1507/63-78/92

Agricultural Land Classification
Havant Borough Local Plan
Hampshire
Objectors Sites

Resource Planning Team
Guildford Statutory Group
ADAS

HAVANT BOROUGH LOCAL PLAN HAMPSHIRE OBJECTORS SITES

Report of Survey

1 Introduction

In August 1992 detailed Agricultural Land Classification (ALC) surveys were carried out on a total of 15 sites around Emsworth Hayling Island and Havant in Hampshire ADAS was commissioned by MAFF to determine the land quality on sites proposed by objectors to the Havant Borough Local Plan proposals

The work was conducted by members of the Resource Planning Team within the Guildford Statutory Group using MAFF s revised guidelines and criteria for grading the quality of Agricultural Land 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 use for agriculture

A series of ALC maps have been drawn up to illustrate the distribution of the grades and subgrades around each site Maps have been drawn at a scale of 1 10 000 the information is accurate at this level but any enlargement would be misleading Details of the areas of each grade are given below for each site separately

The 15 sites surveyed were

* Land South of Langstone Bridge Hayling Island Map 1
* Land North of Stoke Hayling Island Map 1
* Land North of Station Road Newtown Hayling Island Map 2
* Land at Honeyrings Copse Hayling Island Map 2
* Land at Rook Farm Hayling Island Map 2
* Land at Mengham Hayling Island Map 2
* Land at Tournerbury Farm Hayling Island Map 2
* Land East of Castle Avenue Emsworth Map 3
* Land North of Havant Road Emsworth Map 3
* Land South of Havant Road Emsworth Map 3
* Land at East Leigh Farm Emsworth Map 4
* Land at Locks Farm Emsworth Map 4
* Land at Hampshire Farm Emsworth Map 5
* Land South of Lower Road Bedhampton Map 6
* Land at Mill Lane Bedhampton Map 6

2 Climate

For each of the sites the climatic criteria were considered first Climate can be overriding in the sense that severe limitations will restrict land to low grades irrespective of favourable soil or site conditions

The main parameters used in the assessment of the climatic limitation are average annual rainfall as a measure of overall wetness and accumulated temperature as a measure of the relative warmth of a locality

Detailed assessments of the prevailing climate have been made for each site by interpolation from a 5 km gridpoint dataset Details of the interpolations are given below for each site separately These show that there is no overall climatic limitation affecting any of the sites the whole area is climatically Grade 1 A slight exposure limits the most northern section of the Newtown Site restricting this area to no better than Grade 2

There is a range of field capacity days across the sites with some above and some below the important 150 FC level Similar profiles will be less flexible and less easy to work above this level in general

3 Agricultural Land Classification

3 1 Land South of Langstone Bridge, Hayling Island

See ALC Map 1

This 1 2 ha field has been classified as Grade 2 Medium Clay Loam topsoils overlie deep subsoils of Heavy Clay Loam with moderate subsoil conditions and low stone contents Given the high moisture deficits that prevail (118 mm Wheat) soil droughtiness is the key limitation with insufficient available water in the profile to allow the soils to be graded any higher

Climatic Interpolation

Altitude 4 m
Accumulated Temperature 1549 days
Average Annual Rainfall 737 mm
Field Capacity 151 days
Moisture Deficit Wheat 118 mm
Moisture Deficit Potatoes 115 mm

3 2 Land North of Stoke, Hayling Island

See ALC Map 1

All of this 2 ha site has been placed in Grade 4 The land has been disturbed in the past with builders waste covered with topsoil There has been uneven settling and the topsoil still contains very stony patches with rubble at the surface

3 3 Land North of Station Road, Newtown, Hayling Island

See ALC Map 2

All of this 11 6 hectare site has been placed in Sub-grade 3A Soil wetness is the main limiting factor There is some variation across the site in terms of depths to gleying and slowly permeable layers but Wetness Class III is the most appropriate class (ie the soil profile is wet within 70 cm depth for 91 180 days in most years) Topsoil textures are Medium Clay Loam and this in combination with the Wetness Class and the prevailing FC level (139 days) limits the land to Sub grade 3A

Climatic Interpolation

Altitude 5 m
Accumulated Temperature 1550 days
Average Annual Rainfall 682 mm
Field Capacity 139 days
Moisture Deficit Wheat 123 mm
Moisture Deficit Potatoes 121 mm

3 4 Land at Honeyrings Copse, Hayling Island

See ALC Map 2

All of this 1 8 hectare site has been classified as Sub-grade 3A Soils and climate are similar to that described in 3 3 above

3 5 Land at Rook Farm, Hayling Island

See ALC Map 2

Grade	Area (ha)	% of Agricultural Area
2	6 5	71 4
3A	2 6	28 6
Non Agric	0 2	100% (9 1 ha)
Agric Bldgs	0 4	
Total	10 7	

Soils in the northern part of this site fall into Grade 2 The soils are gleyed below 40 cm with slowly permeable layers at approximately 50 cm The soils qualify for Wetness Class II and experience a minor wetness and workability limitation

Soils in the southern section fall into Sub Grade 3A These soils are placed in a worse Wetness Class than those in adjacent fields due to signs of gleying and the presence of slowly permeable layers at shallower depths The workability of this land is thus more restricted The farmer aware of this uses this area for shallow rooting vegetable crops and sets his other land aside for crops that require more tractor aided work at sensitive times during the spring and autumn

3 6 Land at Mengham, Hayling Island

See ALC Map 2

All of the agricultural land on this 4 1 ha site has been placed in Sub-grade 3A with 0 2 hectares non-agricultural Droughtiness is the main limitation on the soils to the south of the site A pit described on adjacent land at Tournerbury Farm also relates to this site These soils have stony subsoil horizons (20%) with restricted root penetration and poor crop response Wetter profiles in the north are similar to those described in the northern area of 3 7

3 7 Land at Tournerbury Farm, Hayling Island

See ALC Map 2

All of this 4 8 hectare site has been placed in Sub-grade 3A Pit 1 is typical of these droughty soils as described in 3 6 above Some wetter profiles occur in the north showing evidence of gleying within 40 cm and slowly permeable layers at approximately 50 cm which place the soils in Wetness Class III (ie the profile is wet within 70 cm depth for 91-180 days in most years)

Climatic Interpolation

Altitude 5 m
Accumulated Temperature 1549 days
Average Annual Rainfall 688 mm
Field Capacity 141 days
Moisture Deficit Wheat 124 mm
Moisture Deficit Potatoes 121 mm

3 8 Land East of Castle Avenue, Emsworth

See ALC Map 3

All of this 7 9 hectare site has been placed in Grade 2 The soils on this western fringe of Emsworth are developed on Coombe Deposits which have given rise to soils with a slight wetness limitation Pit 1 is typical of these soils which have Medium Clay Loam topsoil textures with clay contents increasing down the profile into Heavy Clay Loam lower subsoils which exhibit deep gleying Subsoil structures are moderate in condition and the profiles contain no slowly permeable horizons and the soils can therefore be placed in Wetness Class II (ie the profile is likely to be wet within 70 cm depth for 31-90 days in most years)

Climatic Interpolation

Altitude 10 m
Accumulated Temperature 1541 days
Average Annual Rainfall 785 mm
Field Capacity 163 days
Moisture Deficit Wheat 114 mm
Moisture Deficit Potatoes 109 mm

3 9 Land North of Havant Road, Emsworth

See ALC MAP 3

All of the agricultural area of this site (4 7 ha) has been placed in Grade 2 with a further 0 2 ha classed as Non-Agricultural

These soils are in the same range as those described in 3 7 above and relate to Pit 1 There is a variation across the site with some profiles exhibiting a poorer wetness status due to the presence of slowly permeable layers but on balance Wetness Class II and Grade 2 is the most appropriate grade

3 10 Land South of Havant Road, Emsworth

See ALC Map 3

All of this 21 ha block of land has been placed in Grade 2 Pit 1 is typical of these soils which shows that they have a better wetness status than those Grade 2 soils on sites to the north The profiles show evidence of deep gleying below 80 cm with no slowly permeable horizons This is despite the presence of Clay layers from approximately 50 cm which exhibit common mottling but have a healthy matrix colour (10YR 44 or 10YR 54) The structures of these subsoils are also moderate in condition The profiles can therefore be placed in Wetness Class I (ie the soil is not wet within 70 cm for more than 30 days in most years)

Droughtiness becomes the most limiting factor for these soils The available water in the profiles down to 1 2 m is just insufficient to allow a classification higher than Grade 2

Climatic Interpolation

Altitude 8 m
Accumulated Temperature 1543 days
Average Annual Rainfall 777 mm
Field Capacity 160 days
Moisture Deficit Wheat 114 mm
Moisture Deficit Potatoes 110 mm

3 11 Land at East Leigh Farm, Emsworth

See ALC Map 4

Part of this site (0 6 ha) is occupied by redundant farm buildings but the whole of the agricultural area (2 2 ha) is classified as Sub grade 3B though not currently farmed

There is a distinct change in geology between this site and the adjacent Locks Farm site to the south with the soils at East Leigh developed on Cretaceous Clay The site boundary is marked by a break of slope which pinpoints the geological change Heavy Clay Loam topsoils overlie slowly permeable Clay subsoils with clear evidence of gleying The profiles are placed in Wetness Class IV (ie the soils are believed to be wet within 70 cm depth for more than 180 days but not within 40 cm for more than 210 days in most years) This degree

of waterlogging combined with the heavy nature of the topsoils and the prevailing Field Capacity range (171 days) significantly limits the range of crops that can tolerate such conditions and greatly reduces the number of days when the soil is in a suitable state for cultivation trafficking by machinery or grazing by livestock

3 12 Land at Locks Farm, Emsworth

See ALC Map 4

All of this 10 4 hectare site has been placed in Grade 2 with droughtiness as the most limiting factor Medium Clay Loam topsoils overlie Clay lower subsoils but these show no evidence of restricted drainage Moderate subsoil conditions occur throughout the profile with minor stone contents and deep root penetration Given these characteristics the available water in the profile limits the soils to Grade 2 given the prevailing moisture deficits (wheat 111 mm potatoes 106 mm)

3 13 Land at Hampshire Farm, Emsworth

See ALC Map 5

All of this 7 hectare block has been placed in Sub-grade 3B with soil wetness as the key limitation The higher land to the north has soils developed on Cretaceous Clay with profile characteristics similar to those described in 3 11 above which impose a significant wetness limitation The lower land to the south is developed on Coombe Deposits but there is quite a variation in wetness characteristics (depths to gleying and slowly permeable layers) and on balance these soils have been placed in a low Wetness Class which restricts the land to Sub-grade 3B

3 14 Land South of Lower Road, Bedhampton

See ALC Map 6

All of this 1 8 hectare block has been placed in Grade 2 with soil wetness as the most limiting factor Gleying and slowly permeable horizons are present at depth placing the profiles in Wetness Class II The high topsoil textures permit a Grade 2 classification and there is therefore only a slight wetness limitation on the range of cropping and the degree of workability Currently the site supports soft fruit and field vegetable production

3 15 Land at Mill Lane, Bedhampton

See ALC Map 6

All of this 15 hectare site has been placed in Sub-Grade 3A As with the soils described in 3 14 above the profiles are placed in Wetness Class II with similar degrees of gleying and depths to slowly permeable layers The topsoil textures are however heavier (Heavy Clay Loam) and this creates a more significant workability limitation given the prevailing Field Capacity level (157 days)

DESCRIPTION OF THE GRADES AND SUB-GRADES

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 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 an 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 golf courses 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

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