

**AGRICULTURAL LAND CLASSIFICATION
ALDBOROUGH GATE, BOROUGHBIDGE
NORTH YORKSHIRE
PROPOSED MOTORWAY SERVICE AREA**

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**ADAS
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1. AGRICULTURAL LAND CLASSIFICATION

SUMMARY

A detailed Agricultural Land Classification (ALC) survey of 18.7ha of land at Aldborough Gate, Boroughbridge, was carried out in three stages: The area immediately south of the A1(M)/A6055 junction was surveyed in 1990 in relation to the then proposed A1(M), most of the area south of Stump Cross Farm was surveyed in August 1993, and the remaining areas were surveyed in November 1995. A small area of land adjacent to the west of the existing A1 trunk road will be lost to the new A1(M) motorway which is currently under construction. However, until construction is complete and new O.S. base maps are produced the extent of this area is uncertain.

At the time of the most recent survey 97% of the site was in agricultural use and 14.2ha of this falls in Grade 2. The soils consist of sandy loam topsoils and subsoils, with loamy sand at depth in some places and gleyed and slowly permeable sandy clay loam below 40cm depth in others. Very slight soil droughtiness or soil wetness provide the limitation on ALC grade and, although some soils meet the requirements for Grade 1, it is not possible to map these together as a separate unit.

3.2ha of Subgrade 3a land occurs on the site. To the west of the A1(M) the soils are imperfectly drained, with medium silty clay loam or sandy clay loam topsoils over sometimes gleyed sandy clay loam upper subsoils and gleyed and slowly permeable heavy clay loam lower subsoils. Soil wetness limits this land to Subgrade 3a. To the east of the A1(M) the soils are well drained, with sandy loam or loamy sand topsoils overlying loamy sand subsoils. In this case, soil droughtiness is the factor limiting the ALC grade.

The remainder of the agricultural land on the site (0.8ha) falls in Subgrade 3b. Generally the soils are poorly drained, with medium clay loam topsoils over gleyed and slowly permeable medium or heavy clay loam subsoils. Again, soil wetness is the factor which limits the ALC grade

Other land on the site consists of Urban land (0.5ha) where the A1(M) is being constructed.

AGRICULTURAL LAND CLASSIFICATION REPORT ON LAND AT ALDBOROUGH
GATE, BOROUGHBIDGE (PROPOSED MOTORWAY SERVICE AREA)

1. INTRODUCTION AND SITE CHARACTERISTICS

1.1 Location and Survey Methods

This site lies approximately 1.5km south of Boroughbridge, on both sides of the new A1(M). Survey work was carried out in three stages - the land immediately south of the A1(M)/A6055 junction was surveyed in 1990, most of the land south of Stump Cross Farm in August 1993, and the remaining areas were surveyed in November 1995. The total site area is 18.7ha. Survey work involved examining the soils by hand auger borings at 100m intervals predetermined by the National Grid, and additional borings were made where necessary to refine grade boundaries. In addition, three soil pits were dug to allow the assessment of soil stoniness and subsoil structure. The land quality was assessed 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 and Relief

At the time of the most recent survey 97% of the site was in agricultural use (under winter cereals or permanent grass) and 3% consisted of Urban land.

Site altitude varies from 28m AOD in the west to 35m AOD in the east. The land is level to gently sloping (0-2°) with a northerly or north-westerly aspect.

1.3 Climate

| | |
|---|---------------|
| Grid Reference | : SE397 653 |
| Altitude (m) | : 35 |
| Accumulated Temperature above 0°C (January - June) | : 1362 day °C |
| Average Annual Rainfall (mm) | : 639 |
| Climatic Grade | : 1 |
| Field Capacity Days | : 149 |
| Moisture Deficit (mm) Wheat | : 103 |
| Moisture Deficit (mm) Potatoes | : 94 |

1.4 Geology, Soils and Drainage

The entire site is underlain by Triassic Sherwood Sandstone, over which lie deep deposits of till or, in part of the north-west, a small pocket of glacial sand and gravel.

Where light-textured drift occurs, the soils are well drained (Wetness Class I), with sandy loam or sandy silt loam topsoils over sandy loam or loamy sand subsoils. In other areas the soils (especially the subsoils) tend to be medium textured and the profiles are moderately well to imperfectly drained, falling in Wetness Classes II and III. In these cases sandy loam, sandy clay loam or medium clay loam topsoils overlie sandy clay loam or medium clay loam subsoils, which sometimes pass into heavy clay loam at depth.

One small area of land in the south-east of the site is poorly drained (Wetness Class IV) and consists of medium clay loam topsoils directly overlying slowly permeable medium clay loam or heavy clay loam.

The soils on this site have been mapped as Wighill Series (over most of the site) and Wick Series (north of Aldborough Gate) by the Soil Survey and Land Research Centre.

2. AGRICULTURAL LAND CLASSIFICATION

The ALC grades occurring on this site are as follows:

| <u>Grade/Subgrade</u> | <u>Hectares</u> | <u>Percentage of Total Area</u> |
|------------------------|-----------------|---------------------------------|
| 1 | | |
| 2 | 14.2 | 75.9 |
| 3a | 3.2 | 17.1 |
| 3b | 0.8 | 4.3 |
| 4 | | |
| 5 | | |
| (Sub total) | (18.2) | (97.3) |
| Urban | 0.5 | 2.7 |
| Non Agricultural | | |
| Woodland | | |
| Agricultural Buildings | | |
| Open Water | | |
| Land not surveyed | | |
| (Sub total) | (0.5) | (2.7) |
| | — | — |
| TOTAL | 18.7 | 100 |
| | — | — |

2.1 Grade 2

Approximately 76% of the site falls in Grade 2. The soils consist of very slightly stony light-textured topsoils (typically fine or medium sandy loams) over very slightly stony fine sandy loam or medium sandy loam subsoils. In some areas gleyed and slowly permeable sandy clay loam subsoils occur at between 40cm and 70cm depth (particularly in the north-east of the site) whilst in others loamy sand occurs at depth. The profiles vary between well drained and imperfectly drained (Wetness Classes I to III) depending on the depth to gleying and slowly permeable layer, if present. The ALC grade of this land is limited by either very slight soil droughtiness or very slight soil wetness restrictions depending on the subsoil type and, although some profiles meet the requirements for Grade 1, these cannot be accurately mapped together as a separate unit.

2.2 Subgrade 3a

Two areas of Subgrade 3a land occur, one to the east and one to the west of the A1(M). To the east of this road the profiles are imperfectly drained, falling in Wetness Class III, with medium silty clay loam or sandy clay loam topsoils overlying sandy clay loam upper subsoils (which are sometimes gleyed) and heavy clay loam lower subsoils (which are both gleyed and slowly permeable) in most cases. Soil wetness limits this land to Subgrade 3a.

To the west of the A1(M) the soils consist of sandy loam or loamy sand topsoils overlying loamy sand subsoils. Although well drained (Wetness Class I) these soils are moderately droughty and it is this factor which limits the ALC grade.

2.3 Subgrade 3b

One small area of Subgrade 3b land occurs. Generally the soils are poorly drained (Wetness Class IV), with medium clay loam topsoils overlying gleyed and slowly permeable medium clay loam or heavy clay loam subsoils. Soil wetness is the factor restricting this area to Subgrade 3b.

2.4 Urban

Urban land consists of an area west of the existing A1(T) which has been affected by its upgrading to motorway standard.

MAP