

AGRICULTURAL LAND CLASSIFICATION  
GREAT GRIMSBY LOCAL PLAN  
HUMBERSIDE

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## GREAT GRIMSBY LOCAL PLAN

### AGRICULTURAL LAND CLASSIFICATION REPORT

#### SUMMARY

A total of seven sites were surveyed in the Great Coates, Scartho and Weelsby areas of Grimsby. One further site, at Weelsby, was not surveyed because ownership details could not be confirmed. Over 99% of the land surveyed was in agricultural production. Of the seven sites surveyed, four were covered by Grade 2 and Subgrade 3a land and three by Grade 2, Subgrade 3a and Subgrade 3b land. Two main soil types occur over the seven sites - a medium to heavy-textured soil where a medium clay loam or heavy clay loam topsoil typically overlies a heavy clay loam or clay subsoil, and a light to medium-textured soil where a sandy loam or medium clay loam topsoil overlies a sandy loam, sandy clay loam or medium clay loam subsoil. Soil wetness is generally the limiting factor in the medium to heavy-textured soils and soil droughtiness in the light to medium-textured soils.

A summary of A.L.C. grades and limitations can be found in the appendix.

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## GREAT GRIMSBY LOCAL PLAN

### INTRODUCTION

Land covering a total area of approximately 74 ha was surveyed on seven separate sites (numbered 1, 2, 3, 4, 6, 7 and 8 by Great Grimsby Borough Council). Of these seven sites, numbers 1 - 4 lie between Scartho and Weelsby to the south-east of Grimsby town centre and numbers 6 - 8 are at Great Coates, to the north-west of the town centre. One other site (numbered 5 and located to the south of Weelsby) was not surveyed as ownership details could not be confirmed.

Survey work was carried out in July and August 1992 when soils were examined by hand auger borings at intervals pre-determined by the National Grid. Sites 1, 2 and 6 were surveyed with a boring density of one per hectare and the smaller Sites 3, 4, 7 and 8 were surveyed at a boring density of four per hectare. Extra borings were made, where necessary, to refine grade boundaries.

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

### Climate

One central grid point was used to provide climatic information for all of the seven sites surveyed.

Grid Reference:	TA 270 090
Altitude (m):	10
Accumulated Temperature above 0°C (January - June):	1395 day °C
Average Annual Rainfall (mm):	609
Climatic Grade:	1
Field Capacity Days:	134
Moisture Deficit (mm) Wheat:	113
Moisture Deficit (mm) Potatoes:	106

## Land Use

At the time of survey 99% of the land was in agricultural (mainly arable) use. Arable crops included wheat, oilseed rape and broad beans and there were smaller areas of rough grazing land. Site 5 included a small area of urban land in the north and Site 8 included a narrow band of scrubland which has been classified as non-agricultural.

## Geology and Soils

The area as a whole is underlain by Cretaceous chalk although on none of the sites does this occur within one metre of the soil surface. However, fragments of chalk commonly occur in the subsoils in the area.

The sites lying between Scartho and Weelsby (numbers 1- 4) are generally overlain by deposits of boulder clay while those at Great Coates (numbers 6 - 8) are generally overlain by deposits of marine alluvium. The soils of the area generally reflect the drift geology and typically consist of either medium or heavy clay loam topsoils overlying heavy clay loam or clay subsoils. Drainage status varies from well-drained (Wetness Class I) to poorly drained (Wetness Class IV). Some lighter textures do occur in places on Sites 4 and 7 and over most of Site 3, where sandy loam or sandy clay loam topsoils typically overlie similarly-textured subsoils.

## Site 1

Site 1 is located immediately to the south of the cemetery and the allotment gardens between Scartho and Weelsby, around Grid Reference TA275069. It covers an area of approximately 20 ha, all of which is in agricultural use.

### Geology and Soils

This site is underlain by chalk deposits of the Cretaceous period. Overlying these are deep deposits of drift, mostly made up of boulder clay but also, in isolated areas, of glacial sand and gravel. Soils in the area consists of medium or heavy clay loam topsoils typically overlying a heavy clay loam or clay subsoil. The subsoils also contain fragments of chalk in many places. Generally the profiles are imperfectly or poorly drained (Wetness Class III or IV) but in places well-drained or moderately well-drained (Wetness Class I or II) profiles occur.

### AGRICULTURAL LAND CLASSIFICATION GRADES

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	4.01	19.9
3a	5.54	27.6
3b	10.56	52.5
TOTAL	20.11	100

### Grade 2

Grade 2 land occurs in the north-eastern corner of the site. Typically a medium clay loam topsoil overlies a sandy clay loam, medium clay loam or heavy clay loam subsoil. Profiles are moderately well-drained (Wetness Class II) so this land is restricted to Grade 2 by a slight soil wetness limitation.

### Subgrade 3a

Two separate areas of Site 1 fall within this subgrade. Soils in the eastern area consist of medium clay loam topsoils overlying heavy clay loam or clay subsoils. These soils are imperfectly drained (Wetness Class III) and are limited to Subgrade 3a by soil wetness. In the western area, heavy clay loam topsoils overlie heavy clay loam or clay subsoils. Typically these soils are moderately well-drained (Wetness Class II) but the heavy-textured topsoils indicate a soil workability limitation which prevents this area being graded higher than Subgrade 3a.

### Subgrade 3b

The remainder of Site 1 falls within Subgrade 3b. Soils consist of medium or heavy clay loam topsoils overlying heavy clay loam or clay subsoils. The profiles are imperfectly or poorly drained (Wetness Class III or IV) with slowly permeable layers generally starting at depths of 30 to 40 cm. Soil wetness and soil workability, especially where heavy-textured topsoils occur, are the factors limiting this land to Subgrade 3b.

Site 2

Site 2 is located to the south of the Y.M.C.A at Weelsby, around Grid Reference TA279073. It covers an area of approximately 11 ha., all of which is in agricultural use.

Geology and Soils

Site 2 is underlain by Cretaceous chalk and overlain by deep deposits of boulder clay. Profiles are generally moderately well-drained (Wetness Class II) or imperfectly drained (Wetness Class III) and consist of a medium clay loam topsoil overlying a medium clay loam, heavy clay loam or clay subsoil.

AGRICULTURAL LAND CLASSIFICATION GRADES

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	1.41	13.0
3a	9.41	87.0
TOTAL	10.82	100

Grade 2

Grade 2 land occurs in the south-western corner of Site 2. Typically a medium clay loam topsoil overlies a medium clay loam or heavy clay loam subsoil. Profiles are well drained (Wetness Class I) or moderately well-drained (Wetness Class II) and the land is restricted to Grade 2 by a slight soil wetness or soil droughtiness limitation.

Subgrade 3a

Land in this subgrade covers most of the site. Soil textures typically consist of medium clay loam or medium silty clay loam in the topsoil and heavy clay loam or clay



in the subsoil. Profiles are generally imperfectly drained (falling in Wetness Class III) and the land is limited to Subgrade 3a by soil wetness.

### Site 3

Site 3 is located adjacent to Peakes Lane and opposite the Y.M.C.A. at Weelsby. It is centred on Grid Reference TA279074. It covers an area of approximately 3 ha., all of which is rough grazing land.

### Geology and Soils

Site 3 is underlain by Cretaceous chalk and overlain by deposits of sand, probably of glacial origin. The soils are generally well drained (falling in Wetness Class I) but slightly droughty.

### AGRICULTURAL LAND CLASSIFICATION GRADES

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	2.64	92.3
3a	0.22	7.7
TOTAL	2.86	100

### Grade 2

Land in this grade covers most of Site 3. Generally a sandy loam or sandy silt loam topsoil overlies a similarly textured upper subsoil and either a loamy sand or heavy clay loam lower subsoil. Profiles are well drained (falling in Wetness Class I) but the land is limited to Grade 2 by slight soil droughtiness.

### Subgrade 3a

Subgrade 3a land occurs in the far south of the site. Medium clay loam topsoils overlie a slowly permeable heavy clay loam subsoil beginning at around 40 cm depth. Profiles are, thus, imperfectly drained (Wetness Class III) and the land is limited to this subgrade by soil wetness.

#### Site 4

Site 4 is located to the south of Glebe Road, Scartho and is central on Grid Reference TA273062. The site covers an area of approximately 5 ha., of which 96% is in agricultural production. The remainder is an area of urban land in the north of the site.

#### Geology and Soils

Deep deposits of boulder clay cover the whole of Site 4, overlying Cretaceous chalk, which does not occur within one metre of the soil surface. Topsoils generally consist of medium sandy loams or medium clay loams and overlie subsoils with a variety of textures which range from coarse sandy loam to clay. The occurrence of some light-textured soils indicates the presence of sand, probably of glacial origin.

Profiles are generally well or moderately-well drained (falling in Wetness Classes I or II) but are imperfectly drained (Wetness Class III) in places.

#### AGRICULTURAL LAND CLASSIFICATION GRADES

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	4.57	86.7
3b	0.49	9.3
(Subtotal)	5.06	96.0
Urban	0.21	4.0
TOTAL	5.27	100

#### Grade 2

Land in this grade includes all the agricultural land on the site with the exception of a small area of Subgrade 3a land in the centre. Topsoils generally consist of

medium clay loam or medium sandy loam and overlies subsoils with a variety of textures which range from coarse sandy loam to clay. Profiles are either well or moderately-well drained (Wetness Class I or II) but a slight soil wetness limitation (where profiles are moderately well drained) or droughtiness limitation (where light-textured subsoils occur) restricts the land to Grade 2.

#### Subgrade 3a

Subgrade 3a land occurs in a small area in the centre of the site. The soils are imperfectly drained (falling in Wetness Class III) and consists of a medium clay loam topsoil overlying a heavy clay loam or clay subsoil. There is, thus, a moderate soil wetness limitation which restricts the land to this subgrade.

#### Urban

This refers to a new housing development in the north of the site.

Site 5

No ownership details could be obtained for this site so the land was not surveyed.

## Site 6

Site 6 is located adjacent to Woad Lane and lies to the north of the main railway line at Great Coates; it is centred on Grid Reference TA 242108. The site is approximately 10 ha., in size, all of which is in agricultural use.

### Geology and Soils

Site 6 is underlain by Cretaceous chalk and covered by deposits of clay, probably of alluvial origin. Topsoils consist of either medium or heavy clay loam and overlie heavy clay loam or clay subsoils. The soils vary from well drained (Wetness Class. I), to poorly drained (Wetness Class IV).

### AGRICULTURAL LAND CLASSIFICATION GRADES

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	2.68	26.3
3a	2.15	21.2
3b	5.33	52.5
	—	—
TOTALS	10.16	100
	—	—

#### Grade 2

Land in this grade occurs in the south of Site 6. Generally a medium clay loam topsoil overlies a heavy clay loam subsoil and the profiles are either well-drained or moderately well-drained (falling in Wetness Class I or II). This land is limited to Grade 2 by slight soil wetness and soil droughtiness.

### Subgrade 3a

Subgrade 3a land occurs in the centre of the site. Topsoils consist of medium clay loam or heavy clay loam and overlie a heavy clay loam upper subsoil and a clay lower subsoil. Profiles are moderately well (Wetness Class II) or imperfectly (Wetness Class III) drained and the land is, thus, limited to Subgrade 3a by moderate soil wetness and soil workability restrictions.

### Subgrade 3b

Subgrade 3b land occurs in the north of the site. Profiles are imperfectly or poorly drained (Wetness Class III or IV) and consist of a medium clay loam or heavy clay loam topsoil overlying a heavy clay loam or clay subsoil. This land, is thus, restricted to Subgrade 3b by soil wetness and workability limitations.



## Site 7

Site 7 is located adjacent to Aylesby Road, immediately to the south of the A1136 at Great Coates and is centred on Grid Reference TA230096. It covers an area of approximately 22 ha., all of which is in agricultural use.

### Geology and Soils

The site is underlain by Cretaceous chalk and covered with deep deposits of boulder clay. The soils on the site reflect this and generally consist of medium or heavy-textured topsoils overlying similarly textured subsoils. However, in places light-textured soils occur at depth.

Profiles are generally well or moderately well drained (Wetness Class I or II) but in places they are imperfectly or poorly drained (Wetness Class III or IV). However, some of the heavy-textured topsoils on Site 7 are calcareous which improves their workability.

### AGRICULTURAL LAND CLASSIFICATION GRADES

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	15.88	73.0
3a	3.38	15.5
3b	2.50	11.5
TOTAL	21.76	100

## Grade 2

Grade 2 land covers most of Site 7 and profiles are generally well or moderately well drained (Wetness Class I or II). Soils consist of a medium-textured topsoil (sandy clay loam, medium clay loam or medium silty clay loam) overlying a subsoil which is usually medium or heavy textured (sandy clay loam, medium clay loam or heavy clay loam) but is light-textured (medium sandy loam or loamy medium sand) in places. The land is limited to Grade 2 by either slight soil wetness (where medium or heavy-textured subsoils occur) or slight soil droughtiness (where light-textured subsoils occur).

## Subgrade 3a

Subgrade 3a land occurs in the north of the site. Soils consist of a medium clay loam or heavy clay loam topsoil overlying a light, medium or heavy-textured subsoil (medium sandy loam, sandy clay loam, medium clay loam or heavy clay loam). Depending on the subsoil texture, the profiles vary from well drained (Wetness Class I) to imperfectly drained (Wetness Class III) and the land is limited to Subgrade 3a either by soil wetness (where profiles are imperfectly drained) or soil droughtiness (where light-textured subsoils occur).

## Subgrade 3b

Subgrade 3b land occurs in the south of the site. The soils are poorly drained (Wetness Class IV) and consist of a heavy clay loam topsoil overlying a clay subsoil. This land is, therefore, restricted to Subgrade 3b by soil wetness and workability limitations.

## Site 8

Site 8 is located to the east of Wood Lane in Great Coates, at Grid Reference TA244107. It covers a total of 3 ha., of which 2.9 ha. had been sown to oilseed rape.

## Geology and Soils

This site is underlain by Cretaceous chalk and overlain by deep deposits of clay or either glacial or alluvial origin. Soils consist of medium or heavy clay loam topsoils overlying heavy clay loam or clay subsoils. Profiles are generally well or moderately-well drained, falling in Wetness Class I or Wetness Class II.

## AGRICULTURAL LAND CLASSIFICATION GRADES

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	1.49	49.5
3a	1.45	48.2
(Subtotal)	2.94	97.7
Non-Agricultural	0.07	2.3
TOTAL	3.01	100

## Grade 2

Grade 2 land occurs in the south of Site 8. The soils are well or moderately well-drained (falling in Wetness Class I or Wetness Class II) and typically consist of a medium clay loam or heavy clay loam topsoil overlying a heavy clay loam subsoil.

The land is restricted to Grade 2 by slight soil wetness and soil workability limitations.

#### Subgrade 3a

Subgrade 3a land occurs in the north of the site. Typically a heavy clay loam topsoil overlies a heavy clay loam or clay subsoil and the profiles are moderately well or imperfectly drained (falling in Wetness Class II or Wetness Class III). The factors limiting the A.L.C. grade of the land are soil wetness and soil workability.

#### Non Agricultural

This includes a narrow band of scrubland running through the middle of the site.