Cambs 7/1/93

AGRICULTURAL LAND CLASSIFICATION

LAND AT STANFORD PARK, STANFORD ON SOAR, NOTTS
RUSHCLIFF BOROUGH LOCAL PLAN

1.0 INTRODUCTION

1.1 This 29.5 hectare site is the subject of proposals for residential development. In June 1993, ADAS Resource Planning Team undertook an Agricultural Land Classification (ALC) survey of the site, carrying out a total of 23 auger borings using a hand held Dutch soil auger. In addition two soil inspection pits were dug to assess subsoil conditions.

1.2 At the time of the survey all the land was under grass with many parkland trees and was being used for sheep or horse grazing. The field between Lings Spinney and The Belt has recently been cut for silage.

1.3 On the published ALC map, sheet 122 (MAFF 1962) the whole area is shown as grade 2 with an area of woodland in the northwest mapped as non agricultural land.

2.0 PHYSICAL FACTORS AFFECTING LAND QUALITY

Climate

2.1 Climate data was obtained by interpolating information contained in the published agricultural climatic dataset (Met Office, 1989). This indicates that for an average site altitude of 80 m AOD, the average annual rainfall is 616 mm (24.3"). This data also indicates that the field capacity days are 129 and moisture deficits for wheat and potatoes are 105 mm and 95 mm respectively. These climatic characteristics do not impose any climatic limitation on the site.

Altitude and Relief

2.2 Much of the site is relatively flat with an altitude of 80-85 m AOD. To the south of the private road to Stanford Hall the land falls gently to the south east to a minimum altitude of 70 m AOD.

Geology and Soils

2.3 The published 1:50,000 scale, drift edition geology map, sheet 142 (Geological Survey of England and Wales 1976) shows the whole site is covered with Recent and Pleistocene sand and gravel with underlying Triassic Rhaetic Shales and Limestones.

2.4 No detailed soil map is available of the area but the reconnaissance 1:250,000 scale soil map "Soils of Eastern England" published by the Soil Survey of England and Wales in 1983, shows the presence of three soil associations. The western part of the site is mapped as the Salop Association (*1), the north east corner as Wick 1 (*2) and the south east corner as Flint Association (*3).

2.5 During the detailed ADAS field survey 2 main soil types were identified.

2.6 Over the majority of the site profiles typically comprise sandy clay loam or medium clay loam topsoils over sandy clay loam or sandy clay upper subsoils. Lower subsoils, comprising slowly permeable reddish clay, are encountered generally between 30-55 cms. Soils are non calcareous and usually very slightly stony throughout, although very sporadically gravel was encountered below one metre.

2.7 The second main soil type occurs in the eastern edge of the site where profiles typically comprise very slightly stony sandy clay loam or medium sandy loam topsoils overlying very slightly to slightly stony sandy clay loam (occasionally medium sandy loam) upper subsoils to a depth of 55-65 cms. The lower subsoils comprise a slowly permeable reddish brown clay.

(*1) Salop Association: Slowly permeable seasonally waterlogged reddish fine loamy over clayey, fine loamy and clayey soils associated with fine loamy over clayey soils with slowly permeable subsoils and slight seasonal waterlogging.

(*2) Wick Association: Deep well drained coarse loamy and sandy soils, locally over gravel. Some similar soils affected by groundwater. Slight risk of water erosion.

(*3) Flint Association: Reddish fine loamy over clayey soils with slowly permeable subsoils and slight seasonal waterlogging. Some similar fine soils and some slowly permeable seasonally waterlogged fine loamy over clayey soils.

3.0 AGRICULTURAL LAND CLASSIFICATION

3.1 The definitions of the Agricultural Land Classification (ALC) grades are included in Appendix I.

3.2 A majority of the agricultural land is graded 3a with a small area on the eastern edge of the site graded 2.

The table below shows the precise breakdown of the ALC grades of the site.

AGRICULTURAL LAND CLASSIFICATION

Grade	ha	%
2	4.2	14
3a	15.2	51
Non Agricultural	9.2	31
Urban	1.0	4
TOTAL	29.5	100

3.3 Grade 2

The grade 2 land is associated with the lighter textured soils described in paragraph 2.7. These soils are generally moderately well drained (wetness class II) and the land is limited by a combination of minor winter wetness and summer droughtiness constraints.

3.4 Subgrade 3a

Land classed as subgrade 3a are associated with the slightly heavier soils described in paragraph 2.6. Profiles are imperfectly drained (wetness class III), and this combined with the moderately heavy topsoil textures excludes the land from a higher grade on wetness and workability grounds.

3.5 Non Agricultural

Areas of woodland and a pond are mapped as non agricultural land.

3.6 Urban

Disused farm buildings and houses are mapped as urban.

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REFERENCES

GEOLOGICAL SURVEY OF GREAT BRITAIN (ENGLAND AND WALES) 1976. Drift Edition, Sheet 142, Melton Mowbray, 1:50,000 scale.

MAFF 1962. Agricultural land Classification Map, Sheet 122, Provisional 1:63,360.

MAFF 1988. Agricultural Land Classification of England and Wales (Revised Guidelines and Criteria for Grading the Quality of Agricultural Land) Alnwick.

METEOROLOGICAL OFFICE 1989. Published climatic data extracted from the agroclimatic dataset compiled by the Meteorological Office.

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

SOIL SURVEY OF ENGLAND AND WALES, 1984. Soils and their use in Eastern England by C A H Hodge, R G O Burton, W M Corbett, R Evans and R S Seale. Harpenden.

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 include 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 crops. The level of yields 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 winter 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 levels 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.