# AGRICULTURAL LAND CLASSIFICATION

Field 3661
Wetheral, Carlisle

Proposed Residential Development
Planning Appeal

2FCS 4326
April 1989

Leeds Regional Office

lds.rpg5.Wetheral

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# AGRICULTURAL LAND CLASSIFICATION REPORT ON FIELD 3661, WETHERAL, CARLISLE

## INTRODUCTION

The site (NGR NY46365461) is located on the north western edge of Wetheral between the railway and the Scotby road.

It covers an area of 1.5 hectares (3.83 acres) all of which is under permanent grass.

The site was originally surveyed in October 1988 as part of a larger survey covering several possible development sites in the village. This survey was not on a scale large enough to give very detailed information on individual fields. It was also carried out using the earlier Agricultural Land Classification system described in Technical Reports No 11 (1966) and 11/1 (1976). This was superseded, in January 1989, by the 'Revised guidelines and criteria for grading the quality of agricultural land' which allows more scientific assessments to be made by considering the interaction of soil and climate on land grade.

In order to provide more detail, using the revised system, an additional survey of the site was carried out in April 1989.. Soils were examined by hand auger borings and inspection pits at points predetermined by the National Grid at a density of 4 borings per hectare. This gave a total of 8 observations in addition to the three made in the field in October 1988.

## CLIMATE AND RELIEF

Mean annual rainfall is 868 m (34.1 inches). Accumulated temperature above $0^{o}C$ between January and June is 1316 day $^{o}C$ and the land is at field capacity for 216 days on average each year. These characteristics result in an overall climatic limitation of Grade 2.

The field varies from level to gently sloping with an overall fall to the north east. Average altitude is about 60 m (197 ft) a.o.d.

## Geology and Soils

Soils are developed on glacial and post glacial drift which forms a cover of variable thickness over the underlying red Triassic sandstones. The drift consists of reddish fine loamy boulder clay with superficial layers, up to 80 cm in thickness, of lighter textured material derived probably from adjoining slightly higher sand deposits. The underlying Triassic sandstone does not occur within one metre of the surface on the site.

Topsoils consist of well structured fine or medium sandy loam about 35 cm in thickness over upper subsoils of moderately structured gleyed sandy loam. Below this, at depths varying from 45 to 80 cm from the surface, is reddish slowly permeable sandy clay loam or medium clay loam with a weakly developed coarse angular blocky structure.

## Drainage

Slowly permeable subsoil horizons occur on the site at an average depth of 64 cm. This places most soils, in an area with 216 field capacity days, within Wetness Class III. Soil profiles which meet the criteria for Wetness Class IV (ie slowly permeable horizon at less than 58 cm depth) also occur, but these are not widespread.

AGRICULTURAL LAND CLASSIFICATION

Subgrade 3a (1.5 ha)

This is the dominant subgrade on the site. Topsoils and upper subsoils of sandy loam overlie reddish slowly permeable sandy clay loam at an average depth of 64 cm. Soils of this type meet the criteria for Wetness Class III and thus fall, in this area, within Subgrade 3a. Profiles which meet the requirements of Subgrade 3b also occur, but these are not widespread enough to separate as distinct areas. Overall the site meets the definition of subgrade 3a land, ie 'land capable of consistently producing moderate to high yield of a narrow range of arable crops, especially cereals, or moderate yields of a wide range of crops including cereals, grass, oilseed rape, potatoes, sugar beet and the less demanding horticultural crops'. The land is similar to the adjoining area surveyed in October 1988 on which a wide range of vegetable crops has been grown for many years.

Reference

Revised guidelines and criteria for grading the quality of agricultural land. MAFF (1988).

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