OSWESTRY URBAN AREA LOCAL PLAN

AGRICULTURAL LAND CLASSIFICATION

Report of Survey

1. INTRODUCTION

The site consists of five blocks of land (Areas 1, 2, 2A, 4 and 6) located on the periphery of Oswestry. Area 1 lies to the north east of Oswestry, with the B4580 forming its southern boundary and it is surrounded by agricultural land. Areas 2, 2A and 6 lie east of Oswestry. The B4579 forms the southern boundary of these areas and the A5 (T) forms the eastern boundary for Areas 2 and 2A. Agricultural land is found to the north and west of Area 2. A playing field forms the western boundary of Area 2A, with agricultural land found to the north. Area 6 is bounded by a minor road in the north, housing and a playing field in the west and agricultural land in the east. Area 4 lies south of Oswestry and is bounded by a minor road and track in the west, a railway line in the east and agricultural land to the north and south.

The site was surveyed in 1991 using the MAFF Revised Agricultural Land Classification System, with soils being augered to a depth of 100 cm at 100 m grid intersections. Additional profiles were described as necessary to determine land quality boundaries and several soil pits were dug to examine soil structure. Land quality ranges from grade 2 to sub-grade 3b.

2. CLIMATE

The grade of the land is determined by the most limiting factor present. The overall climate is considered first because it can have an overriding influence on restricting land to lower grades, despite other favourable conditions. The main parameters used in the assessment of the climatic limitations are the Average Annual Rainfall (AAR), as a measure of overall wetness, and the Accumulated Temperature above 0°C for the period January to June (ATO), as a measure of warmth. The figures for AAR and ATO indicate that for the majority of the survey area there is no climatic limitation, however, Area 1 is climatically borderline between grades 1 and 2.

3. SITE LIMITATIONS

The assessment of site factors is primarily concerned with the way topography influences the use of agricultural machinery and hence the cropping potential of the land. Area 1 is gently sloping between 117 m and 115 m. Areas 2, 2A and 6 are also gently sloping between 105 m and 110 m . Microrelief and gradient are limiting factors for a small area in the south of Area 6, where this area overlaps with 2A. Area 4 is almost level, at an altitude of 105 m.

4. SOIL LIMITATIONS

The soils in Area 1 and the majority of soils in Area 2 and 6 are derived from Boulder Clay. These soils include sandy silt loam or more typically medium clay loam/medium silty clay loam topsoils over medium clay loam/heavy clay loam subsoils with medium clay loam to clay at depth. In Area 2A and the south of Areas 2 and 6, the soils are underlain by sand and gravel and are typified by medium clay loam topsoils over medium clay loam subsoils, with medium clay

loam/heavy clay loam at depth. Stoniness is a limiting factor in the south of Area 6, where this area overlaps Area 2A, with stones larger than 2 cm in diameter exceeding 10% of the topsoil volume. Area 4 is underlain by Late Glacial Flood Gravels and the soils include medium clay loam/heavy silty clay loam topsoils over medium clay loam/heavy clay loam.

5. INTERACTIVE LIMITATIONS

The interactions between climate, site and soil determines whether a soil will be prone to wetness, droughtiness or erosion. The majority of soils on this site are medium to heavy textured and therefore not prone to drought. A soil's susceptibility to drought is measured by the amount of water the profile can hold (AP) in comparison to the potential soil moisture deficit for the area (MD). For this site the moisture deficit for wheat varied between 85-88 mm and for potatoes 71-74 mm.

Seasonal waterlogging affects soil workability and crop yields, hence wetness is an important parameter in the classification of land. It is measured by reference to climate particularly field capacity days, soil wetness and topsoil texture. The field capacity days for this site vary from 196 to 200 days. Some of the soils have gley morphology below 40 cm and do not have a slowly permeable layer within 80 cm of the surface. These soils fall into Wetness Class I. Other soils are gleyed within 40 cm and are slowly permeable below 53 cm, or alternatively, exhibit gley morphology within 70 cm and have a slowly permeable layer above 72 cm. These soils fall into Wetness Class III. Occasional profiles fall into Wetness Class II being gleyed within 40 cm, but having a slowly permeable layer below 80 cm.

6. LAND USE

At the time of survey the area was mainly under grass and cereals with some land left fallow.

7. AGRICULTURAL LAND CLASSIFICATION

Land quality ranges from grade 2 to sub-grade 3b.

7.1 GRADE 2

This grade is found in the south of Area 1 and is mapped in Areas 2, 2A and 6, accounting for 19.0 ha and 31.3% of the site. It includes medium clay loam topsoils, which typically overlie medium clay loam subsoils with heavy clay loam at depth. These soils fall into Wetness Class I with no evidence of gleying in the profile to at least 45 cms and the absence of a slowly permeable layer within 80 cm of the surface.

7.2 SUB-GRADE 3A

This sub-grade is mapped extensively to include 37.6 ha and 61.9% of the site. In the west of Area 6, part of Area 4 and in the north of Areas 2 and 6 the soils are too poorly drained for a higher grade showing distinct gleying in the profiles at depths below 30 cm and have slowly permeable layers below 55 cm. These soils are characterised by medium clay loam/medium silty clay loam topsoils over medium clay loam/heavy clay loam topsoils over heavy clay loam/clay at depth.

The areas of sub-grade 3A located in the north of Area 1, in the south of Area 2, where it overlaps with Area 2A, and part of Area 4 are also limited by soil

wetness. These soils include medium clay loam topsoils, which typically overlie medium clay loam subsoils with heavy clay loam/clay at depth. Gley morphology is present below 40 cm and the slowly permeable layer is within 72 cm of the surface. The area of sub-grade 3a land located in the south of Area 6, is more stony than typical, with stones larger than 2 cm in diameter exceeding 10% of the topsoil volume. Isolated profiles of grade 2 occur within the land mapped as sub-grade 3a, but these areas were too small to map separately at this scale.

7.3 SUB-GRADE 3B

This sub-grade occupies 3.5 ha and accounts for 5.8% of the site. Soil wetness is a limiting factor for the area of sub-grade 3b land found in the north of Area 4. The soils typically have heavy silty clay loam topsoils which usually pass into heavy clay loam subsoils. These soils show distinct gleying in the profiles at depths below 35 cm and have a slowly permeable layer below 55 cm, falling into Wetness Class III.

The small area of sub-grade 3b soils located in the south of Area 6, where it overlaps with Area 2A, is limited by both gradient and microrelief.

7.4 NON-AGRICULTURAL LAND AND WOODLAND

The remaining 0.6 ha and 1.0% of the survey area include a dwelling house with non-agricultural land and a small area of woodland.

OSWESTRY URBAN DISTRICT LOCAL PLAN

Addendum

1. INTRODUCTION

In order to complete the survey of land west of the A5 (sites 2, 2A, 6) the remaining portion, comprising 7.6 ha was surveyed in December 1994. The survey was carried out as a 'free' survey with six auger borings being made.

2. SOILS

The soils encountered were similar to those described for the remainder of the site with clay loam textures overlying clay loams and clays.

3. SUMMARY OF AGRICULTURAL LAND CLASSIFICATION GRADES

The following table gives the ALC grades for the whole of the area surveyed west of the A5.

Grade/Subgrade	Area (Ha)	% of survey area	% of agricultural land
2	21.3	47.6	48.2
3a	22.3	49.8	50.5
3b	0.6	1.3	1.3
Other land			
Woodland	0.5	1.1	
Urban	0.1	0.2	
Totals	44.8	100.0	100.0