

AGRICULTURAL LAND CLASSIFICATION REPORT

FLANSHAW, WAKEFIELD, WEST YORKSHIRE

ADAS
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AGRICULTURAL LAND CLASSIFICATION REPORT ON LAND AT
FLANSHAW, WAKEFIELD, WEST YORKSHIRE

1.1 INTRODUCTION

The site is located around National Grid Reference SE305205 adjoining the A638 on the western outskirts of Wakefield within 1 km of junction 40 on the M1 motorway. It covers an area of 13.6 hectares all of which is in agricultural use.

Survey work was carried out in March 1989 when soils were examined by hand auger borings to a depth of one metre. Auger borings were made at points predetermined by the National Grid at a density of one boring per hectare. Additional borings were made to check upon and refine grade boundaries. Profile pits were dug to collect data on soil morphology and obtain samples for laboratory analysis.

Land quality assessment was made using the revised guidelines published by MAFF in 1988.

1.2 CLIMATE AND RELIEF

Average annual rainfall is approximately 668 mm and the accumulated temperature above 0°C (January to June) is 1341 day °C. The site is at field capacity for 159 days per year. There is thus no overall climatic limitation on ALC grade.

The site has a northerly aspect, with the highest land occurring on the southern boundary along the A638 Wakefield-Dewsbury Road. This area is gently undulating but further north, away from the road, slopes are steeper though never exceeding 11°.

Average altitude is 70 m aod.

1.3 GEOLOGY AND SOILS

In common with many parts of West and South Yorkshire drift cover is thin or absent and soils are formed largely on interbedded Coal Measure Sandstones and shales.

Sandstone is common in the north western part of the site. It is fine grained and weathers to produce fine sandy loam, sandy clay loam or medium clay loam top soils over similar or slightly heavier subsoils. Thin shaly bands within the sandstone prevent rapid water movement and subsoils are usually mottled and slowly permeable below about 50 cm depth. Soils of this type fall within Wetness Class III in this area.

In the southern and eastern parts of the site where the underlying material is solid shale, topsoils are of heavy clay loam over clayey slowly permeable subsoils. The slowly permeable subsoil occurs usually within 30 cm of the surface placing these soils in Wetness Class IV.

A disturbed area between the northern and eastern boundaries contains heavy textured material contaminated with glass, cinders, coal and other refuse. These soils which also meet the criteria for Wetness Class IV are easily identified by very poor crop establishment.

1.4 LAND USE

All the land is in arable use except for a small area of rough grassland near the warehouses at the north western end of the site.

1.5 AGRICULTURAL LAND CLASSIFICATION

Grade	Area (hectares)	% of total area
3a	5.6	41.2%
3b	6.3	46.3%
4	1.7	12.5%
Total	13.6	100

1.5.1 Subgrade 3a

Land of this subgrade occurs on the western side of the site. It consists of sandy loam, sandy clay loam and medium clay loam topsoils over similar upper subsoils. Below 50 cm depth is a slowly permeable, lower subsoil sometimes over thinly bedded shaly fine sandstone.

These soils fall within Wetness Class III and can be placed no higher than subgrade 3a in areas with more than 150 field capacity days.

1.5.2 Subgrade 3b

This subgrade contains soils with a medium or heavy clay loam topsoil over a slowly permeable, clayey subsoil which occurs at about 30 cm depth. These soils meet the criteria for Wetness Class IV and fall within subgrade 3b because of wetness and workability problems. Also included in this subgrade is land containing up to 35% of stones larger than 2 cm, or 20% larger than 6 cm, in the top 25 cm of soil.

1.5.3 Grade 4

Grade 4 land is restricted to the disturbed compacted area adjoining the northern and eastern boundaries of the site. Top and subsoils are severely compacted and mixed and have been severely contaminated with coal, cinders, glass and other refuse. Chemical analyses of this soil indicate unacceptably high levels of zinc copper and lead in both top and subsoil. The wetness and low fertility are reflected in much poorer crop establishment than on the surrounding subgrade 3b land. The high heavy metal levels also make this land unsuitable for livestock. For these reasons this area has been limited to Grade 4.

Reference

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

Resource Planning Group
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