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Horsham District Local Plan
Land at Ifield Court Farm,
Crawley.
Reconnaissance Survey
Agricultural Land Classification
ALC Map and Report
March 1995

AGRICULTURAL LAND CLASSIFICATION REPORT

HORSHAM DISTRICT LOCAL PLAN. LAND AT IFIELD COURT FARM, CRAWLEY. RECONNAISSANCE SURVEY.

1. Summary

- 1.1 ADAS was commissioned by MAFF's Land Use Planning Unit to provide information on land quality for a number of sites in the Horsham District of West Sussex. The work forms part of MAFF's statutory input to the preparation of the Horsham District Local Plan.
- 1.2 The site comprises 120 hectares of land around Ifield Court Farm at Ifield, north-west of Crawley in West Sussex. An Agricultural Land Classification (ALC) survey was carried out in March 1995. The survey was undertaken at a reconnaissance level of approximately one boring per 5 hectares of agricultural land surveyed. The southern half of the site has been previously surveyed by Bioscan UK Ltd in January 1995. Consequently, the boring density of the ADAS survey was decreased in this area of the site, being sufficient to verify the Bioscan findings. A total of 21 borings and two soil inspection pits were described in accordance with 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 a long term limitation on its use for agriculture.
- 1.3 The survey work was carried out by members of the Resource Planning Team in the Guildford Statutory Group of ADAS.
- 1.4 At the time of the survey the agricultural land on the site comprised permanent grassland, cereals and recently ploughed land. Areas marked as non-agricultural include scrubland and areas of woodland have also been marked on the map. Areas of urban comprise private dwellings, gardens and tarmac roads. An area of open water has been mapped around Ifield Court Hotel and farm buildings have been mapped around Ifield Court Farm.
- 1.5 The distribution of grades and subgrades is shown on the attached ALC map, and the areas and extent are given in the table below. The map has been drawn at a scale of 1:10,000. It is accurate at this scale, but any enlargement would be misleading.

Table 1 : Distribution of Grades and Subgrades

Grade	Area (ha)	% of Site
3b	99.0	82.5
Non-agricultural	1.0	0.8
Woodland	1.7	1.4
Urban	17.3	14.5
Farm buildings	0.6	0.5
Open Water	<u>0.4</u>	<u>0.3</u>
Total area of site	120.0	100%

- 1.6 Appendix I gives a general description of the grades, subgrades and land use categories identified in the survey. The main classes are described in terms of the type of limitation that can occur, the typical cropping range and the expected level and consistency of yield.
- 1.7 The majority of the agricultural land on the site has been classified as Subgrade 3b, moderate quality land, with soil wetness as the main limitation. Soil profiles typically comprise medium clay loam and heavy clay loam topsoils resting upon clay subsoils. Profiles are commonly gleyed from the topsoil, and the clay subsoils are slowly permeable and significantly impede drainage, such that a classification of Subgrade 3b is appropriate. Poorly drained wet soils restrict plant growth and development and may be more susceptible to structural damage through trafficking by agricultural machinery or poaching by grazing livestock.
The previous Bioscan survey similarly found land to be classified as Subgrade 3b due to a wetness limitation.

2. Climate

- .1 The climatic criteria are considered first when classifying land as climate can be overriding in the sense that severe climatic limitations will restrict land to low grades irrespective of favourable site or soil conditions.
- 2.2 The main parameters used in the assessment of an overall climatic limitation are average annual rainfall, as a measure of overall wetness, and accumulated temperature (degree days Jan-June), as a measure of the relative warmth of a locality.
- 2.3 A detailed assessment of the prevailing climate was made by interpolation from a 5km gridpoint dataset (Met. Office 1989). The details are given in the table below and these show that there is no overall climatic limitation affecting the site.
- 2.4 However, climatic factors do interact with soil factors to influence soil wetness and droughtiness limitations. At this locality the climate is relatively warm and moist, therefore the likelihood of soil wetness problems may be increased.
- 2.5 No local climatic factors such as exposure or frost risk are believed to affect the site.

Table 2 : Climatic Interpolation

Grid Reference	TQ 245 381
Altitude (m)	65
Accumulated Temperature (degree days, Jan-June)	1452
Average Annual Rainfall (mm)	812
Field Capacity (days)	172
Moisture Deficit, Wheat (mm)	104
Moisture Deficit, Potatoes (mm)	96
Overall Climatic Grade	1

3. Relief

3.1 The site is relatively flat, lying at an altitude of approximately 65m AOD.

4. Geology and Soils

4.1 The published geological map (BGS, 1972) shows the majority of the site to be underlain by Weald Clay. Alluvium is mapped around watercourses, clay-ironstone beds in the north of the site and small bands of River Mole 2nd terrace deposits towards the south of the site.

4.2 The published Soil Survey map (SSEW, 1983) shows the soils on the site to comprise those of the Wickham 1 association. These are described as 'slowly permeable seasonally waterlogged fine silty over clayey, fine loamy over clayey and clayey soils' (SSEW 1983).

4.3 Detailed field examination found the majority of the soils on the site to be silty and clayey with slowly permeable subsoils.

5. Agricultural Land Classification

5.1 The location of the soil observation points are shown on the attached sample point map.

Subgrade 3b

5.2 All of the agricultural land on the site has been classified as Subgrade 3b, at a reconnaissance survey level, due to a significant soil wetness limitation. Soil profiles were found to typically comprise medium silty clay loam and heavy silty clay loam topsoils commonly resting directly upon clay subsoils. Profiles show evidence of drainage imperfections in the form of gleying, usually from the topsoils. Two soil inspection pits dug on the site indicated the clay subsoils to be poorly structured with low porosity, and therefore classified as slowly permeable layers which significantly impede drainage. The presence of gleying and the relatively shallow depth to these slowly permeable layers means that these soils are assigned to Wetness Class IV, with a resultant classification of Subgrade 3b given the prevailing climatic conditions. Poorly drained wet soils can inhibit plant and root development, and may be more susceptible to structural damage through trafficking by agricultural machinery or poaching by grazing livestock. This can in turn affect the frequency and timing of such operations.

ADAS Ref: 4205/18/95
MAFF Ref: EL 42/130

Resource Planning Team
Guildford Statutory Group
ADAS Reading

SOURCES OF REFERENCE

British Geological Survey (1972), Sheet No. 302, Horsham, 1:50,000 Series (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 Data for Agricultural Land Classification.

Soil Survey of England and Wales (1983), Sheet 6, Soils of South East England, 1:250,000 and accompanying legend.

AGRICULTURAL LAND CLASSIFICATION, SUMMARY REPORT

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APPENDIX I

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 or horticultural crops can usually be grown but on some land of this 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 land.

Grade 3 : Good to Moderate Quality Land

Land with moderate limitations which affect the choice of crops, the 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 the 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 severe limitations which restrict use to permanent pasture or rough grazing, except for occasional pioneer forage crops.

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. 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, eg. buildings in large grounds, and where map scale permits, the cover types may be shown separately. Otherwise, the most extensive cover type will be shown.