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AGRICULTURAL LAND CLASSIFICATION
HOLDERNESS DISTRICT WIDE LOCAL PLAN
HUMBERSIDE
OCTOBER 1994

ADAS
Leeds Statutory Group

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SUMMARY

AGRICULTURAL LAND CLASSIFICATION REPORT

A total of 77 ha of land was surveyed on nine sites in Holderness District in relation to the District Wide Local Plan.

Site HED2 at Hedon consists of 10.2 ha of Subgrade 3b and 0.8 ha of Agricultural Buildings. The ALC grade is limited by soil wetness and topsoil workability problems.

Site HED 4, also at Hedon, consists of 6.6 ha of Subgrade 3b land and 0.3 ha of Agricultural Buildings. Again, soil wetness and topsoil workability problems limit the land to this subgrade.

Site THG2 at Thorngumby consists of 4.3 ha of Subgrade 3b and 1.4 ha of Agricultural Buildings. Soil wetness and topsoil workability problems limit the land to Subgrade 3b.

Site KEY 2 at Keyingham consists of 3.1 ha of Subgrade 3a land, 5.0 ha of Subgrade 3b land and 0.3 ha of Agricultural Buildings. Varying degrees of soil wetness restrict the ALC grades of the land on this site.

Site WTH1 at Withernsea consists of 3.9 ha of Grade 2, 1.6 ha of Subgrade 3a and 1.5 ha of Subgrade 3b land. Soil wetness restricts the ALC grade of this land to varying degrees. In addition 2.4 ha of Non Agricultural land and 1.0 ha of unsurveyed land occur on this site.

Site HRN1 at Hornsea consists of 6.9 ha of Subgrade 3a and 6.2 ha of Subgrade 3b, besides 0.4 ha of Agricultural Buildings. Again, soil wetness restricts the ALC grade of this land to varying degrees.

Site HRN 3, also at Hornsea consists of 6.1 ha of Subgrade 3b. Soil wetness and topsoil workability problems restrict the land to this subgrade.

Sites SK2 and SK3 at Skirlaugh consist of 6.6 ha of Subgrade 3a and 2.0 ha of Subgrade 3b land. Again, soil wetness and topsoil workability problems restrict the land to either Subgrade 3a or Subgrade 3b, depending on the extent of the problem. 1.6 ha of Non Agricultural land also occurs on these sites.

Site RTN 1 at Long Riston consists of 4.8 ha of Grade 2. Slight soil wetness restricts the land to this grade.

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AGRICULTURAL LAND CLASSIFICATION: HOLDERNESS DISTRICT WIDE LOCAL PLAN

1. INTRODUCTION

Land covering 77 ha was surveyed at nine sites within Holderness District. The agricultural land quality of each of these sites is described in the following sections of this report. All of the sites were subject to a detailed survey in October 1994 when soils were examined by hand auger borings at 100m intervals predetermined by the National Grid. Soil profile pits were dug to examine soil characteristics in greater detail. All assessments of the land quality were made 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).

2. AGRICULTURAL LAND CLASSIFICATION AND MAPS

2.1 SITE HED 2

2.1.1 Location, Land Use and Relief

This site lies approximately 1km south-east of the village of Hedon, around Grid Reference TA 198 282. It lies at an altitude of 3m AOD and is level. At the time of survey all of the agricultural land on the site was under grass or in arable use.

2.1.2 Climate

Grid Reference	: TA 198 282
Altitude (m)	: 3
Accumulated Temperature above 0°C (January - June)	: 1397 day °C
Average Annual Rainfall (mm)	: 614
Climatic Grade	: 1
Field Capacity Days	: 134
Moisture Deficit (mm) Wheat	: 113
Moisture Deficit (mm) Potatoes	: 106

2.1.3 Geology, Soils and Drainage

The site is underlain by Flamborough Chalk over which lie thick deposits of marine alluvium. Medium to heavy textured topsoils overlie heavy textured subsoils and profiles are poorly drained, falling in Wetness Class IV.

2.1.4. AGRICULTURAL LAND CLASSIFICATION: SITE HED 2

The ALC grades occurring on this site are as follows:

Grade/Subgrade	Hectares	Percentage of Total Area
1		
2		
3a		
3b	10.2	92.7
4		
5		
(Sub total)	(10.2)	(92.7)
Urban		
Non Agricultural		
Woodland - Farm		
- Commercial		
Agricultural Buildings	0.8	7.3
Open Water		
Land not surveyed		
(Sub total)	(0.8)	(7.3)
TOTAL	11.0	100

2.1.5 Subgrade 3b

All of the agricultural land on this site falls in Subgrade 3b. Profiles are poorly drained (Wetness Class IV) with non-calcareous medium silty clay loam, heavy silty clay loam or heavy clay loam topsoils overlying slowly permeable clay or silty clay subsoils at around 25cm depth. Soil wetness and topsoil workability limitations are the factors restricting this land to Subgrade 3b.

2.1.6 Agricultural Buildings

These are found at Leaf Sails Farm, in the south of the site.

2.2 SITE HED 4

2.2.1 Location, Land Use and Relief

This site lies approximately 1km south of the village of Hedon, around Grid Reference TA 192 278. It lies at an altitude of 3m AOD and is level. At the time of survey all of the agricultural land on the site was under permanent grass.

2.2.2 Climate

Grid Reference	: TA 192 278
Altitude (m)	: 3
Accumulated Temperature above 0°C (January - June)	: 1397 day °C
Average Annual Rainfall (mm)	: 612
Climatic Grade	: 1
Field Capacity Days	: 134
Moisture Deficit (mm) Wheat	: 113
Moisture Deficit (mm) Potatoes	: 107

2.2.3 Geology, Soils and Drainage

The site is underlain by Flamborough Chalk over which lies a thick layer of marine alluvium. Heavy-textured topsoils overlie similar subsoils and most profiles are imperfectly or poorly drained, falling in Wetness Classes III and IV.

2.2.4 AGRICULTURAL LAND CLASSIFICATION: SITE HED 4

The ALC grades occurring on this site are as follows:

Grade/Subgrade	Hectares	Percentage of Total Area
1		
2		
3a		
3b	6.6	95.7
4		
5		
(Sub total)	(6.6)	(95.7)
Urban		
Non Agricultural		
Woodland - Farm		
- Commercial		
Agricultural Buildings	0.3	4.3
Open Water		
Land not surveyed		
(Sub total)	(0.3)	(4.3)
TOTAL	6.9	100

2.2.5 Subgrade 3b

All of the agricultural land on this site falls in Subgrade 3b. Profiles are imperfectly or poorly drained, falling in Wetness Classes III and IV, with non-calcareous heavy silty clay loam or silty clay topsoils overlying similarly textured slowly permeable subsoils at between 20cm and 50cm depth. Soil wetness and topsoil workability limitations are the factors restricting this land to Subgrade 3b.

2.2.6 Agricultural Buildings

These occur in the north-east of the site.

2.3 SITE THG 2

2.3.1 Location, Land Use and Relief

Site THG2 lies on the north-western edge of the village of Thorngumbald, around Grid Reference TA 202 266. It lies at an altitude of around 5m AOD and is level to gently sloping (0-2°) with a southerly aspect. At the time of survey the westernmost field was in maize while the two fields in the centre of the site were agriculturally derelict. Glasshouses covered most of the eastern edge of the site.

2.3.2 Climate

Grid Reference	: TA 202 266
Altitude (m)	: 5
Accumulated Temperature above 0°C (January - June)	: 1394 day °C
Average Annual Rainfall (mm)	: 610
Climatic Grade	: 1
Field Capacity Days	: 134
Moisture Deficit (mm) Wheat	: 114
Moisture Deficit (mm) Potatoes	: 107

2.3.3 Geology, Soils and Drainage

The site is underlain by Flamborough Chalk over which lie deposits of marine alluvium. Generally medium to heavy-textured topsoils overlie slowly permeable heavy-textured subsoils and profiles are imperfectly or poorly drained, falling in Wetness Classes III and IV.

2.3.4. AGRICULTURAL LAND CLASSIFICATION: SITE THG 2

The ALC grades occurring on this site are as follows:

Grade/Subgrade	Hectares	Percentage of Total Area
1		
2		
3a		
3b	4.3	75.4
4		
5		
(Sub total)	(4.3)	(75.4)
Urban		
Non Agricultural		
Woodland - Farm		
- Commercial		
Agricultural Buildings	1.4	24.6
Open Water		
Land not surveyed		
(Sub total)	(1.4)	(24.6)
TOTAL	5.7	100

2.3.5 Subgrade 3b

All of the agricultural land on this site falls in Subgrade 3b. Profiles are imperfectly or poorly drained, falling in Wetness Classes III or IV, with non-calcareous medium clay loam, heavy clay loam or heavy silty clay loam topsoils overlying slowly permeable clay or silty clay subsoils at between 30cm and 55cm depth. Soil wetness and topsoil workability limitations restrict this land to Subgrade 3b.

2.3.6 Agricultural Buildings

Much of the east and north-east of the site is under glasshouses.

2.4 SITE KEY 2

2.4.1 Location, Land Use and Relief

The site lies on the south-western edge of the village of Keyingham, around Grid Reference TA 244 251. It lies at an altitude of approximately 6m AOD and is gently sloping (2-3°) with a southerly aspect. At the time of survey most of the land was sown to winter cereals, with permanent grass and an orchard in the north-eastern and north-western corners respectively.

2.4.2 Climate

Grid Reference	: TA 244 251
Altitude (m)	: 6
Accumulated Temperature above 0°C (January - June)	: 1393 day °C
Average Annual Rainfall (mm)	: 620
Climatic Grade	: *1*
Field Capacity Days	: 135
Moisture Deficit (mm) Wheat	: 113
Moisture Deficit (mm) Potatoes	: 106

2.4.3 Geology, Soils and Drainage

This site is underlain by Flamborough Chalk over which lies a thick layer of lacustrine and marine alluvium (in the south and west) and boulder clay (in the north-east). The soils in the north-east are typically imperfectly drained, falling in Wetness Class III, with medium-textured topsoils overlying medium to heavy-textured subsoils. The soils over the remainder of the site are poorly drained (Wetness Class IV) with heavy clay loam topsoils overlying slowly permeable clay or silty clay subsoils.

2.4.4. AGRICULTURAL LAND CLASSIFICATION: SITE KEY 2

The ALC grades occurring on this site are as follows:

Grade/Subgrade	Hectares	Percentage of Total Area
1		
2		
3a	3.1	36.9
3b	5.0	59.5
4		
5		
(Sub total)	(8.1)	(96.4)
Urban		
Non Agricultural		
Woodland - Farm		
- Commercial		
Agricultural Buildings	0.3	3.6
Open Water		
Land not surveyed		
(Sub total)	(0.3)	(3.6)
TOTAL	8.4	100

2.4.5 Subgrade 3a

Subgrade 3a land is found in the north-east of the site. Profiles are typically imperfectly drained (falling in Wetness Class III) with medium clay loam or, in places, medium sandy loam topsoils overlying similarly textured upper subsoils and slowly permeable heavy clay loam or clay lower subsoils. The slowly permeable layers begin at between 45 and 60cm depth and soil wetness is, therefore, the factor which restricts this land to Subgrade 3a.

2.4.6 Subgrade 3b

The remainder of the agricultural land on this site falls in Subgrade 3b. Profiles are poorly drained (Wetness Class IV) with heavy clay loam topsoils over slowly permeable clay or silty clay subsoils at around 25cm depth. This land is limited to Subgrade 3b by soil wetness and topsoil workability restrictions.

2.4.7 Agricultural Buildings

Agricultural Buildings occur in the south-east of the site.

2.5 SITE WTH 1

2.5.1 Location, Land Use and Relief

Site WTH 1 lies around 1 km west of Withernsea around Grid Reference TA 338 275. Site altitude varies from 10m AOD in the north to 4m AOD in the south and the land is gently sloping (2-3°) with a south-easterly aspect. At the time of survey most of the land was sown to winter cereals, with an area of allotments in the north-east and some grass paddocks in the south-east.

2.5.2 Climate

Grid Reference	: TA 338 275
Altitude (m)	: 8
Accumulated Temperature above 0°C (January - June)	: 1388 day °C
Average Annual Rainfall (mm)	: 614
Climatic Grade	: 1
Field Capacity Days	: 134
Moisture Deficit (mm) Wheat	: 112
Moisture Deficit (mm) Potatoes	: 105

2.5.3 Geology, Soils and Drainage

This site is underlain by Flamborough Chalk over which lie deposits of boulder clay. The soils are moderately well to poorly drained, falling in Wetness Classes II to IV, with medium clay loam or heavy clay loam topsoils and upper subsoils overlying heavy clay loam or clay lower subsoils.

2.5.4. AGRICULTURAL LAND CLASSIFICATION: SITE WTH 1

The ALC grades occurring on this site are as follows:

Grade/Subgrade	Hectares	Percentage of Total Area
1		
2	3.9	37.5
3a	1.6	15.4
3b	1.5	14.4
4		
5		
(Sub total)	(7.0)	(67.3)
Urban		
Non Agricultural	2.4	23.1
Woodland - Farm		
- Commercial		
Agricultural Buildings		
Open Water		
Land not surveyed	1.0	9.6
(Sub total)	(3.4)	(32.7)
TOTAL	10.4	100

2.5.5 Grade 2

Grade 2 land occurs in the centre and south-west of this site. Profiles are moderately well drained (Wetness Class II) with medium clay loam topsoils and upper subsoils overlying gleyed and slowly permeable heavy clay loam or clay lower subsoils at between 50cm and 60cm depth. Topsoils and subsoils are only very slightly stony and the ALC grade of this land is limited by slight soil wetness.

2.5.6 Subgrade 3a

Subgrade 3a land occurs in the north. Profiles are imperfectly drained (Wetness Class III) with medium clay loam topsoils and upper subsoils overlying clay lower subsoils at around 45cm depth. These lower subsoils are gleyed and slowly permeable and the land is limited to Subgrade 3a by soil wetness restrictions.

2.5.7 Subgrade 3b

An area of Subgrade 3b land occurs in the south of the site. Profiles are poorly drained (Wetness Class IV) with medium clay loam or heavy clay loam topsoils overlying gleyed and slowly permeable heavy clay loam or clay subsoils at around 30cm depth. Soil wetness and topsoil workability restrictions are, therefore, the factors limiting this land to Subgrade 3b.

2.5.8 Non Agricultural

Land in this category includes allotments in the north-east and an area of scrub in the south.

2.5.9 Land not Surveyed

A small area of grass paddocks in the south-east was left unsurveyed because no details on ownership were available.

2.6 SITE HRN1

2.6.1 Location, Land Use and Relief

Site HRN 1 lies about 1km south of Hornsea, around Grid Reference TA 208 469. Site altitude varies between 15m AOD in the south and 7m AOD in the north. The land is gently sloping, typically 2-3°, with a northerly aspect. At the time of survey most of the east and south of the site was in permanent grass while the west was sown to oilseed rape.

2.6.2 Climate

Grid Reference	: TA 208 469
Altitude (m)	: 10
Accumulated Temperature above 0°C (January - June)	: 1380 day °C
Average Annual Rainfall (mm)	: 627
Climatic Grade	: 1
Field Capacity Days	: 139
Moisture Deficit (mm) Wheat	: 110
Moisture Deficit (mm) Potatoes	: 102

2.6.3 Geology, Soils and Drainage

The area is underlain by Flamborough Chalk over which lie deposits of boulder clay. The soils are generally imperfectly or poorly drained (falling in Wetness Classes III or IV) with medium clay loam or heavy clay loam topsoils and upper subsoils overlying heavy clay loam or clay lower subsoils.

2.6.4. AGRICULTURAL LAND CLASSIFICATION: SITE HRN 1

The ALC grades occurring on this site are as follows:

Grade/Subgrade	Hectares	Percentage of Total Area
1		
2		
3a	6.9	48.6
3b	6.2	43.7
4		
5		
(Sub total)	(13.1)	(92.3)
Urban		
Non Agricultural	0.7	4.9
Woodland - Farm		
- Commercial		
Agricultural Buildings	0.4	2.8
Open Water		
Land not surveyed		
(Sub total)	(1.1)	(7.7)
TOTAL	14.2	100

2.6.5 Subgrade 3a

Subgrade 3a land occurs in the north and in the south of the site. Typically the soils are moderately well or, more often, imperfectly drained, falling in Wetness Classes II and III. In most cases non-calcareous medium clay loam or heavy clay loam topsoils and upper subsoils overlie gleyed and slowly permeable heavy clay loam lower subsoils at between 40cm and 65cm depth. Soil wetness and topsoil workability are, thus, the factors limiting this land to Subgrade 3a.

2.6.6 Subgrade 3b

The centre of this site has been mapped as Subgrade 3b. Profiles are poorly drained (Wetness Class IV) with medium clay loam topsoils overlying gleyed and slowly permeable heavy clay loam subsoils. Soil wetness restricts this land to Subgrade 3b.

2.6.7 Non-Agricultural

This category includes playing fields in the south-west.

2.6.8 Agricultural Buildings

These occur at Carr Farm, in the centre of the site.

2.7 SITE HRN 3

2.7.1 Location, Land Use and Relief

This site lies 1½ km south of Hornsea, on the east side of the B1242 road, and around Grid Reference TA 207 463. The land lies at an altitude of 15m AOD and is level. At the time of survey it was in cereal stubble.

2.7.2 Climate

Grid Reference	: TA 207 463
Altitude (m)	: 15
Accumulated Temperature above 0°C (January - June)	: 1375 day °C
Average Annual Rainfall (mm)	: 629
Climatic Grade	: 1
Field Capacity Days	: 139
Moisture Deficit (mm) Wheat	: 109
Moisture Deficit (mm) Potatoes	: 101

2.7.3 Geology, Soils and Drainage

The area is underlain by Flamborough Chalk and covered by drift deposits of boulder clay. The soils on this site are poorly drained (Wetness Class IV) with heavy clay loam topsoils overlying clay subsoils at around 35cm depth.

2.7.4. AGRICULTURAL LAND CLASSIFICATION: SITE HRN 3

The ALC grades occurring on this site are as follows:

Grade/Subgrade	Hectares	Percentage of Total Area
1		
2		
3a		
3b	6.1	100.0
4		
5		
(Sub total)	(6.1)	(100.0)
Urban		
Non Agricultural		
Woodland - Farm		
- Commercial		
Agricultural Buildings		
Open Water		
Land not surveyed		
(Sub total)		
TOTAL	6.1	100

2.7.5 Subgrade 3b

All of this site falls in Subgrade 3b. The soils are poorly drained, falling in Wetness Class IV, with heavy clay loam topsoils overlying gleyed and slowly permeable clay subsoils at around 35 cm depth. Soil wetness and topsoil workability limitations restrict this land to Subgrade 3b.

2.8 SITES SK2 and SK3

2.8.1 Location, Land Use and Relief

This site lies on the western side of the village of South Skirlaugh, around Grid Reference TA 137 394. Site altitude varies from 5m AOD in the north to 10m AOD in the south and the land is generally level or gently sloping (0-3°) with a northerly aspect. At the time of survey the westernmost field was in cereal stubble and the remaining agricultural land was under ley grass. In addition there is a playing field in the east of the site.

2.8.2 Climate

Grid Reference	: TA 137 394
Altitude (m)	: 10
Accumulated Temperature above 0°C (January - June)	: 1384 day °C
Average Annual Rainfall (mm)	: 631
Climatic Grade	: 1
Field Capacity Days	: 139
Moisture Deficit (mm) Wheat	: 106
Moisture Deficit (mm) Potatoes	: 98

2.8.3 Geology, Soils and Drainage

This site is also underlain by Flamborough Chalk, which is overlain by boulder clay and, alongside the stream in the north, alluvium. The soils vary from moderately well to poorly drained (Wetness Classes II to IV) and typically consist of medium clay loam topsoils over medium clay loam or heavy clay loam upper subsoils and heavy clay loam or clay lower subsoils.

2.8.4. AGRICULTURAL LAND CLASSIFICATION: SITES SK2 and SK3

The ALC grades occurring on this site are as follows:

Grade/Subgrade	Hectares	Percentage of Total Area
1		
2		
3a	6.6	64.7
3b	2.0	19.6
4		
5		
(Sub total)	(8.6)	(84.3)
Urban		
Non Agricultural	1.6	15.7
Woodland - Farm		
- Commercial		
Agricultural Buildings		
Open Water		
Land not surveyed		
(Sub total)	(1.6)	(15.7)
TOTAL	10.2	100

2.8.5 Subgrade 3a

Most of the agricultural land on this site falls in Subgrade 3a. Profiles are moderately well (Wetness Class II) or imperfectly drained (Wetness Class III) with medium clay loam topsoils overlying medium or heavy clay loam upper subsoils (which are sometimes gleyed) and gleyed and slowly permeable heavy clay loam or clay lower subsoils. Although some profiles meet the requirements for Grade2, they cannot be mapped as a separate unit, and the remaining land is restricted to Subgrade 3a by soil wetness limitations.

2.8.6 Subgrade 3b

Subgrade 3b land occurs in the north of the site. The soils are poorly drained (Wetness Class IV) with medium clay loam or heavy silty clay loam topsoils overlying gleyed and slowly permeable heavy clay loam or silty clay subsoils at around 25cm depth. Soil wetness and topsoil workability problems limit this land to Subgrade 3b.

2.8.7 Non Agricultural

This category includes a playing field in the east.

2.9 SITE RTN 1

2.9.1 Location, Land Use and Relief

Site RTN1 lies to the north-east of the village of Long Riston, around Grid Reference TA 124 424. It covers a total area of 4.8 ha and lies at an altitude of 10m AOD. The land is level to gently sloping (0-2°) with a westerly aspect and, with the exception of a field of winter cereals in the north-west, was under permanent grass at the time of survey.

2.9.2 Climate

Grid Reference	: TA 124 424
Altitude (m)	: 10
Accumulated Temperature above 0°C (January - June)	: 1384 day °C
Average Annual Rainfall (mm)	: 638
Climatic Grade	: 1
Field Capacity Days	: 143
Moisture Deficit (mm) Wheat	: 106
Moisture Deficit (mm) Potatoes	: 98

2.9.3 Geology, Soils and Drainage

The site is underlain by Flamborough Chalk and overlain by deposits of boulder clay. The soils are generally moderately well drained (Wetness Class II) with medium clay loam topsoils and upper subsoils overlying permeable sandy clay loam or slowly permeable clay lower subsoils.

2.9.4. AGRICULTURAL LAND CLASSIFICATION: SITE RTN 1

The ALC grades occurring on this site are as follows:

Grade/Subgrade	Hectares	Percentage of Total Area
1		
2	4.8	100.0
3a		
3b		
4		
5		
(Sub total)	(4.8)	(100.0)
Urban		
Non Agricultural		
Woodland - Farm		
- Commercial		
Agricultural Buildings		
Open Water		
Land not surveyed		
(Sub total)		
TOTAL	4.8	100

2.9.5 Grade 2

All of this site has been mapped as Grade 2. The soils are moderately well drained, falling in Wetness Class II. Generally very slightly stony medium clay loam topsoils and upper subsoils overlie either gleyed but permeable sandy clay loam or gleyed, slowly permeable clay. The slowly permeable layers begin at around 55cm depth where present and this land is restricted to Grade 2 by slight soil wetness.