AGRICULTURAL LAND CLASSIFICATION

GOOLE/HOOK LOCAL PLAN
AMENDMENT

SITES SURVEYED FOR
HUMBERSIDE COUNTY COUNCIL
AS POSSIBLE ALTERNATIVE
INDUSTRIAL SITES

ADAS
Leeds Regional Office

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Goole/Hook Local Plan. Amendment

Agricultural Land Classification Reports: Sites Surveyed for Boothferry Borough Council's Industrial Land Suitability study.

INTRODUCTION

Land covering a total area of 436 ha was surveyed on 7 separate sites north of Goole and around Howden.

Survey work was carried out in March 1991 when soils were examined by hand auger borings at 100 metre intervals at points pre-determined by the National Grid. The density of borings was one per hectare. Where necessary additional borings were made to check and refine grade boundaries.

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

Climate

There is little variation in climate between the sites and the data below is representative of climatic conditions on all 7 sites. Average annual rainfall (AAR) is approximately 600 mm. Accumulated temperature (ATO) above 0°C between January and June is about 1410 days°C and the average duration at which the land is at field capacity is approximately 125 days per year. These factors indicate there is no overall climatic limitation on ALC grade.

Summer soil moisture deficits of 110 mm and 105 mm for wheat and potatoes respectively indicate that soil droughtiness may be a limiting factor where light textured soils are dominant.

Land Use

All land is in arable use except for site 11 where there are some areas of grass and semi-derelict land. There is a large area of industrial development on site 13 and a reclaimed waste disposal site on site 12.

Relief

Land at the 7 sites surveyed is flat and altitude varies from 2 to 6 m above ordnance datum. Land on each side of field boundaries and drainage ditches differs in height at some locations by 1 m or so as a result of the warping processes that formed most soils.

GEOLOGY

Soils on parts of the sites near the Rivers Aire and Ouse are formed on recent, often calcareous, silt loam, silty clay loam or silty clay marine alluvium (warp), which forms a cover of variable thickness over the underlying lacustrine clays. The warp can be a result of either natural or artificial flooding. Glacio fluvial sand is common on parts of sites 9, 10, 11 and 12 where it varies in thickness from over a metre to just a few centimetres on top of the lacustrine clay. This clay is widespread at the surface in the western half of site 13.

Most soil profiles on the warp consist of calcareous medium or heavy silty clay loam or silty clay topsoils over similar or lighter textured subsoils. Profiles formed on calcareous silt loams or sandy silt loam are less common and usually occur only in areas close to the river or which have been artificially warped. Non calcareous alluvial soils consisting of heavy silty clay loam or silty clay topsoils over slowly permeable silty clay subsoils are common on parts of site 7. The areas of sandy soil in sites 9-12 consist mainly of medium sandy loam or loamy medium sand topsoil over loamy medium sand or medium sand upper subsoils, again followed by lacustrine day at depths of between 40 and 100 cm. Where the lacustrine clay occurs at the surface in site 13 heavy clay loam topsoils 30-35 cm in thickness overlie gleyed slowly permeable clay subsoils.

DRAINAGE

The calcareous warp soils although often heavy in texture do not usually contain slowly permeable layers even though they are sometimes gleyed between 35 and 50 cm depth. Profiles thus fall within Wetness Class I. Subsoils of lacustrine clay or non-calcareous alluvial clay, however, are slowly permeable and profiles of this type fall within Wetness Classes II or III depending on depth to the slowly permeable horizon. The sand soils are free from any drainage impediment and usually fall within Wetness Class I.

SITE 7 HOOK LANE WEST

Site 7 is located south of the River Ouse, adjacent to the M62 around National Grid Reference SE 737255.

The site covers an area of approximately 26 ha, 80% of which is in agricultural use.

Agricultural Land Classification Grades

The ALC grades occurring on this site are as follows:

Grade/Sub grade	Hectares	Percentage of Total Site Area
2	0.7	2.7%
3a	17.0	64.9%
3b	3.4	13.0
Non Agric	4.4	16.8
Urban	0.7	2.6
Totals	26.2	100

Grade 2

Land in this grade occurs on the northern edge of the site adjoining the River Ouse. Soils consist of medium silty clay loam topsoils over medium to heavy silty clay loam upper subsoils over slowly permeable clay at depth. These soils are moderately well drained and fall within Wetness Class II. Soil workability and traffickability problems are the limiting factors on land within this grade.

Sub Grade 3a

Land in this grade occupies the southern half of the site. Soils consist of medium sandy loam to medium clay loam topsoils over loamy medium sand or medium clay loam upper subsoils passing to medium sand or loamy medium sand. These soils are well drained and fall within Wetness Class I but are limited to subgrade 3a by droughtiness.

Subgrade 3b

Land in this grade occurs around Towns Drain and consists of heavy silty clay loam topsoils over slowly permeable heavy silty clay loam or silty clay subsoils. Profiles of this type fall into Wetness Class III and are imperfectly drained. Soil wetness and workability problems are the overriding limiting factors on land within this sub grade.

Urban

Land in this grade consists of tracks passing to the side of and under the M62 bridge.

Non Agricultural

This consists of part of a playing field on the southern edge of the site.

SITE 8 OUSE CARR

This site is located around National Grid Reference SE 745265. It is bounded on its western side by the M62 and on the southern and eastern sides by the River Ouse. It covers a total of 37.44 ha, 93% of which is in agricultural use.

The ALC grades occurring on this site are as follows:

Grade	Hectares	Percentage of Total Site Area
1	13.2	35.3%
2	11.5	30.7%
3a	3.4	9.1%
3b	6.7	17.9%
Urban	0.4	5.9%
	37.4	100

Grade 1

Land in this grade is widespread in the southern part of the site. Soils consist of fine sandy silt loam to medium silty clay loam topsoils over similar subsoils. These soils are well drained (Wetness Class I) and there are no soil or climatic limitations on land within this grade.

Grade 2

Grade 2 land consists of soils with heavy silty clay loam topsoils over silty loam to heavy silty clay loam subsoils. These soils are not gleyed, and fall within Wetness Class I. The heavy silty clay loam topsoils, however, will cause some workability problems and this is the limiting factor.

Subgrade 3a

Land in this sub grade consists of soils with medium sandy loam to medium clay loam topsoils over loamy medium sand upper sub soils and medium sand lower subsoils. These soils are well drained falling in Wetness Class I, but are limited to subgrade 3a by droughtiness.

Subgrade 3b

Sub grade 3b land contains two soil types. The first consists of well drained (Wetness Class I) medium sandy loam topsoils over loamy medium sand upper subsoils and medium sand lower subsoils. Soils of this type are very droughty and are restricted to subgrade 3b for this reason. The second soil type is formed of heavy silty clay loam topsoils over slowly permeable heavy silty clay loam to silty clay subsoils. These soils are poorly drained (Wetness Class III) and are limited to subgrade 3b by wetness and workability problems.

Non Agricultural

This includes the river embankment and adjoining land.

Urban

This category consists of a farm track.

SITE 9 THE GROVES

Site 9 lies north of the river around National Grid Reference SE 740268 between the M62 and the A614. it covers 86.3 hectares, 97% of which is in agricultural use.

Agricultural Land Classification Grades

The ALC grades occurring on this site are as follows:

Grade	Hectares	Percentage of Total Site Area
1	14.9	17.3%
2	15.9	18.4%
3a	32.2	~~32.3%~~ 37.3%
3b	20.7	23.9%
Non Agric	0.4	0.5%
Urban Inc agric buildings	2.2	2.6%
Total	86.3	100

Grade 1

Land in this grade occurs in the southern part of the site and soils consist of medium silty clay loam topsoils over fine sandy silty loam or medium silty clay loam subsoils. These soils are well drained and fall into Wetness Class I. There are no soil or climatic limitations on agricultural use of soils within this grade.

Grade 2

Land in this grade consists of soils with medium silty clay loam topsoils over similar subsoils. These soils are moderately well drained and fall within Wetness Class II. Soil wetness and workability are limiting factors on land within this grade.

Subgrade 3a

Subgrade 3a is widespread in the northern half of the site. Soils consist of medium sandy loam topsoils over loamy medium sand upper soils and medium sand at depth. These soils are well drained, falling within Wetness Class I, but are subject to droughtiness which is the limiting factor on land of this type.

Subgrade 3b

Land within this sub grade occurs in the northern part of the site. Soils consist of well drained loamy medium sand or occasionally medium sandy loam topsoils over loamy medium sand upper subsoils and medium sand lower subsoils. The lighter nature of the topsoil means that droughtiness is more restricting than on the adjoining subgrade 3a land and this is the overriding limitation on ALC grade.

Non Agricultural

This consists of a small area of woodland.

Urban/Agricultural Buildings

Land within this category includes tracks crossing the site and the farm buildings at The Groves.

SITE 10 BOOTHFIELDS

This site lies to the south west of Howden and to the north of the River Ouse around National Grid Reference SE 740 275. It covers a total of 59.7 ha, 84% of which is in agricultural use.

Agricultural Land Classification Grades

The ALC grades occurring on this site are as follows:

Grade	Hectares	Percentage of total site area
2	4.1	6.9
3a	20.8	34.8
3b	20.8	42.7
Non Ag	1.2	2.0
Urban	8.1	13.6
Total	59.7	100

Grade 2

Land in this grade consists of soils with fine sandy loam topsoils over loamy fine sand subsoils. These soils are well drained (Wetness Class I). Slight soil droughtiness is the limiting factor on land within this grade.

Sub Grade 3a

Subgrade 3a land consists of medium sandy loam topsoils over loamy medium sand upper subsoils and medium sand lower subsoils. These soils are well drained and fall into Wetness Class I. Soil droughtiness is greater than on the Grade 2 land and is the limiting factor.

Sub Grade 3b

This subgrade is widespread in the central part of the site. Soils are formed of well drained (Wetness Class I) loamy medium sand topsoils over similar upper subsoils and medium sand lower subsoils.

The very light topsoil texture means that droughtiness is more severe than on the slightly heavier subgrade 3a land and this is the main limiting factor.

Non Agricultural

Land in this category consists of planted woodland.

Urban

This includes factories in the south and east and tracks crossing the site.

SITE 11 HAIL FARM

This site is located south of Howden between the M62 and the A614 around National Grid Reference SE 750 275.

Agricultural Land Classification Grades

The ALC grades occurring on this site are as follows:

Grade	Hectares	Percentage of Total Site Area
2	20.0	43.0%
3a	3.4	7.3%
3b	15.1	32.5%
Non Agric	4.2	9.0%
Urban (Agric Build)	3.8	8.2%
TOTAL	46.5	100

Grade 2

This grade consists of soils with medium sandy loam topsoils over loamy medium sand to sandy clay loam upper subsoils and slowly permeable heavy clay loam lower subsoils. These soils are imperfectly drained and fall into Wetness III. Soil wetness and workability problems are the limiting factors on land of this type.

Sub Grade 3a

Land in this sub grade occurs in two small areas near Hail Farm and alongside the A614. Topsoils consist of calcareous heavy clay loams over similar subsoils which become slowly permeable at depth. These soils fall into Wetness Class III and are limited to this subgrade by slight soil wetness and workability problems.

Subgrade 3b

The sub grade 3b land contains two soil types. The first, which is common at the western end of the site, consists of loamy medium sand topsoils over similar upper subsoils and medium sand lower subsoils. These soils are limited to subgrade 3b by droughtiness. The second consists of heavy silty clay loam topsoils over poorly drained (Wetness Class III) slowly permeable heavy silty clay loam or silty clay subsoils. This type of land occurs in the northern part of the site and is limited to subgrade 3b by wetness and workability problems.

Non-Agricultural

This consists of derelict land.

urban/Agric Buildings

Land in this category includes a sewage pumping station, a factory, housing and tracks.

SITE 12 AIRMYN NEW WOOD

This site around National Grid reference SE 724245 is bounded by the M62 to the east and Little Airmyn to the north. it covers 80.1 hectares, 88% of which is in agricultural use.

Agricultural Land Classification Grades

The ALC grades occurring on this site are as follows:

Grade	Hectares	Percentage of Total Site Area
2	40.7	50.8
3a	26.3	32.8
3b	4.1	5.1
Non Agricultural	8.0	10.0
Urban	1.0	1.3
TOTAL	80.1	100

Grade 2

Land in this grade consists of sandy clay loam and calcareous heavy silty clay loam topsoils over similar or lighter subsoils. These soils fall into Wetness Classes II or III depending on topsoil texture and depth to slowly permeable layer, if present. Slight soil wetness and workability problems along with slight droughtiness are the main limiting factors.

Grade 3a

Subgrade 3a land contains soils with medium clay loam topsoils over medium sandy loam to medium clay loam upper subsoils and medium sand to heavy clay loam lower subsoils. Soils with sandy lower subsoils are moderately well drained, (Wetness Class II) and are limited by soil droughtiness. Soils with medium to heavy clay loam subsoils are imperfectly drained, (Wetness Class III) and are limited by soil wetness and workability problems.

Sub grade 3b

This subgrade is restricted to one small area at the south western end of the site. Soils consist of freely drained loamy medium sand topsoils over medium or occasionally coarse sand subsoils. Available water amounts in these soils are small and this area is restricted to subgrade 3b by severe droughtiness.

Non Agricultural

This consist of the restored wooded landfill site on Airmyn road.

Urban

Land in this category consists of tracks crossing the site.

SITE 13 THORPE ROAD

The site is located on the northern edge of Howden between the B1228 and A614 around National Grid reference SE 755 295.

Agricultural Land Classification

The ALC grades for the site are as follows:

Grade	Hectares	Percentage of Total Area
1	9.7	9.7%
2	16.2	16.2%
3a	17.5	17.5%
3b	33.9	34.0%
Non Agric	2.1	2.1%
Urban/Agric Buildings	20.5	20.5
TOTAL	99.9	100

Grade 1

Grade 1 land occurs to the north east of the factory area. Soils consist of fine sandy loam to medium silty clay loam topsoils over similar subsoils. These soils are well to moderately well drained (Wetness Classes I and II). There are no soil or climatic limitations on the agricultural use of land of this type.

Grade 2

Land in this grade occurs to the south of Thorpe Hall. Soils consist of fine sandy loam topsoils over sandy clay loam upper subsoils with clay at depth in some locations. These soils fall into Wetness Class II and are limited to Grade 2 by slight soil wetness problems.

Subgrade 3a

This consists of medium clay loam topsoils over medium to heavy clay loam upper subsoils over slowly permeable heavy clay loam lower subsoils. These soils are imperfectly drained and fall within Wetness Class III. Soil wetness and workability problems are the main limitations on land within this grade.

Subgrade 3b

Land in this sub-grade consists of heavy clay loam topsoils over clayey, slowly permeable subsoils. These soils are imperfectly drained and fall into Wetness Class III. Soil wetness and workability problems are more severe than on the adjoining subgrade 3a land and are the overriding limitation on ALC grade.

Non Agricultural

This consists of disused land around the glasshouses.
Urban - Agric Buildings

This category includes the industrial area, tracks, farm buildings and glasshouses.

Resource Planning Group
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