4206-134-92

AGRICULTURAL LAND CLASSIFICATION
LAND SOUTH OF HOLTYE ROAD
EAST GRINSTEAD WEST SUSSEX

ADAS Ref 4206/134/92
MAFF Ref EL 42/90

Resource Planning Team
ADAS Statutory Group
Reading

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1 INTRODUCTION

1 1 In December 1992, an Agricultural Land Classification (ALC) survey was carried out on approximately 7 hectares of land south of Holtye Road, East Grinstead, West Sussex ADAS was commissioned by MAFF to determine the quality of land in connection with proposals for residential development

1 2 The survey work was undertaken using a handheld Dutch soil auger and sampling at 100 metre intervals One soil inspection pit was dug in addition to assess subsoil conditions Both the auger borings and the soil inspection pit were assessed using MAFF's revised guidelines and criteria for grading the quality of agricultural land (MAFF, 1988) These guidelines provide a framework for classifying land according to the extent to which its physical or chemical characteristics impose long term limitations on its agricultural use

At the time of the survey the agricultural land was under grass

1 3 The distribution of the grades and subgrades is shown on the attached ALC map and the areas are given in the table below The map has been drawn at a scale of 1 5000 Any enlargement of this scale would be misleading

Table 1 Distribution of Grades and Subgrades

Grade	Area (ha)	% of Agricultural Land
3A	2 5	58 1
3B	1 8	41 9
Non-agricultural land	3 3	100% (4 3 ha)
Total Area of Site	7 6	

A general description of the ALC grades and subgrades and landcover categories is attached

1 4 The majority of the site has been classified as non agricultural land consisting of woodland and scrub and gardens Agricultural land to the north of the site has been classified as subgrade 3A and is typically limited by slight to moderate wetness/workability problems

1 5 Land to the south of the site has been classified as subgrade 3B limited by slope gradient in excess of 7°

2 PHYSICAL FACTORS AFFECTING LAND QUALITY

Altitude and Relief

2 1 The site comprises land at an altitude of 125-140 metres AOD and slopes gently south before falling more steeply south towards the southern boundary Using an optical reading clinometer, slope angles of between 7 5° and 9° were recorded in this area Consequently this land is classified as subgrade 3B due to slope limitation

Climate

2 2 Climate data for the site was obtained by interpolation of a 5 km grid dataset (Met Office 1989) for representative locations in the survey area

Table 2 Climatic Interpolation

Grid Reference	TQ 408391	TQ 408392	TQ 408394
Altitude (m)	125	135	140
Accumulated Temperature (day°)	1380	1368	1363
Annual Average Rainfall (mm)	835	838	838
Field Capacity Days	176	176	176
Moisture Deficit - wheat (mm)	96	94	94
Moisture Deficit - potatoes (mm)	86	84	83

2 3 These climatic characteristics do not impose any climatic limitation on the ALC grading of the site However both climate and soil factors interact to affect soil wetness limitations

Geology and Soils

2 4 The published 1 63,360 scale British Geological Survey Sheet 303 (1971) shows the presence of Cretaceous Ardingly Sandstone to the north of the site To the south is mapped Cretaceous Lower Tunbridge Wells Sand The published 1 250 000 scale Soils Map, Sheet 6 Soils of South East England' shows the site to be mapped as Curtisden Association " silty stagnogleyic argillic brown earths " (SSEW 1984) A detailed examination of the soils indicates the occurrence of one soil type

3 AGRICULTURAL LAND CLASSIFICATION

Subgrade 3a

3 1 Good quality agricultural land has been mapped in the northern half of the site Profiles typically consist of medium clay loam, occasionally heavy clay loam topsoils which are very slightly stony (1-5% fine soft sandstone) Upper subsoils typically comprise very slightly to slightly stony (2-15% by volume) medium clay loam or sandy clay loam Lower subsoils consist of similar textures, occasionally fine sandy loam and loamy fine sand Stone content is very slightly to slightly stony (2-15% by volume fine soft sandstone) Profiles are typically gleyed within 40 cm but with no slowly permeable layers in the subsoil Consequently profiles are reasonably well drained wetness class II, occasionally wetness class I However the topsoil textures and high field capacity days, in the locality combine to limit the land to subgrade 3A due to wetness/workability limitations

Subgrade 3B

3 2 Moderate quality agricultural land covers the southern part of the site, profiles being similar to those described in paragraph 3 1 However slope angles between 7 5-9° impede the safe and efficient use of machinery and limit the land to this subgrade

January 1993

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Sources of Reference

BRITISH GEOLOGICAL SURVEY 1971 Sheet 303 (Tunbridge Wells) 1 63 360 scale solid and drift edition

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 Sneet 6 Soils of South Eastern England 1 250 000 scale

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

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