AGRICULTURAL LAND CLASSIFICATION

Peafield Farm (Robin Hood Theme Park), Nottinghamshire

The site at Peafield Farm and Warren Farm near Mansfield was surveyed in detail by the Resource Planning Group in February 1989. It is situated on the north eastern edge of Mansfield between the A6075 and New Hill Lane, with a small area north of the A6075. To the east the site is bounded by woodland and to the west, in part, by housing. The River Maun runs across the centre of the site, which covers about 215 ha.

Most of the land was in agricultural use at the time of survey, with potatoes, sugar beet, oilseed rape and temporary grass. Land mapped as non-agricultural includes wood and scrubland and the track and banks running along the northern bank of the river.

Climate

Average annual rainfall in the vicinity of the site is about 688 mm. The accumulated temperature for the period January to June is 1337 day °C so there is no overall climate limitation in this area although it is close to the Grade1/2 boundary.

The growing season extends to about 240 days from late March to late November and the site has a climatic regime of 150 field capacity days.

At the local scale the higher parts of the site, notably on either side of the A6075 in the south, are exposed and cold dry north easterly winds in spring are occasionally responsible for local erosion of the sandy soils particularly in late March. At the time of survey wind movement of sand was evident and part of one winter oilseed rape crop had been lost to wind erosion, requiring reseeding.

Site Factors

Site altitude ranges from 70 m along the River Maun to 100 m along New Hill Lane and 110 m on the A6075 north of Peafield Farm. From ridges to the north and south of Peafield Farm the land slopes down gently or moderately to the north and south. Immediately north of and to the south of the river topography is more undulating and east of south of Warren Farm there are steep

sided dry valleys with slopes of up to 11°. Adjacent to the river there are steeply sloping and irregular banks up to 25° in places. In these areas gradient is a major factor limiting land use.

Land adjacent to the River Maun is subject to flooding, particularly in the stretch between Warren Farm and the eastern boundry of the site.

Geology and Soils

Geology in this area comprises Bunter Pebble Beds and Lower Mottled sandstones with a narrow band of Alluvium alongside the River. The soils derived from these parent materials are mainly reddish brown loamy sands over sands. In places the topsoils are slightly stony and stony layers may be encountered within the profile at 30 - 60 cm depth. Soil texture, droughtiness and stoniness are all factors limiting the use of this land.

Irrigation is current practice in this area particularly for responsive and higher value crops such as potatoes and sugar beet, and thus irrigation has been taken into account in the ALC grading.

AGRICULTURAL LAND CLASSIFICATION

Grade 2

Areas of Grade 2 land have been mapped in the north of the site, between Green Lane and the River Maun and between Warren Farm and New Hill Lane. The soils are stoneless or only very slightly stony and have deep loamy sand to about 40 cm over sand and occasionally loamy fine sand or fine sand. The major limiting factor is droughtiness and most of these soils are inherenetly in the middle of Grade 3a, but irrigation can significantly enhance the potential of agricultural land, so the land has been upgraded to Grade 2.

Grade 3a

Most of the site has been mapped as Grade 3a. Soils are slightly stony loamy sands over sands below about 30cms. Droughtiness restricts these soils to the bottom of Grade 3a and Grade 3b in places, but with irrigation they are considered as good Grade 3a soils. Within the areas shown as 3a there are isolated better

profiels of Grade 2, notably between Green Lane and the River Maun, but because of a pattern limitation they have not been mapped separately.

Grade 3b

Land has been mapped as Grade 3b alongside the river where soil wetness and flooding are limiting. To the east and south of Warren Farm gradients of more than 7° restrict the land to this Grade.

Grade 4

Grade 4 land occurs where slopes exceed 11° and alongside the river a combination of micro-relief and gradient restict land to this Grade.

Grade 5

A small area of steeply sloping land (25° - 30°) has been mapped as Grade 5.

Area of Land in each Grade

	hectares	% of total area	% of agricultural area
Grade 2	34.5	16	17
Grade 3a	135.6	63	66
Grade 3b	28.2	13	14
Grade 4	6.7	3	3
Grade 5	0.5	<1	<1
N.A.	8.2	4	-
Farm Buildings	1.6	1	-
Total Agricultural Area	206	-	100
TOTAL SITE AREA	215.3	100	