

## REPORT ON THE MAFF AGRICULTURAL LAND CLASSIFICATION SURVEY (1988) - WEEFORD ISLAND

### 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 land surveyed 30% is classified as grade 2 and 61% as sub-grade 3a. A further 3% is classified as non-agricultural land, which includes woodland and small pond area.

### 1. Introduction:

The survey work was carried out during the period 27th April - 8th May 1990. This coincided with a period of dry weather, thus making the ground hard and difficult to auger. A free auger boring survey was completed and soil pits were dug as required.

### 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 are no site limitations affecting the use of the land.

### 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 with climate or site are soil wetness, droughtiness and erosion. Soil wetness, which expresses the extent to which excess water imposes restrictions on crop growth, is the main interactive limitation affecting the grading on this site. Soil wetness is assessed in the field by identifying the depth to any slowly permeable soil horizon, defined in terms of soil texture, structure and gleying, and relating this to the texture of the top 25 cm. Combining the soil wetness class and the field capacity days (FCD) a land classification grade is arrived at. Reference will be made to this limitation in Section 7.

To achieve full yield potential a crop requires an adequate supply of soil moisture throughout the growing season. In the Agricultural Land Classification (ALC) system the method used to assess

droughtiness takes into account the crop adjusted available water capacity of the soil and the moisture deficit to give an estimate of the average soil moisture balance.

5. **Background information:**

The underlying geology is mapped as Keuper Sandstones (Sheet 154, Lichfield, Geological Survey).

6. **Agricultural Land Use:**

At the time of the survey the land was under potatoes, cereals and grass.

7. **Agricultural Land Quality (Appendix 1):**

Grade 2: the soil typically has a sandy loam texture overlying loamy sand and sand below 50 cm. The main limitation to the agricultural use of this land is soil droughtiness, as shown by the moisture balance, which fails to meet the requirements for Grade 1, but satisfies those for Grade 2.

Sub-Grade 3a: the soil typically has a loamy sand texture overlying sand below 40 cm. The main limitation to the agricultural use of this land is soil droughtiness. The resultant moisture balance does not satisfy the requirements of Grade 2 and therefore the land is classified as sub-grade 3a.

There are small areas of clay present within the sub-grade 3a land, where soil wetness is a limitation to the agricultural use. Where clay does occur observations of the depth to the slowly permeable layer in combination with the field capacity day figure of 155 indicates wetness class IV and with a topsoil texture of either loamy sand or sandy loam a classification of sub-grade 3a.

Other land: includes an area of woodland, ponds, agricultural buildings and a track.

**AGRICULTURAL LAND QUALITY - WEEFORD ISLAND**

Grade sub-grade	ha	as % of area	as % of agricultural land
2	33.4	36	37
3a	56.1	61	63
Other Land (buildings, woodland etc.)	2.2	3	
<b>TOTAL</b>	<b>91.7</b>		<b>89.5</b>