

AGRICULTURAL LAND CLASSIFICATION REPORT

PROPOSED BURLEY-IN-WHARFEDALE BYPASS

INTRODUCTION

The proposed route runs to the north of Burley-in-Wharfedale between the village and the River Wharfe (Grid Reference SE 180460 to SE 159471). The corridor surveyed covers an area of 24 hectares of which 19.3 hectares are currently in agricultural use.

Survey work was first carried out in March 1987 when soils were examined by hand auger borings in a 75 m corridor along the route. Further field surveys were carried out on the eastern extension along the Otley Road in October 1990 when a somewhat wider strip of land was examined. Overall soils were examined at a density of about 4 borings per hectare.

LAND USE

The land currently in agricultural use is under a mixture of grass and arable cultivation. There is an area of urban land use from Burley Hall to the Vicarage. To the west of this area there are two recreation fields.

CLIMATE

Mean annual rainfall is approximately 809 mm. Accumulated temperature above 0°C between January and June is 1347 day °C and the land is at field capacity for 205 days each year on average. The rainfall and temperature figures impose an overall climatic restriction on ALC of Grade 2.

RELIEF

The route lies at an altitude of approximately 60-70 m aod. The majority of the site is level or gently sloping, except north of Middle Lodge where the land becomes more undulating. Here there are also a few moderately steep slopes.

SOILS

In the central part of the route topsoils consist typically of sandy clay loam or medium clay loam with a thickness of between 20 and 25 cm. Subsoils in these areas are generally similar in texture although some lighter and heavier profiles also occur (sandy loams and heavy clay loams for example).

Heavier soils are found either side of Leather Bank where topsoils are predominantly of medium and heavy clay loam over slowly permeable heavy clay loam or clay subsoils. Here topsoils depths are also generally between 20 and 25 cm.

Between Burley Hall and the Otley Road soils are lighter. Topsoil textures consist usually of sandy loam or medium clay loam. Depth is again between 20 and 25 cm. Subsoil textures are generally also of sandy loam. Immediately to the south east of Burley Hall there is an area of somewhat heavier but variable soil. Topsoils in this area are generally between 20 and 25 cm in depth and consist typically of sandy loam or sandy clay loam over similar subsoils. Throughout the length of the route soils are slightly stony, but this does not affect land classification grades.

DRAINAGE

Drainage conditions are variable along the route. The worst conditions are found in a small area to the south east of Burley Hall and on either side of Leather Bank where drainage is generally poor and soils fall within Wetness Class IV. Better drained land occurs around Greystone Manor Lodge and between Burley Hall and Otley Road. Alongside the river east of Burley Hall soils are well or moderately well drained (Wetness Class I or II), but are subject to occasional winter flooding. The flood risk is great enough to affect ALC grade, especially near Greengate House.

AGRICULTURAL LAND CLASSIFICATION

The area covered by each grade within the survey corridor is shown in hectares and as a percentage on the accompanying ALC map.

GRADE 2

In the areas falling within grade 2 medium and light topsoils overlie similar subsoils at about 20 to 25 cm. These areas are predominantly well and moderately well drained (Wetness Classes I and II) and are subject only to minor climatic, drainage and flooding limitations.

SUBGRADE 3a

The subgrade 3a area in the western part of the route consists of medium clay loam topsoils overlying similar subsoils at between about 20 and 25 cm. Soils here are generally imperfectly drained (Wetness Class III) and this is the factor limiting this area to subgrade 3a.

The area within subgrade 3a around Middle Lodge has lighter soils with sandy loam topsoils overlying light subsoils at about 15-125 cm depth. Drainage however is imperfect and this is the main limiting factor. Near Greengate House a small area is limited to Subgrade 3a by the winter flooding risk.

SUBGRADE 3b

The land classed as subgrade 3b, especially around Leather Bank, generally contains medium or heavy clay loam topsoils over heavy clay loam or clay subsoils at a depth of between 20 and 25 cm. These areas are poorly drained (Wetness Class IV) and limited to Subgrade 3b by wetness and workability problems.

GRADE 4

This small area near Burley Hall is limited to Grade 4 by gradients of 23°.

RPG
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