

AGRICULTURAL LAND CLASSIFICATION
MIDDLESBOROUGH LOCAL PLAN
NUNTHORPE HALL, CLEVELAND

SEPTEMBER 1992

ADAS
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MIDDLESBOROUGH LOCAL PLAN

SITE AT NUNTHORPE HALL

SUMMARY

Land covering a total of 324 ha. was surveyed of which 256 ha. is agricultural land.

Over 87% of the agricultural land falls within Subgrade 3b. Typically profiles are poorly drained (Wetness Class IV) with a medium-textured topsoil overlying a heavy-textured subsoil. This land is limited to Subgrade 3b by soil wetness and land workability restrictions.

Three separate areas of Subgrade 3a land (totalling 5.4 ha) occur on the site. Generally a medium-textured topsoil and upper subsoil overlies a heavy-textured subsoil. Profiles are imperfectly drained (Wetness Class III) and the land is limited to Subgrade 3a by soil wetness.

Six separate areas of Grade 2 land (totalling 25.1 ha) occur on the site. Typically medium sandy loam topsoils overlie a loamy medium sand subsoils. Profiles are well drained (Wetness Class I) but the land is limited to Grade 2 by overall climate and slight soil droughtiness.

One small area of Grade 4 land occurs in the north-west of the site, where slopes of 12 - 18" are the factor limiting the A.L.C. grade of the land.

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1. AGRICULTURAL LAND CLASSIFICATION.

1. INTRODUCTION AND SITE CHARACTERISTICS

The site is located around Grid Reference NZ534133 and lies 8 km. south-east of Middlesborough town centre. It covers a total of 360 ha of which 324 ha was surveyed. 256 ha of the land surveyed was in agricultural production. The Survey work was carried out in September 1992 when soils were examined by hand auger borings at 200 m intervals predetermined by the National Grid. Extra borings were made where necessary to refine grade boundaries and one soil pit was dug to allow the assessment of subsoil structure. 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).

Climate

Grid Reference: NZ534133

Altitude (m): 80

Accumulated Temperature above 0°C
(January - June): 1287 day °C

Average Annual Rainfall (mm): 665

Climatic Grade: 2

Field Capacity Days: 167

Moisture Deficit (mm) Wheat: 92

Moisture Deficit (mm) Potatoes: 79

Land Use and Relief

At the time of survey approximately 71% of the area surveyed was in agricultural use, principally oilseed rape, cereals and permanent grassland.

There were also significant areas of non-agricultural land (mainly woodland), agricultural buildings and urban land (consisting of a disused hospital and a number of houses and roads scattered across the site). The site varies between 70 m A.O.D. in the north-west to 95 m A.O.D. in the south-west. Slopes are generally slight (typically 0 - 5°) but slopes of 12 - 18° limit a small area in the north west of the site to Grade 4.

Geology and Soils

The site is underlain by the Triassic Mercia Mudstone and overlain by thick deposits of boulder clay. In parts of the site, particularly in the south, there are also deposits of glacial sand and post glacial lake sediments.

Over most of the site soils are medium to heavy-textured, typically consisting of medium clay loam topsoils overlying heavy clay loam or clay subsoils. These are similar to the Dunkeswick series mapped by the Soil Survey and Land Resource Centre. Profiles are generally poorly drained (Wetness Class IV) although imperfectly drained (Wetness Class III) profiles occur in places. Where the deposits of glacial sand and post glacial lake sediments occur, profiles are well drained (falling in Wetness Class I) and typically consist of medium sandy loam topsoils overlying a loamy medium sand subsoil.

2. AGRICULTURAL LAND CLASSIFICATION

The A.L.C. grades occurring on this site are as follows:-

<u>Grade/Subgrade</u>	<u>Hectares</u>	<u>Percentage of Total Area</u>
2	25.07	7.0
3a	5.44	1.5
3b	225.2	62.6
4	0.78	0.2
(Sub total)	(256.49)	(71.3)
Urban	36.36	10.1
Non Agricultural	9.24	2.6
Farm Woodland	18.93	5.3
Agricultural Buildings	1.81	0.5
Open Water	0.96	0.3
Not Surveyed	35.85	9.9
TOTAL	359.64	100

Grade 2

Grade 2 land occurs in six separate areas in the south of the site. Profiles are well-drained (Wetness Class I) and typically consist of medium sandy loam topsoils overlying loamy medium sand subsoils. This land is limited to Grade 2 by overall climate and by slight soil droughtiness.

Subgrade 3a

Land in this subgrade occurs at three separate points on the site. Generally medium-textured topsoils and upper subsoils (medium clay loam or sandy clay loam) overlie slowly permeable heavy-textured lower subsoils (usually heavy clay loam). These soils are imperfectly drained, falling in Wetness Class III, and the land is limited to Subgrade 3a by soil wetness.

Subgrade 3b

Most of the agricultural land on the site falls in Subgrade 3b. Profiles are poorly drained (falling in Wetness Class IV) and typically consist of a medium clay loam topsoil overlying a slowly permeable heavy clay loam or clay subsoil at between 25 cm and 40 cm depth. This land is limited to Subgrade 3b by soil wetness and workability restrictions.

Grade 4

A small area of Grade 4 land occurs in the north-west of the site where gradients of 12 - 18° are the factor limiting the A.L.C. grade of the land.

Urban

This category includes Poole Hospital in the centre of the site (now disused), the village of Nunthorpe Hall and a number of other buildings and roads scattered across the site.

Non Agricultural

Land in this category occurs at several points across the site and consists principally of woodland and parkland.

Agricultural Buildings

This category includes the farmhouse and outbuildings at Ryehill House.

Open Water

This refers to a fish pond in the centre of the site.

Not Surveyed

This refers to areas where no ownership details could be obtained.

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