



Shrobb Lodge
Old Stratford
Northamptonshire

AGRICULTURAL LAND CLASSIFICATION

SHROBB LODGE, OLD STRATFORD, NORTHAMPTONSHIRE

1. BACKGROUND

- 1.1 The site, an area of 93.2 hectares, is the subject of an application for the development of a golf course to the west of Old Stratford, Northamptonshire. MAFF surveyed the site in November 1991 to assess the agricultural land quality.

2. PHYSICAL FACTORS AFFECTING LAND QUALITY

Climate

- 2.1 Climate data for the site was obtained from the published agricultural climatic dataset (Met Office, 1989). This indicates that for the survey area the annual average rainfall is 668 mm (26"). This data also indicates that field capacity days are 146 and moisture deficits are 105 mm for wheat and 96 mm for potatoes. These climatic characteristics do not impose any climatic limitations on the ALC grading of the survey area.

Altitude and Relief

- 2.2 The land surveyed comprises a gently sloping plateau with the highest point (of 90m AOD) to the north west. The land falls gently to the south east to an altitude of 80m AOD. Land adjacent to the farm is dissected by a minor tributary (of the River Great Ouse), which traverses the centre of the site in a south west/north east direction. Neither gradient or altitude constitute limitations to the ALC grade.

Geology and Soils

- 2.3 The published 1:63360 scale solid and drift edition geology sheet 202 (Geological Survey of England and Wales 1969) shows the geology to comprise mainly glacial till, with a narrow band of first terrace river

deposits adjacent to the tributary.

2.4 The Soil Survey of England and Wales have mapped the soils at a reconnaissance scale of 1:250,000. This map shows the occurrence of the Hanslope Association (*1) over the entire area. During the current survey a more detailed inspection of the soils was carried out. Soils are mainly derived from the glacial till with a narrow deposit of alluvial soils adjacent to the tributary.

2.4.1 The majority of soils typically consist of non calcareous heavy clay loam or clay topsoils over gleyed, non calcareous clays to 50/65 cm, or occasionally 45 cm. At depth the majority of the clays are calcareous due to the presence of chalk fragments which increase in density towards the base of the profiles.

2.4.2 Non calcareous alluvial soils of similar textures outcrop as a narrow strip adjacent to the tributary.

3. AGRICULTURAL LAND CLASSIFICATION

3.1 The definition of the Agricultural Land Classification grades are included in Appendix 1.

3.2 The table below shows the breakdown of ALC grades in hectares and % terms for the survey area.

AGRICULTURAL LAND CLASSIFICATION

Grade	ha	%
3b	93.0	99.8
Non Agricultural	<u>0.2</u>	<u>0.2</u>
TOTAL	<u>93.2</u>	<u>100.0</u>

(*1) Hanslope Association: Slowly permeable calcareous clayey soils. Some slowly permeable non-calcareous clayey soils. Slight risk of water erosion.

3.3 In association with both soil types (described in paras 2.4.1 and 2.4.2) the whole survey area has been graded 3b. Profile pit observations indicate that the soils are slowly permeable at shallow depths. Consequently the drainage status has been assessed as wetness class III* or IV. The high wetness class, decalcified upper horizons and clayey textures combine to impose a significant limitation on the agricultural flexibility of this land.

3.4 Non Agricultural

A small area of woodland south of Shrobb Lodge Farm appears as Non Agricultural.

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* In the valley feature east of Shrobb Lodge Farm a small area of better drained land occurs, but it covers too small an area to delineate separately at this survey scale.

References

GEOLOGICAL SURVEY OF ENGLAND AND WALES 1969. Solid and drift edition Geology sheet 202 (Towcester) 1:63360.

MAFF, 1988. Agricultural Land Classification of England and Wales (Revised Guidelines and Criteria for grading the quality of Agricultural Land) Alnwick.

METEOROLOGICAL OFFICE 1969. Climate data extracted from the published agricultural climatic dataset.

SOIL SURVEY OF ENGLAND AND WALES 1983. Soils of Eastern England Sheet 4 1:250,000.

Appendix 1

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. When 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 yield of which are variable. In most 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.

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Map 1 : Agricultural Land Classification