

AGRICULTURAL LAND CLASSIFICATION

HOLMEWOOD LAND, ARMTHORPE

Proposed Industrial, Retail and
Residential Development

ADAS
LEEDS REGIONAL OFFICE

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1. AGRICULTURAL LAND CLASSIFICATION

AGRICULTURAL LAND CLASSIFICATION REPORT ON LAND AT HOLMEWOOD LANE,
ARMTHORPE (NGR SE640 050)

1. INTRODUCTION AND GENERAL SITE CHARACTERISTICS

1.1 LOCATION AND SURVEY

METHOD

The site is located at Armthorpe approximately 7½ km North East of Doncaster City Centre and is bounded by the A630, M18, Holmewood Lane and West Moor Lane. It covers 91.2 hectares all of which is in agricultural use.

Survey work was carried out in August 1989 when soils were examined by hand auger borings at 100 metre intervals pre-determined by the National Grid. Soil profile pits were also dug at representative locations to assess topsoil and subsoil stone contents and soil structural characteristics.

All assessments of land quality were made using the methods described in "Agricultural Land Classification of England and Wales: Revised Guidelines and Criteria for Grading the Quality of Agricultural Land". (MAFF 1988).

1.2 LAND USE

The majority of the site was in cereal production during the 1988-89 season. Some areas of heavier land along the southern site edge were under oil seed rape.

1.3 CLIMATE AND RELIEF

Mean Annual Rainfall (AAR) around Armthorpe is approximately 588 mm. Accumulated temperature above 0°C between January and June (ATO) is 1413 day degree C and the field capacity period is about 117 days.

These factors indicate no overall climatic restriction on ALC grade, although summer moisture deficits of 112 mm for winter wheat and 104 mm for potatoes mean that soil droughtiness will be moderately limiting on coarse loamy or sandy soils and slightly limiting on the fine loamy and clayey soils that predominate on the site. Altitude varies between 1 and 10 metres above Ordnance Datum and the relief is level to very gently undulating. Slopes rarely exceed 1 or 2 degrees and, therefore do not restrict the use of agricultural machinery.

1.4 GEOLOGY AND SOILS

Soils have developed over non-calcareous glacio-fluvial drift overlying Permo-Triassic Bunter Sandstone at depth.

Of these deposits, sands and gravels form the predominant cover. Soils on these are light and easily worked but have a moderate drought limitation in most years, particularly between mid summer and early autumn.

South of Holme Wood Lane and adjacent to the A630 the soils have developed over clay drift. These have gleyed and slowly permeable clay subsoils although localised deposition and mixing from adjacent sands often give rise to appreciably lighter coarse to fine loamy topsoils.

2. AGRICULTURAL LAND CLASSIFICATION GRADES

The ALC grades occurring on this site are as follows:

| GRADE | HECTARES | PERCENT OF TOTAL SITE AREA |
|--------------|------------|-------------------------------|
| 2 | 2.4 | 2.6 |
| 3a | 20.7 | 22.7 |
| 3b | 68.1 | 74.7 |
| Total | <hr/> 91.2 | <hr/> 100% |

2.1 GRADE 2

This occurs along the extreme southern boundary. The soils fall within wetness Class II and consist of sandy loam or sandy clay loam topsoils over similar upper subsoils that pass into slowly permeable clay at depth.

Slight soil droughtiness forms the main grading limitation, although heavier topsoil variants in the grade can also be limited by wetness and workability problems.

2.2 GRADE 3a

Most land in this subgrade occurs south of Holme Wood Lane or adjacent to the A630 where soils consist of sandy clay loam or medium clay loam topsoils over gleyed and slowly permeable clay. These profiles fall within wetness Class III and are limited to the grade by a combination of soil wetness and workability problems.

A small area of subgrade 3a land also occurs near the western boundary. The soils fall within wetness classes I or II and consist of sandy loam topsoils over similar or slightly lighter, subsoils that contain variable clay loam lenses. Soil droughtiness, which is typically limiting for both winter wheat and potatoes, forms the main grading limitation.

2.3 GRADE 3b

Subgrade 3b land predominates. Soils fall within wetness class I and consist of loamy medium sand topsoils over subsoils which gradually pass into medium sand at variable depths. Soil droughtiness is limiting for both winter wheat and potatoes and forms the main limitation on ALC grade.

Resource Planning Group
Leeds RO

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