, SOUTH BERSTED, BOGNOR

(STATUTORY CONSULTATION)

Background

The site lies to the north of Oldlands Farm, near South Bersted in West Sussex. It forms a narrow strip of land running to the north of and parallel with Oldlands Farm track being bounded to the west by the A29 Shripney Road and the east by the Barnham to Bognor railway line.

The site was surveyed using a 110cm Dutch auger with samples being taken at approximately 100m intervals. However, supplementary borings were taken where appropriate in areas of soil complexity in order to correctly establish the boundary between grades.

Land Use

At the time of survey (December 1988), the majority of the site was under cereal cultivation with grassland occupying much of the lower lying land at the east of the site.

Physical Factors Affecting Land Quality

Relief

The majority of the site lies at approximately 4m OD, though the land under grass at the east lies at a slightly lower level. Gradient was not a significant factor affecting agricultural land quality at this site.

Climate

The average annual rainfall for this area is approximately 744mm. The average length of growing season is c 295 days/annum and the area is not believed to suffer from frost or exposure. Soils are at field capacity for 151 days/annum. The median accumulated temperature above 0 degrees C for January to June is 1545 day degrees.

Geology

British Geological Survey Sheet 332 shows the west of the site to be underlain by Upper Cretaceous Upper Chalk, capped with Brickearth deposits from the Recent and Pleistocene. The east of the site however, coinciding with the areas of grassland, is shown to be underlain by Recent and Pleistocene Alluvium.

Soils

The Soil Survey of Great Britain "Soils of the West Sussex Coastal Plain" shows the site to belong to four soil series. The majority of the higher level land at the west of the site is shown to belong to the Hamble (sols lessives) and Hook (sols lessives with gleying) series. The majority of the lower lying land is shown to belong to the Arundel complex (ground water gley soils) with a strip of the Park Gate series (non calcareous gley soils) running along the border with the higher land.

Field examination of the soils showed them to fall into three groups. Group 1 occurs to the west of the farm buildings and is typically composed of silt loam topsoils overlying silt loam or medium silty clay loam in the subsoil. Group 2 occurs to the east of the farm buildings and is composed typically of medium silty clay loam topsoils overlying silty clay at quite shallow depth in the subsoil. Group 3 occurs on the disturbed land to the north of the farm buildings and is typically composed of silty clay loam textures throughout. Where agricultural limitations exist, the land is chiefly limited by drainage status.

Agricultural Land Classification

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

Grade 1

This grade is dominant at the west of the site with profiles being typically composed of silt loam topsoils overlying silt loam or medium silty clay loam textures in the subsoil. Profiles of this nature fall into soil wetness class 1, which combined with their topsoil texture in this range of field capacity days, has resulted in their allocation to grade 1 agricultural land.

Grade 3b

This grade is dominant to the north and east of the farm buildings. Profiles to the east of the farm buildings on the lower lying grassland are most typically composed of medium silty clay loam topsoils directly overlying silty clay in the subsoil. However, on the disturbed land to the north of the buildings profiles are typically composed of medium silty clay loam textures throughout. Profiles in this grade fall into soil wetness class 4, the result of poor structural conditions accompanied by features of wetness at quite shallow depth in the subsoil. On the land to the north of the farm buildings, this is probably due to former disturbance. This wetness class, when combined with the topsoil textures present in this range of field capacity days, has resulted in their allocation to grade 3b agricultural land on the grounds of relatively difficult workability.

Areas of Grades

Total area of site	3 92ha
Agricultural buildings	0 33ha
Grade 1	1 89ha (53% agricultural land)
Grade 3b	1 70ha (47% agricultural land)
Total area of agricultural land	3 59ha

References

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

Meteorological Office 1969, Meteorological survey of West Sussex
and South East Hampshire (OS map 181)

Meteorological Office (publication due 1989) Climatological data
for Agricultural Land Classification

British Geological Survey 1975, Sheet 332 (Bognor) 1 50 000

Soil Survey of Great Britain 1967, Soils of the West Sussex
Coastal Plain 1 25 000, plus accompanying memoir

Soil Survey of England and Wales 1983, Soils of South-East
England, Sheet 6 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.