AGRICULTURAL LAND CLASSIFICATION

HOWDEN LOCAL PLAN

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HOWDEN LOCAL PLAN

AGRICULTURAL LAND CLASSIFICATION REPORTS

PART 1: SITES AROUND HOWDEN TOWN

INTRODUCTION

Land covering a total area of 75.6 hectares was surveyed on 5 separate sites* on the outskirts of the town. Ninety two per cent of this land is in agricultural production.

Survey work was carried out in February 1989 when soils were examined at points pre-determined by the National Grid. The overall survey density was approximately one boring per hectare with additional borings being made, where necessary, to refine grade boundaries and to check soil variability.

All assessments of agricultural land quality were made using the methods described in the **Agricultural Land Classification of England and Wales. (MAFF 1988).**

CLIMATE

Average Annual rainfall around Howden is about 582 mm. Accumulated temperature above $0^{o}C$ (January to June) is approximately 1404 day ^{o}C and the Mean Duration of Field Capacity is approximately 125 Field Capacity days. These factors indicate that there is no overall climatic limitation on ALC grade.

Summer Moisture Deficits of 110 mm for winter wheat and 103 mm for potatoes, however, mean that soil droughtiness will be limiting on many soils in the area.

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* Site numbers in the following reports are those used by RPG for identification purposes and may differ from those used by other organisations.

LAND USE

At the time of survey all agricultural land was in arable use on except sites 3 and 5 where small areas of grassland also occur.

Geology and Soils

Glacio lacustrine clay deposits underlie most of the area around Howden. These are overlain by patchy cover of sandy drift except around Knedlington where relatively thick and uniform sand deposits occur.

Soils closely reflect this pattern with well drained, but droughty, loamy sands and sands occurring on the light drift and slowly permeable heavy clay loam and clayey soils occurring on the lacustrine clays. Medium textured, slowly permeable soils are also common on the margins of the sand deposits where the underlying clay occurs close to the surface.

HOWDEN LOCAL PLAN:

SITES AROUND HOWDEN TOWN

SITE 1

Site 1 is located around national Grid Reference SE 740 275 between the A614 and the B1228, south west of Howden.

The site covers an area of approximately 30.9 hectares,84 per cent of which is in agricultural use. At the time of survey all agricultural land was being used for arable crops. Non agricultural and urban land includes buildings and vacant land associated with the factories near the southern end of the site.

1. GEOLOGY AND SOILS

Deep sandy drift covers the whole site with underlying lacustrine clay absent within 1 metre of the surface: Soils are all light textured.

2. AGRICULTURAL LAND CLASSIFICATION GRADES

The ALC grades occurring on this site are as follows:-

GRADE	HECTARES	PERCENTAGE OF TOTAL AGRICULTURAL LAND
3a	6.6	25%
3b	19.4	75%
Non Agricultural	4.1	-
Urban	0.8	-
Total	30.9	100%

Subgrade 3a

Subgrade 3a land occurs along the southern edge of the site. Soils consist of medium sandy loam or loamy medium sand topsoils over loamy medium sand or sand subsoils passing occasionally into sandy clay loam at depth.

Soil droughtiness is limiting for both winter wheat and potatoes and restricts this area to subgrade 3a.

Subgrade 3b

Subgrade 3b land is widespread over most of the site. Soils are generally lighter than in the 3a area and consist of loamy medium sand topsoils over similar textured upper subsoils, passing into sand at depth. Droughtiness is even more restricting than on the 3a land and is the main grading limitation.

Urban

This consists of a factory and associated hard standing adjoining Booth Ferry Road.

Non Agricultural

This consists of vacant land around the factory near the southern edge of the site.

SITES AROUND HOWDEN TOWN

SITE 2

This 5.1 hectare site is located around National Grid Reference SE 741279 near recent housing development on the western edge of Howden.

All agricultural land is used for arable cropping. Land in the extreme eastern corner, however, is vacant and has therefore been classified as non agricultural.

1. **GEOLOGY AND SOILS**

Sandy deposits overlie lacustrine clay on this site. Along the eastern edge these sands are thin and the underlying clay often occurs as a lower subsoil within 1 metre of the surface. Upper soil horizons are all light textured.

2. **AGRICULTURAL LAND CLASSIFICATION GRADES**

The ALC grades occurring on this site are as follows.

GRADE	HECTARES	PERCENTAGE OF TOTAL AGRICULTURAL LAND AREA
3a	1.6	33%
3b	3.2	67%
Non Agricultural	0.3	-
Total	5.1	100%

Subgrade 3a

Subgrade 3a land occurs along the extreme southern edge of the site. Soils consist of medium sandy loam and loamy medium sand topsoils over similar upper subsoils which usually overlie silty clay at between 60 and 80 cm depth. Soil droughtiness is limiting for potatoes and is the main restriction on ALC grade.

Subgrade 3b

Most of the site falls within this subgrade. Soils consist of medium loamy sand topsoils over medium loamy sand and sand. Droughtiness is more restricting than on the 3a land for both winter wheat and potatoes and is the main grading limitation.

Non Agricultural

This consists of vacant land in the extreme eastern corner of the site.

HOWDEN AREA LOCAL PLAN:

SITE AROUND HOWDEN TOWN

SITE 3

Site 3 is located around National Grid Reference SE 745 287 adjacent to the A614 on the north western edge of Howden. The site covers an area of approximately 18.7 hectares, 94 per cent which is in agricultural production.

All agricultural land was used for arable cropping at the time of survey except for two fields along the eastern edge and one in the north western corner of the site which were under grass. Non agricultural land consists mainly of semi natural vegetation and seasonal ponds in the extreme north east.

1. GEOLOGY AND SOILS

Clayey lacustrine drift underlies the whole site. Along the extreme southern edge this is overlain by superficial sandy deposits which become progressively thinner and more patchy northwards. Soils reflect this and show a transition from light in the south through medium clay loam, to heavy clay loam and clay along the northern boundary of the site.

2. AGRICULTURAL LAND CLASSIFICATION GRADES

The ALC grades occurring on this site are as follows:

GRADE	HECTARES	PERCENTAGE OF TOTAL AGRICULTURAL LAND
2	4.7	27%
3a	8.8	50%
3b	4.1	23%
Non Agricultural	1.0	-
Farm Buildings	0.1	-
Total	18.7	100%

Grade 2

Grade 2 quality land occurs along the southern edge where sandy drift overlies the lacustrine clay.

Soils consist of medium sandy loam topsoils over similar or marginally lighter subsoils which, occasionally, pass into a clayey lower subsoil below about 60 cm depth. Soil droughtiness is slightly limiting for potatoes and is the main limitation on ALC grade.

Subgrade 3a

A broad band of land running through the centre of the site falls within this subgrade. Poorly structured and gleyed slowly permeable clay occurs below medium clay loam topsoils placing most soils in wetness class III. Land with medium clay loam topsoils in this Wetness Class is restricted by soil workability problems to subgrade 3a in areas with less than 126 field capacity days.

Subgrade 3b

Land in subgrade 3b occurs along the northern edge of the site. Soils fall within Wetness Class III and consist of heavy clay loam and clay topsoils over gleyed and slowly permeable clay. Workability problems are greater than on the subgrade 3a land and forms the main limiting factor.

Non Agricultural

Non Agricultural land consists mainly of semi natural vegetation and seasonal ponds in the north eastern corner of the site.

HOWDEN AREA LOCAL PLAN:

SITES AROUND HOWDEN TOWN

SITE 4

This 9.4 hectare site is located around National Grid Reference SE 756292 to the north east of Howden. At the time of survey the whole site was being used for arable cropping.

1. GEOLOGY AND SOILS

Lacustrine clay deposits underlie the whole site to give a heavy textured slowly permeable soil.

2. AGRICULTURAL LAND CLASSIFICATION GRADES

The ALC grades occurring on this site are as follows:

GRADE	HECTARES	PERCENTAGE OF TOTAL AGRICULTURAL LAND
3b	9.4	100%
Total	9.4	100%

Subgrade 3b

The whole site falls within this subgrade. Soils are derived from the clayey drift and consist mainly of heavy clay loam topsoils over gleyed and slowly permeable clay or silty clay to depth.

Workability problems associated with heavy clay loam topsoils in Wetness Class III are the main limitations on ALC grade.

HOWDEN AREA LOCAL PLAN

SITES AROUND HOWDEN TOWN

SITE 5

Site 5 is located around National Grid Reference SE 765290 north east of Howden between the A614 and the B1230. The site covers an area of 11.5 hectares, all of which is in agricultural production.

1. GEOLOGY AND SOILS

Soils are developed on superficial sandy drift which forms a cover about one metre in thickness over the underlying lacustrine clay.

2. AGRICULTURAL LAND CLASSIFICATION GRADES

the ALC grades occurring on this site are as follows.

GRADE	HECTARES	PERCENTAGE OF TOTAL AGRICULTURAL LAND
2	10.9	95%
4	0.6	5%
Total	11.5	100%

Grade 2

This is the predominant grade. Soils consists of medium sandy loam topsoils over similar, but gleyed, upper subsoils which often pass into slowly permeable sandy clay loam lower subsoil horizons.

A combination of topsoil workability restrictions, associated with a profile wetness of Class III, and slight soil droughtiness restricts land of this type to grade 2.

Grade 4

A small area of grade 4 land occurs in the northern corner of the site along the line of an old railway. Soils are shallow, wet and severely disturbed and limited to grade 4 for these reasons.

AGRICULTURAL LAND CLASSIFICATION REPORTS
PART 2: SITES AROUND EASTRINGTON

INTRODUCTION

Five separate sites*, covering a total area of 10.3 hectares around the village of Eastrington, were surveyed in February 1989. Soils were examined at regularly spaced intervals to give an overall survey density of approximately 3 borings per hectare.

CLIMATE

Average Annual Rainfall around Eastrington is about 591 mm. Accumulated Temperature above $0^{o}C$ (January to June) is approximately 1403 day degree C and the Mean duration of Field Capacity is approximately 129 field capacity days. These factors indicate that there is no overall climatic restriction on ALC grade.

Summer Moisture Deficits of 111 mm for winter wheat and 104 mm for potatoes, however, mean that soil droughtiness will be limiting on many soils in the area.

LAND USE

At the time of survey all agricultural land was in arable use.

Geology and Soils

Glacio lacustrine clays underlie most of the area around Eastrington. These deposits are often overlain by patchy sandy drift usually less than one metre thick. Soils are similar to those around Howden town and vary from very light droughty sands to heavy slowly permeable clays.

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* Other planning sites at Eastrington were not surveyed. ALC surveys were carried out only on sites numbered 2, 3, 4, 5, 6 on plans supplied to RPG.

SITES AROUND EASTRINGTON

SITE 2*

Site 2* is located around National Grid Reference SE 798303 east of the village between the disused railway and Sandholme Road. The site covers an area of approximately 1.8 hectares, all of which is in agricultural use.

1. GEOLOGY AND SOILS

Glacio lacustrine clay with a patchy surface layer of sandy drift covers the whole site. The sandy surface horizons are thickest in the east where they give light easily worked soils. Elsewhere topsoils vary between sandy loam, sandy clay loam and medium clay loam and frequently overelie heavy clay loam subsoils.

2. AGRICULTURAL LAND CLASSIFICATION

The ALC grades occurring on this site are as follows:

GRADE	HECTARES	PERCENTAGE OF TOTAL AGRICULTURAL LAND
2	1.1	57%
3a	0.7	43%
Total	1.8	100%

Grade 2

Grade 2 land occurs in the eastern half of the site. Soils consist of medium sandy loam topsoils over similar upper subsoils which pass into gleyed sandy clay loam at depth. Soil Droughtiness is slightly limiting for both winter wheat and potatoes and is the main grading limitation.

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* See explanation of site numbering in Introduction.

Subgrade 3a

This subgrade covers the western half of the site. Soils consist mainly of sandy clay loam or medium clay loam topsoils over gleyed and slowly permeable heavy clay loam subsoils.

Soils of this type fall within Wetness Class III and, in areas with between 126 and 150 FC, Days are limited to subgrade 3a by wetness and workability problems.

SITES AROUND EASTRINGTON

SITE 3

This 1.9 hectare site is located around National Grid Reference SE 798301, south of Sandholme Road on the eastern edge of the village. At the time of survey the whole site was in arable use.

1. GEOLOGY AND SOILS

Loamy drift covers the glacio lacustrine clay which underlies the whole site at a depth of about 60 cm. Upper soil horizons are medium textured, but pass into clayey, slowly permeable lower subsoils.

2. AGRICULTURAL LAND CLASSIFICATION GRADES

Grade 3a

Subgrade 3a quality land covers the whole site. Soils fall within Wetness Class III and consists usually of sandy clay loam or medium clay loam topsoils over similar upper subsoils which pass into slowly permeable clay or sandy clay between 35 cm and 60 cm depth. Topsoil wetness and workability difficulties associated with this soil type are the main grading limitations.

SITES AROUND EASTRINGTON

SITE 4

This site which covers 3.5 hectares, is located around National Grid Reference SE 793202, north of Westfield Lane on the western edge of the village.

At the time of survey the whole site was in arable use with the exception of a narrow strip of non agricultural scrub woodland which occurs along the line of the old Hull and Barnsley railway on the northern edge of the site.

1. GEOLOGY AND SOILS

Superficial sandy drift, overlying glacio lacustrine clay, covers the site. This deposit becomes noticeably thinner along the northern and eastern boundary. Soils reflect this pattern with the heaviest soil types occurring in these areas.

2. AGRICULTURAL LAND CLASSIFICATION GRADES

The ALC grades occurring on this site are as follows:

GRADE	HECTARES	PERCENTAGE OF LAND TOTAL AGRICULTURAL
2	1.8	62%
3a	1.1	38%
Non Agricultural	0.6	-
Total	3.5	100%

Grade 2

Grade 2 land occurs over most of the central and western parts of the site. Soils consist of medium sandy loam topsoils over similar upper

subsoils which pass into gleyed sandy clay loam at depth. Soil droughtiness is slightly restricting for potatoes and is the main grading limitation.

Subgrade 3a

Subgrade 3a land occurs in the northern and eastern parts of the site. These soils which fall within wetness class III, consist mainly of medium clay loam or sandy clay loam topsoils over gleyed and slowly permeable sandy clay loamy subsoils. Topsoil wetness and workability difficulties associated with these textures are the main limiting factors.

Non Agricultural

This consists of scrub woodland along the line of the disused railway on the northern edge of the site.

HOWDEN LOCAL PLAN:

SITES AROUND EASTRINGTON

SITE 5

This 2.1 hectare site (NGL SE 794 299) is located between the High Street and Westfield Lane on the western edge of the village. At the time of survey the whole site was in an arable use.

1. GEOLOGY AND SOILS

Lacustrine clay underlies the area. This is overlain, in the northern half of the site, by superficial sandy deposits which became progressively thinner and more patchy towards the south west. Soils reflect this and show a transition from light textured, in the north and north east, through medium to medium and heavy textured in the south western corner of the site.

2. AGRICULTURAL LAND CLASSIFICATION GRADES

The ALC grades occurring on this site are as follows.

GRADE	HECTARES	PERCENTAGE OF TOTAL AGRICULTURAL LAND
2	1.3	62%
3a	0.6	29%
3b	0.2	9%
Total	2.1	100%

Grade 2

Grade 2 land occurs in the northern half of the site. Soils consist of fine sandy loam topsoils over similar, or lighter, subsoils which often pass into gleyed sandy clay loam at depth.

Soil droughtiness is slightly limiting for potatoes and is the main restriction on ALC grade.

Subgrade 3a

Subgrade 3a land occurs around the southern boundary. Soils fall within wetness class III and consist mainly of medium clay loam topsoils over gleyed and slowly permeable sandy clay loam subsoils. Topsoil workability difficulties associated with this wetness class are the chief limitations on ALC grade.

Subgrade 3b

Land in subgrade 3b occurs around the south western corner of the site.

Soils fall within wetness class III and consist of heavy clay loam topsoils over gleyed and slowly permeable lacustrine clay. Wetness and workability problems are greater than on the adjoining subgrade 3a land and are the main limiting factors.

SITES AROUND EASTRINGTON

SITE 6

This 1 hectare site is located around National Grid Reference SE 796 298 between Nanrock Lane and the sports ground on the southern edge of the village. The whole site was in agricultural use at the time of survey.

1. GEOLOGY AND SOILS

Glacio lacustrine clay covers the site which, in the east, is overlain by a thin layer of sandy drift. Soils closely reflect this pattern with the lightest and most easily worked land occurring in the eastern half of the site.

2. AGRICULTURAL LAND CLASSIFICATION GRADES

The ALC grades occurring on this site are as follows.

GRADE	HECTARES	PERCENTAGE OF TOTAL AGRICULTURAL LAND
3a	0.45	45%
3b	0.55	55%
Total	1.00	100%

Grade 3a

Land in this subgrade occurs in the eastern half of the site. Soils fall within wetness class III because of gleyed and slowly permeable medium clay loam or sandy clay loam upper subsoil horizons below similar but unmottled topsoil. These subsoils usually pass into lacustrine clay below about 50 cm depth. Topsoil workability problems associated with this wetness class are the principal grading limitations on this land.

Grade 3b

Subgrade 3b land occurs in the west. Soils fall within wetness class III and consist mainly of heavy clay loam topsoils over gleyed and slowly permeable clay to depth.

Topsoil workability difficulties form the main grading limitation which are more restricting than on the subgrade 3a land because of the heavier textured topsoil.

AGRICULTURAL LAND CLASSIFICATION REPORTS

PART 3: SITES AROUND HOWDENDYKE

INTRODUCTION

Land covering a total area of 10.9 hectares was surveyed on two adjoining sites at Howdendyke. Survey work was carried out in February 1989 when soils were examined at regularly spaced intervals to give an overall survey density of approximately 2 borings per hectare.

CLIMATE

Average Annual Rainfall around Howdendyke is 595 mm Accumulated Temperature above $0^{o}C$ (January to June) is approximately 1405 day degree C and the Mean Duration of Field Capacity is approximately 126 field capacity days. These factors indicate that there is no overall climatic restriction on ALC grade.

Summer Moisture Deficits of 111 mm for winter wheat and 104 mm for potatoes, however, mean that soil droughtiness is likely to be slightly limiting on clayey warp soils in the area.

LAND USE

At the time of survey both sites were entirely in arable use.

GEOLOGY AND SOILS

Soils on both sites are formed on heavy warp except for a strip near the eastern edge of site 3A where the deposits are similar to lacustrine clay. Typical soils consist of heavy silty clay loam topsoils over similar subsoils to depth. In the clayey area in site 3A, heavy clay loam or silty clay loam topsoils overlie slowly permeable clayey subsoils. With rare exceptions all topsoils are non-calcareous.

HOWDEN LOCAL PLAN:

SITES AROUND HOWDENDYKE

SITE 3A

This site is located around National Grid Reference SE 757 270 adjacent to the factory complex at Howdendyke. The site, which covers an area of approximately 8.1 hectares, is entirely in agricultural use.

1. GEOLOGY AND SOILS

Heavy warp covers most of the site with thin patchy sand lenses common within the deposit west of Husbandman's Drain. A strip of lacustrine clay occurs near the eastern boundary. Topsoils on the warp are of heavy silty clay loam, and of heavy clay loam or silty clay loam on the lacustrine clay.

2. AGRICULTURAL LAND CLASSIFICATION GRADES

The ALC grades occurring on this site are as follows:

GRADE	HECTARES	PERCENTAGE OF TOTAL AGRICULTURAL LAND
2	3.8	47%
3a	1.3	16%
3b	3.0	37%
Total	8.1	100%

Grade 2

Grade 2 land occurs as a strip on either side of Husbandman's Drain and along the extreme eastern boundary.

Soils fall within wetness class 1 and generally consist of heavy silty clay loam topsoils over similar or heavier subsoils to depth. Slight soil droughtiness, along with workability problems associated with this heavy topsoil texture, restrict land of this type to grade 2.

Grade 3a

Land in this subgrade forms a narrow band west of Husbandman's Drain. Soils consist mainly of heavy silty clay loam topsoils over similar upper subsoils which often pass into a thin sandy loam lense between 40 and 60 cm depth. Gleyed and slowly permeable sandy clay loam below this places these soils within wetness class II. Soil workability problems associated with this wetness class form the main grading limitation.

Subgrade 3b

Subgrade 3b land occurs in two areas near the eastern and western boundaries. Soils fall within wetness class III and generally consist of heavy silty clay loam or heavy clay loam topsoils over gleyed and slowly permeable clay or silty clay. Soil workability problems are more restricting than on the 3a land and are the main grading limitations.

SITE 3B

Site 3b, which covers 2.8 hectares, is located around National Grid Reference SE 759271 adjoining the houses at Kilpin Pike. All of it is in arable use except for the factory access road which bisects the site.

1. GEOLOGY AND SOILS

Heavy non-calcareous warp covers the site.

2. AGRICULTURAL LAND CLASSIFICATION GRADES

All of the agricultural land is within Grade 2.

Grade 2

Soils in this grade fall within wetness class I and consist largely of heavy silty clay loam topsoils over unmottled silty clay loam or silty clay to depth. Soil workability problems associated with this topsoil texture along with slight soil droughtiness, restrict land of this type to grade 2.

Urban

This consists of the factory access road.