3303-018-89

AGRICULTURAL LAND CLASSIFICATION

WALLINGFORD LOCAL PLAN

LAND AT WINTERBROOK

1 BACKGROUND

1 1 An area of 12 8 ha at Winterbrook Wallingford was inspected on 23 May 1989 in connection with the Wallingford Local Plan The area surrounding the site was previously surveyed in September and October 1985 (also in connection with local plan proposals) but the land in question was not then inspected (MAFF 1985)

1 2 At the time of survey the land was in grass being used for cattle and horse grazing and grass conservation A small paddock to the southeast of the site was not surveyed as permission to enter the land had not been obtained

2 PHYSICAL FACTORS AFFECTING LAND QUALITY

Climate

2 1 The site lies within the Thames Valley in an area having a site adjusted average annual rainfall of 606 mm (Met Office 1989) which is relatively low by national standards The median accumulated temperature above zero degrees C (Jan - June) is estimated from interpolated data to be 1462 day degrees (Met Office 1989) The site is estimated to have 130 field capacity days (Met Office 1989) which provides a measure of the effect of climate on the soil water regime Crop adjusted moisture deficits are 117 mm and 111 mm for wheat and potatoes respectively (Met Office 1989) and the area is unlikely to be especially prone to frost or exposure Climate per se is therefore not a limitation in terms of the agricultural land classification grading

Relief

2 2 The site lies at altitudes between 45 and 50 m A O D and has very gently falls A small ridge towards the western half of the site runs approximately west to east Neither gradient nor altitude place any limitation in terms of the agricultural land quality of the site

Geology and Soils

2 3 The geology of the area is indicated on Geological Map Sheet No 254 (Henley on Thames) B G S (1978) as 1st level river terrace deposits within the slightly lower lying areas with Lower Chalk with glauconitic marl on the slightly elevated ridge This description accords well with the soils developed upon them and which were identified during detailed survey work

2 4 The soils associated with the river terrace deposits typically comprise fine sandy clay loam or sandy clay loam topsoils overlying similar or progressively heavier clay subsoils containing lenses of sandy material At depth coarser sandy loam loamy sand or gravelly horizons may occur With the exception of some lower subsoil horizons the soil profiles are very slightly stony They typically fall within wetness classes I or II In addition the soils are slightly droughty

2 5 Land associated with the lower chalk deposit comprise heavier textured soils having calcareous heavy clay loam or clay topsoils resting over similar subsoils which become increasingly paler coloured and more calcareous with depth and sometimes passing into a sandy and gritty chalky marl These soils are well drained (wetness class I) but their relatively heavy topsoil and slight droughtiness is a limitation in terms of agricultural quality

3 AGRICULTURAL LAND CLASSIFICATION

2 1 A breakdown of the area and extent of the grades is given below

Grade	ha	%*
2	9 8	87
3a	1 4	13
Non-Ag	0 2	100
Not surveyed	1 4	* of total agricultural area
Total	12 8	surveyed

Grade 2

3 2 Land of this quality covers the majority of the site and includes soils within the two groups described previously in paragraphs 2 4 and 2 5 The soils derived from river terrace deposits comprise very slightly stony sandy clay loams and fine sandy clay loams resting over generally permeable subsoils of sandy clay loam and clay Gravelly and/or coarser textured horizons may occur at depth Such soils have been allocated to wetness classes I and II They suffer from minor droughtiness restrictions and are therefore appropriately placed in grade 2 The remaining land in this grade is associated with the heavier textured soils derived from the Lower Chalk They typically comprise calcareous heavy clay loam and clay topsoils resting over permeable (wetness class I) and increasingly calcareous clayey subsoils The heavy soil textures results in these soils being slightly drought-prone and this coupled with minor workability restrictions places this land within grade 2

Grade 3

Subgrade 3a

3 3 A small area of subgrade 3a has been identified adjoining the Bradford Brook along the northern boundary of the site The associated soils are derived from the river terrace deposits and are very similar in nature to those described above for grade 2 However due to gravelly horizons below 45-65 cm the risk of drought is increased and moisture balance assessments indicate that a grading of 3a is appropriate

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SOURCE OF REFERENCE

BRITISH GEOLOGICAL SURVEY (1978) Solid and Drift Edition Geology Map Sheet 254 Henley on Thames (1 50 000 scale)

MAFF (1985) Agricultural Land Classification Wallingford Local Plan (RPG Ref 3303/ - /85)

MAFF (1988) Agricultural Land Classification in England and Wales Revised guidelines and criteria for grading the quality of agricultural land

METEOROLOGICAL OFFICE (1989) Climatological datasets for Agricultural land Classification