AGRICULTURAL LAND CLASSIFICATION

Land at Whickham, Gateshead

ADAS
Leeds Regional Office

January 1992
File Ref: 2FCS 5707
Project No: 135/91

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LAND AT WICKHAM, GATESHEAD, TYNE AND WEAR

1. INTRODUCTION

The site is located around National Grid Reference NZ222601 and lies about 5 km south-west of Gateshead town centre. It covers a total area of 19.6 ha. Field work was carried out in January 1992 when soils were examined by hand auger borings to a depth of 100cm at 100m intervals pre-determined by the National Grid. Further borings were made, where necessary, to refine grade boundaries.

1.1 Land Use

The entire site is in arable production and, at the time of the survey, the area to the north of the disused railway line was sown with winter cereals. The area to the south of the line was sown with oilseed rape.

1.2 Climate and Relief

Average Annual Rainfall on the site is approximately 700mm. The accumulated temperature above 0°C (January to June) is 1233 day °C and the site is at field capacity for 174 days a year. The temperature and rainfall figures indicate that there is an overall climatic limitation of Grade 2 on the site. Site altitude varies from 95m in the north-west to 60m in the east. Slopes are moderate to severe (generally 2 - 10°) and slopes of greater than 7° limit parts of the east of the site to subgrade 3b.

1.3 Geology, Soils and Drainage

The site is underlain by carboniferous coal measures and covered by deposits of boulder clay (to the north) and glacial sand (to the south of the disused railway line). The soils to the north of the disused railway generally consist of medium clay loam topsoils overlying medium clay loam, sandy clay loam and heavy clay loam subsoils. These soils

are imperfectly to poorly drained and fall in Wetness Classes III and IV. The soils to the south of the railway consist of medium sandy loam or medium clay loam topsoils overlying medium sandy loam or course sandy loam subsoils. These soils are well-drained and fall in Wetness Class I.

All of the soils on the site are slightly to moderately stony with 5 - 12% small to medium sized hard stones and sandstones.

2. AGRICULTURAL LAND CLASSIFICATION

Subgrade 3a (7.80ha or 39.8% of the site area).

Land in this subgrade covers southern parts of the site and a small area in the north-east. To the north of the disused railway soils consist of medium clay loam topsoils overlying medium clay loam or sandy clay loam subsoils. Heavy clay loam sometimes occurs at depth and slowly permeable layers generally occur at around 60cm depth. In these soils, wetness is the main factor limiting A L C grade. In the north-western corner of the site lies a small area of subgrade 3a land consisting of a medium clay loam topsoil overlying a loamy coarse sand subsoil. This soil is moderately stony, with around 12% small to medium hard stones in the topsoil and soil stoniness is the principal limiting factor on A L C grade.

To the south of the disused railway soils consist of medium clay loam or medium sandy loam topsoils overlying medium or coarse sandy loam subsoils. These soils are well drained but slopes vary from 2° to 7° and slope angle and direction often change greatly over short distances. This microrelief could limit the use of certain types of agricultural machinery and for this reason the land has been limited to subgrade 3a.

Subgrade 3b (11.80ha or 60.2% of the site area).

Subgrade 3b land covers the north of the site. In the north-east soils consist of medium clay loam topsoils overlying heavy clay loam or clay subsoils. Slowly permeable layers begin at around 40cm depth and the soils are poorly drained, falling in Wetness Clay IV. Soil wetness is, thus, the limiting factor on A L C grade.

In the north-west of the site soils are medium textured throughout the profile in most cases, although heavy clay loam occurs at depth in places. Slowly permeable layers are generally absent or found at depths below 50cm making these soils moderately well to imperfectly drained, (Wetness Classes II and III).

Slopes vary from around 4° to 10° and gradient is the limiting factor on land in this part of the site. A small band of subgrade 3a land occurs in a flatter area of land running from north to south across this part of the site, but has been included in the subgrade 3b land due to it s small area and the severe slopes to the east and west.

Resource Planning Group
ADAS
Leeds Regional Office
January 1992