REPORT OF THE MAFF AGRICULTURAL LAND CLASSIFICATION SURVEY RUGBY RADIO STATION

1. Summary:

The land has been classified following the Agricultural Land Classification of England and Wales - revised guidelines and criteria for grading the quality of agricultural land (MAFF, 1988). Of the site nearly 85% is classified as sub-grade 3b with 11% in Grade 2 and sub grade 3a. The remaining 4% consists of land classified as urban and agricultural buildings.

2. Climatic Limitations:

The main parameters used in the assessment of the climatic limitations are average annual rainfall (AAR), as a measure of overall wetness and accumulated temperature (ATO), as a measure of the relative warmth of the locality. The figures of AAR and ATO indicate that there are no climatic limitations on this site.

3. Site Limitations:

The assessment of site factors is primarily concerned at the way in which topography influences the use of agricultural machinery and hence the cropping potential of the land. There is a gradient limitation affecting the use of the land in the southern part of the site.

4. Soil Limitations:

The main soil properties which affect the cropping potential and management requirements of land are texture, structure, depth, stoniness and chemical fertility. These may act as limitations separately, in combination or through interactions with climate or site factors. The physical limitations which result from interactions between climate, site and soil are soil wetness, droughtiness, and erosion.

To achieve full yield potential a crop requires an adequate supply of soil moisture through the season. Droughtiness is most likely to be a significant limitation to crop growth in the areas with relatively low rainfall or high evapo-transpiration or where the soil holds only small reserves of moisture available to plant roots. The severity of the limitation in an area depends on the relationship between the soil properties and climatic factors and the moisture requirements of the crops grown. These relationships are complex and the degree of moisture stress varies from year to year according to the weather. In the ALC system the method used to assess the droughtiness provides an indication of the average droughtiness based on two reference crops, winter wheat and main crop potatoes. The method used to assess droughtiness takes account of crop rooting and foliar characteristics to obtain an estimate of the average soil moisture balance (MB) for the reference crops at a given location. The moisture balance is calculated on the basis of two parameters - the crop adjusted available water capacity of the soil profile and the moisture deficit. Reference will be made to droughtiness where it is a limiting factor in Section 7.

A soil wetness limitation exists where the soil water regime adversely affects plant growth or imposes restrictions on cultivations or grazing by livestock. The soil wetness assessment takes account of a climatic regime, the soil water regime and the texture of the top 25cm of the soil. Reference will be made to soil wetness where it is a limiting factor in Section 7.

5. Background Information

The underlying solid geology is mapped as Lias silts and clays (sheet 185, Northampton, scale 1:50,000) covered by deposits of alluvium and sand and gravel.

6. Agricultural Land Use:

At the time of the survey November 1991 and July 1992 the site was under grass with an area of orchard at Dollman Farm.

7. Agricultural Land Quality (Appendix 1):

Grade 2 - land in this grade is found close to Dollman Farm where soils of a sandy loam or sandy clay loam texture overlie sand at depth and are slightly stony in the subsoils. Droughtiness is the main limitation for agricultural use.

Sub grade 3a - land in this grade is found at Dollman Farm and Normandy Farm where the soil typically has a medium clay loam texture overlying clay at 50cm. The depth to the slowly permeable layer and observation of gleying indicate wetness class III, which in combination with a field capacity day figure of 157 results in a classification of sub grade 3a. The main limitation to the agricultural use of this land is wetness.

Sub grade 3b - land in this grade covers most of the site where the soil typically has a clay or heavy clay loam texture overlying clay to at least 60cm. The depth of the slowly permeable layer and observation of gleying indicate wetness class IV and sub grade 3b. Close to Normandy Farm a slope limitation is present where the gradient exceeds 7° limiting the land to sub grade 3b.

Urban - this includes a dwelling house at Dollman Farm, the wireless station and associated roads.

Resource Planning Team
Wolverhampton
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Agricultural Land Classification
Rugby Radio Station

Grade/ sub grade	Area	% of total area	% of agricultural area
2	2.3	2	2
3a	10.8	90	109
3b	96.1 (109.2)	85	88
Urban	3.4	3	-
Agricultural Buildings	1.1	1	-
Total	113.7	100	100