## AGRICULTURAL LAND CLASSIFICATION

## GROVE FARM, DRAYTON

Grove Farm was surveyed by the Resource Planning Team in April 1993 by means of a grid survey method. The site is located west of Drayton village and comprises two areas separated by the Drayton Road. The northern area is bounded to the north by a ponded stream and to the north east by housing. Agricultural buildings occupy the north east corner of the southern area and agricultural land surrounds the rest of the site. The total area of the site is 42ha.

At the time of survey the whole of the site was planted with rhubarb. A network of tar-sealed tracks services the site and has been mapped as non-agricultural land.

### Climate

The average annual rainfall in the vicinity of the site is 695mm. The accumulated temperature above 0°C for the period January to June is 1383 day°C. There is no overall climatic limitation to the use of the site.

### Site

The highest point on the site at 145m is Barrow Hill in the south east corner. The hill slopes gently down to a saddle and the land then falls gently to the north. Approximately mid-way across this area there is an increase in gradient. The gradient is not severe enough to limit the use of machinery but evidence of soil erosion was observed. At the northern end of this area the land is almost level.

On the northern area of the site the general relief is irregular but with an overall slope trending to the north. Shutt Hill is the highest point in this area and slopes irregularly, with gently to moderately severe gradients to the farm track. Below the track the land is gently undulating, becoming level towards the northern boundary. On the western side of this area is a low hill with slopes steep enough to severely restrict the use of agricultural machinery. North of here the land slopes gently to the boundary. Gradient is thus a limitation to agriculture over parts of the site.

### Geology and Soil

The site is underlain by Lower Keuper Sandstone over which have developed dominantly sandy textured soils of the Bromsgrove Series. The soils are predominantly fine sandy loams with loamy fine sand and fine sand at depth. In the northern portion of the site occasional pockets of clay were found in the subsoil.

Clay subsoils were found to occur on two low ridges north of Shutt Hill and on the saddle below Barrow Hill. In these areas soil wetness is a limitation to agricultural usage.

Two minor areas occurring on the south western boundary of the site were found to have stony topsoils. The percentage of stones occurring in the topsoil would limit the use of agricultural machinery.

Elsewhere on the site the soils do not provide any limitations to agricultural use.

***Irrigation***

Information on irrigation at the site was provided by the National Rivers Authority. The landowner has a licence to extract 24.3 million gallons per year between March and October, with a maximum of 540,000 gallons per day. The licence covers a command area of approximately 57.5 ha, which is greater than the area surveyed. Water is extracted from a ponded stream at the north end of the site and applied using a rain gun.

**Agricultural Land Classification**

The site has been surveyed and mapped at a scale of 1:10,000 using a sampling density of 1 per hectare. Enlargements of the map should not be regarded as accurate.

**Grade 1**

Covering 31.5 ha this is the most extensive grade on the site. The soils are deep fine sandy loams with loamy fine sand and fine sand at depth. Occasionally pockets of clay are found in the subsoil particularly on the western side of the northern portion.

Some evidence of soil erosion was noted but this was not regarded as a major hazard and could be mostly avoided by planting along the contour.

**Grade 2**

This grade covers 1.6 ha and is restricted to two areas on the western boundary of the southern portion of the site. The soils are similar to those of grade 1 however surface stones provide a limitation to agriculture.

**Grade 3a**

This grade covers 2.6 ha over two areas. At the southern most end of the site an area of clay underlies a sandy loam topsoil. The clay forms a slowly permeable layer, restricting subsoil drainage. Hence wetness is a limitation to agricultural use.

Within the northern portion of the site an area of grade 3a has been mapped on soils varying in texture; sands and clays both occur. On the sands the limitation to agriculture is drought, while on the clays the limitation is wetness.

**Grade 3b**

There are three areas on the site classed as 3b with a total area of 1.3ha. In each of the areas the soils are similar to those in grade 1, however there are gradients of over 7° which would limit the use of agricultural machinery.

**Grade 4**

This grade covers only 0.7ha and is restricted to the slopes of a low hill on the north west side of the site. The gradient is major limitation to agricultural use.

**Non-Agricultural Land**

The area mapped as non-agricultural land is mostly tar sealed farm tracks around the site. Storage sheds and a park for farm machinery occupy a corner of the site and a small area on the northern boundary has been used as a tip for garden refuse.

| Grades | % of total | Area (ha) | % Agricultural Land |
|---|---|---|---|
| 1 | 74.53 | 31.49 | 83.6 |
| 2 | 3.76 | 1.59 | 4.2 |
| 3a | 6.11 | 2.58 | 6.9 |
| 3b | 3.12 | 1.32 | 3.5 |
| 4 | 1.62 | 0.68 | 1.8 |
| Non agricultural | 10.86 | 4.59 | |
| Total | | 42.25 | |

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