AGRICULTURAL LAND CLASSIFICATION
MIDDLESBOROUGH LOCAL PLAN
THORNTON, CLEVELAND

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ADAS
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MIDDLESBOROUGH LOCAL PLAN

SITE AT THORNTON

SUMMARY

Land covering a total of 294 ha. was surveyed of which approximately 258 ha. is agricultural land.

Over 96% of the agricultural land in the area surveyed falls within Subgrade 3b. Typically medium clay loam topsoils overlie slowly permeable heavy clay loam or clay subsoils. Profiles are poorly drained (Wetness Class IV) and the land is limited to Subgrade 3b by soil wetness and workability restrictions.

Three small areas of Subgrade 3a land (7.4 ha. in total) occur in the west of the site where deep medium clay loam topsoils overlie heavy clay loam or clay subsoils. Profiles are imperfectly drained (Wetness Class III) and the land is limited to Subgrade 3a by soil wetness and workability restrictions.

A small area (1.8 ha) of Grade 2 land also occurs in the west of the site. medium sandy loam topsoils overlie loamy medium sand subsoils. Profiles are well drained (Wetness Class I) but the A.L.C. grade of the land is limited by slight soil droughtiness.

CONTENTS

1. INTRODUCTION AND SITE CHARACTERISTICS

The site is located around Grid Reference NZ490135 and lies 7 km. south of Middlesborough town centre. It covers a total of 314 ha. of which 293 ha. was surveyed. Almost 258 ha. of the land surveyed was agricultural. 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:	NZ490135
Altitude (m):	60
Accumulated Temperature above 0°C (January - June);	1310 day °C
Average Annual Rainfall (mm):	643
Climatic Grade:	1
Field Capacity Days:	159
Moisture Deficit (mm) Wheat:	97
Moisture Deficit (mm) Potatoes:	86

Land Use and Relief

At the time of survey agricultural land (principally arable land, ley and permanent grassland and a large area of vacant land in the north east of the site) made up 82% of the total site area.

There were also significant areas of non-agricultural land (mainly woodland and scrub), agricultural buildings and urban land (principally Thornton Village and the site of the former Hemlington Hospital).

The site varies in altitude from 30 m A.O.D. in the west to 80 m A.O.D. in the east. Slopes are generally slight (typically 0 - 5°) but slopes of 8 - 11° limit parts of the west of the site to Subgrade 3b.

Geology and Soils

The site is underlain by Triassic Mercia Mudstone (formerly Keuper Marl) and overlain by thick deposits of boulder clay.

Soils are typically medium to heavy-textured, with medium clay loam topsoils overlying heavy clay loam or clay subsoils. They are similar to those mapped as the Dunkeswick Series by the Soil Survey and Land Resource Centre. Lighter soils occur locally.

Profiles are generally poorly drained (falling in Wetness Class IV) but imperfectly drained profiles (Wetness Class III) occur in parts of the west of the site.

2. AGRICULTURAL LAND CLASSIFICATION GRADES

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

Grade/Subgrade	Hectares	Percentage of Total Area
2	1.81	0.6
3a	7.36	2.3
3b	248.69	79.2
(Subtotal)	(257.86)	(82.1)
Urban	22.90	7.3
Non Agricultural	10.68	3.4
Agricultural Buildings	2.13	0.7
Not Surveyed	20.65	6.5
TOTAL	314.22	100

Grade 2

This occurs in a small area in the south-west of the site. Profiles typically consist of medium sandy loam topsoils overlying loamy medium sand subsoils. The soil is well drained (falling in Wetness Class I) but soil droughtiness is slightly limiting and this is the factor which prevents the land being placed higher than Grade 2.

Subgrade 3a

Land in this subgrade occurs in three separate areas in the west of the site. Typically medium clay loam topsoils overlie slowly permeable heavy clay loam subsoils at between 45 cm. and 60 cm. depth. Profiles are imperfectly drained (Wetness Class III) and the land is limited to this subgrade by soil wetness and workability restrictions.

Subgrade 3b

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

Urban

This refers to Thornton Village, the site of the former Hemlington Hospital (which was being demolished at the time of survey) and a number of houses and minor roads scattered across the site.

Non Agricultural

This includes several areas of woodland and scrubland, principally in the west of the site.

Agricultural Buildings

This refers to a number of farm houses and outbuildings scattered across the site.

Not Surveyed

This refers to land where access was refused or where no ownership details were available.

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