

AGRICULTURAL LAND CLASSIFICATION

BOOTHFERRY LOCAL PLAN

HUMBERSIDE

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AGRICULTURAL LAND CLASSIFICATION

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BOOTHFERRY LOCAL PLAN

PART 1: Sites Around Goole/Hook

INTRODUCTION

Land covering a total area of approximately 48 ha was surveyed on 6 separate sites (Nos. 12, 13, 16, 22, 23, 24, numbered according to Local Authority plans) around Goole. These are located in Old Goole, around Hook north east of the town centre and adjoining the river immediately south of Goole railway bridge.

Survey work was carried out in June and July 1992 when soils were examined at 100 m intervals at points pre-determined by the National Grid. The overall boring density was approximately 1 per hectare, additional borings being made at up to 4 to the hectare, where small fields were encountered and where it was necessary to refine grade boundaries and define soil variability. All assessments of agricultural land were made using the methods described in the Agricultural Land Classification of England and Wales (MAFF 1988).

Climate

Average annual rainfall around Goole is about 600 mm. Accumulated temperature (ATO) above 0°C (January - June) is approximately 1407 day °C and the mean duration of Field Capacity is approximately 126 Field Capacity Days. The combination of these factors indicates there is no overall climatic limitation on ALC grade.

Land Use

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

Geology and Soils

Triassic sandstones and marls underlie the whole area over which there is a considerable thickness of glacial clays and sands, peat and, at the surfaces Recent silty estuarine alluvium. Much of the alluvium, known locally as

warp, has been deposited artificially, mainly in the 19th century, by controlled tidal flooding of selected areas. Land formed in this way is flat except for levees around some drainage ditches.

Soils formed on the alluvium consist of gleyic brown calcareous alluvial soils. These are subdivided into the Blacktoft series on heavy silty clay loam deposits and the Romney series on the light silt loams and sandy silt loams. Although mottled and occasionally gleyed, the warp soils are now all well drained and fall mainly within Wetness Class I. Slowly permeable layers are rare, even where subsoils consist of silty clay.

SITE 12

Site 12 is located around National Grid Reference SE758251 within Hook CP, adjacent to Southfield Lane and approximately 1 km north west of Goole Bridge.

The site covers an area of 18.0 ha, 97.8% of which is in agricultural use. At the time of the survey all agricultural land was in arable use. Urban land consists of access tracks.

Geology and Soils

Medium textured calcareous warp deposits form a thick cover over the underlying glacial clays and sands. Solid strata are at a considerable depth below the surface.

AGRICULTURAL LAND CLASSIFICATION GRADES

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

<u>Grade/Subgrade</u>	<u>Hectares</u>	<u>Percentage of Total Area</u>
1	17.6	97.8
Urban	0.4	2.2
	-----	-----
TOTAL	18.0	100
	-----	-----

Grade 1

The whole site falls within Grade 1 except for small areas of urban land. Soils consist of medium silty clay loams over medium or heavy silty clay loams or occasionally silt loams. Profiles are calcareous and well drained, even though subsoils are mottled, and fall mainly within Wetness Class I. There are no soil or climatic limitations on the agricultural use of land of this type.

Urban

This consists of access tracks.

SITE 13

Site 13 is located around National Grid Reference SE759247 adjacent to Southfield Lane and approximately 500 m west of Goole Bridge.

The site covers an area of 4.5 hectares, 91.1% of which is in agricultural use. At the time of the survey all agricultural land was in arable use. Urban land consists of an area of private gardens/allotments in the north east of the site.

Geology and Soils

Medium textured calcareous warp deposits form a thick cover over the underlying glacial clays and sands. Solid strata are at a considerable depth below the surface.

AGRICULTURAL LAND CLASSIFICATION GRADES

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

<u>Grade/Subgrade</u>	<u>Hectares</u>	<u>Percentage of Total Area</u>
1	4.1	91.1
Urban	0.24	8.9
	<hr/>	<hr/>
TOTAL	4.5	100
	<hr/>	<hr/>

Grade 1

The whole site falls within this grade except for a small area of urban land. Soils consist of medium silty clay loams over medium or heavy silty clay loams or occasionally silt loams. Profiles are calcareous and well drained, even though subsoils are mottled, and fall mainly within Wetness Class I. There are no soil or climatic limitations on the agricultural use of land of this type.

Urban

This consists of an area of gardens/allotments in the north eastern part of the site.

SITE 16

Site 16 is located around National Grid Reference SE762245 within Hook CP, adjacent to Hook Road and approximately 500 m south west of Goole Bridge.

The site covers an area of 11.4 hectares, 89.5 % of which is in agricultural use. At the time of survey all agricultural land was in arable use. Urban land consists of an unmetalled track running west to east. The allotments north of this track fall within the non-agricultural category.

Geology and Soils

Medium and light textured calcareous warp deposits form a thick cover over the underlying glacial clays and sand or solid strata are at a considerable depth below the surface.

AGRICULTURAL LAND CLASSIFICATION GRADES

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

<u>Grade/Subgrade</u>	<u>Hectares</u>	<u>Percentage of Total Area</u>
1	10.2	89.5
Non Agricultural	0.9	7.9
Urban	0.3	2.6
	-----	-----
TOTAL	11.4	100
	-----	-----

Grade 1

All agricultural land on the site falls within this grade. Soils consist of medium silty clay loam topsoils over silt loam or occasionally medium or heavy silty clay loam subsoils. Profiles are calcareous and well drained (Wetness Class I) even though subsoils are mottled. There are no soil or climatic limitations on the agricultural use of land of this type.

Non Agricultural

This consists of a strip to the north of the site containing allotment areas.

Urban

This consists of an unmetalled track running from west to east between the agricultural area and the allotments.

SITE 22

Site 22 is located around National Grid Reference SE745222 in the Old Goole area off Manor Road.

The site covers an area of 7.2 hectares, 94.4% of which is in agricultural use. At the time of the survey all agricultural land was in arable use. Urban land consists of tracks or unmetalled roads.

Geology and Soils

Medium and light textured warp deposits occurs as a thin cover over underlying glacial sands. Solid strata are at a considerable depth below the surface.

AGRICULTURAL LAND CLASSIFICATION GRADES

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

<u>Grade/Subgrade</u>	<u>Hectares</u>	<u>Percentage of Total Area</u>
2	6.8	94.4
Urban	0.4	5.6
	<hr/>	<hr/>
TOTAL	7.2	100
	<hr/>	<hr/>

Grade 2

All agricultural land falls within Grade 2. Soils consist of medium silty clay loam or silt loam topsoils over loamy sand or medium sand subsoils. An area west of the north-south running track is disturbed and contains some bricks, glass and rubble below the topsoil. Soil droughtiness is limiting for wheat and restricts the area to Grade 2.

Urban

This consists of tracks and footpaths crossing the site.

SITE 23

Site 23 is located around National Grid Reference SE748220 adjacent to the school off Hall Road and directly west of South Park.

The site covers an area of 3.5 hectares, 91.4% of which is in agricultural use. At the time of the survey all agricultural land was being used for arable crops. Urban land consists of tracks and unmetalled roads.

Geology and Soils

Light and medium textured warp deposits form a cover of variable thickness over the underlying glacial sands. Sand is close to the surface in the centre and west of the site. Solid strata are at a considerable depth below the surface.

AGRICULTURAL LAND CLASSIFICATION GRADES

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

<u>Grade/Subgrade</u>	<u>Hectares</u>	<u>Percentage of Total Area</u>
1	1.9	54.3
2	1.3	37.1
Urban	0.3	8.6
	<hr/>	<hr/>
TOTALS (Agricultural	3.2	100
(Site total	3.5	

Grade 1

Grade 1 land occurs on the eastern part of the site and along the southern and north western edges. Soils consist mainly of calcareous deep silt loam topsoils over silt loam and some silty clay loam subsoils. Sandy loam occurs at depth. Profiles are well drained (Wetness Class I) even though subsoils

are mottled. There are no soil or climatic limitations on the agricultural use of land of this type.

Grade 2

Grade 2 land occurs as a small area in the southern part of the site. Soils consist of well drained calcareous medium silty clay loam topsoils over loamy medium sands at a depth of about 50 cm. Soil droughtiness is limiting for wheat and restricts this area to Grade 2.

Urban

This consists of an unmetalled road running from north to south and a track in the west of the site.

SITE 24

Site 24 is located around National Grid Reference SE750222 adjacent to the A161 in Old Goole.

The site covers an area of 3.3 hectares, all of which is in agricultural use. At the time of the survey all agricultural land was being used for arable crops.

Geology and Soils

Medium and light textured calcareous warp deposits form a thick cover over the underlying glacial sands. Solid strata are at a considerable depth below surface.

AGRICULTURAL LAND CLASSIFICATION GRADES

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

<u>Grade/Subgrade</u>	<u>Hectares</u>	<u>Percentage of Total Area</u>
1	3.3	100
TOTAL	3.3	100

Grade 1

Grade 1 soils occur over the whole site. Soils consist of medium silty clay loam or silt loam topsoils over medium silty clay loam and silt loam subsoils. Soils are well drained and permeable and calcareous. Profiles are well drained (Wetness Class I) despite subsoil mottling. There are no soil or climatic limitations on the agricultural use of land of this type.

PART 2:Sites Around Snaith

INTRODUCTION

Land covering an area of approximately 21 hectares was surveyed on five separate sites (Nos 3 - 7, numbered according to Local Authority plans) on the southern edge of Snaith. Survey work was carried out in July 1992 when soils were examined at up to 4 points per hectare pre determined by the National Grid. All assessments of agricultural land were made using methods outlines in the Agricultural Land Classification of England and Wales (MAFF 1988).

Climate

Average annual rainfall around Snaith is 598 mm. Accumulated temperature above 0°C January - June is approximately 1404 day °C and the average duration of field capacity is 124 days. The above combination of rainfall and temperature figures indicate that there is no overall climatic limitation on ALC grade.

Land Use

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

Geology and Soils

The underlying Triassic sandstone is overlain by a thick cover of Recent drift deposits consisting mainly of glacial sands and gravels. These form typical brown sands mapped by the Soil Survey of England and Wales as the Newport series.

SITES AROUND SNAITH

SITE 3

Site 3 is located around National Grid Reference SE648218 between Snaith and West Cowick to the south of the A1041 (T) and east of Butt Lane. It covers an area of 2.9 hectares, all of which is in agricultural use. At the time of survey the area was under wheat production.

Geology and Soils

The underlying solid geology of the area consists of the Permo-Triassic Sherwood (Bunter) Sandstone. This is overlain in Site 3 by a thick (> 1 m) covering of Recent drift deposits, mainly glacial sands and gravels. The resulting soils are all of a predominantly light texture and slightly to moderately stony. Typical profiles consist of well drained (Wetness Class I) medium sandy loam topsoils over loamy medium sand subsoils.

AGRICULTURAL LAND CLASSIFICATION GRADES

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

<u>Grade/Subgrade</u>	<u>Hectares</u>	<u>Percentage of Total Area</u>
3a	2.9	100
TOTAL	2.9	100

Subgrade 3a

The whole of Site 3 falls within Subgrade 3a. Soils are predominantly light textured with medium sandy loam topsoils over medium sandy loam, or loamy sand subsoils. Droughtiness is the most limiting factor and the area restricted to Subgrade 3a for this reason.

SITE 4

Site 4 is located between Snaith and West Cowick, to the south of the A1041 (T) and immediately east of Butt Lane. The central National Grid Reference is SE647217.

The site covers an area of 5.3 hectares, all of which is in agricultural use. At the time of survey the area was all under wheat production.

Geology and Soils

The underlying geology consists of Permo-Triassic Sherwood (Bunter) Sandstone. This is overlain by a thick (> 1 m) covering of Recent drift deposits, mainly of glacial sands and gravels. The resulting soils are predominantly light textured and slightly to moderately stony. Typical profiles consist of well drained (Wetness Class I) medium sandy loam or sandy clay loam topsoils over loamy medium sand, medium sandy loam or sandy clay loam subsoils.

AGRICULTURAL LAND CLASSIFICATION GRADES

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

<u>Grade/Subgrade</u>	<u>Hectares</u>	<u>Percentage of Total Area</u>
2	3.8	71.7
3a	1.5	28.3
	<hr/>	<hr/>
TOTAL	5.3	100
	<hr/>	<hr/>

Grade 2

Grade 2 land occurs along the western side of the site. Soils consist of sandy clay loam topsoils over medium sandy loam or sandy clay loam subsoils. Droughtiness although less restricting than on the surrounding lighter soils is the main limitation on ALC grade.

Subgrade 3a

The remainder of the Site falls within Subgrade 3a. Soils are predominantly light textured with medium sandy loam topsoils over medium sandy loam or loamy sand subsoils. As a consequence droughtiness is more limiting than on the adjoining Grade 2 land.

SITE 5

Site 5 is located to the south of Snaith immediately to the west of Butt Lane, round National Grid Reference SE644217.

The site covers an area of 3.3 hectares, all of which is under agricultural production. At the time of the survey the area was under a variety of crops ranging from sugar beet to barley and wheat.

Geology and Soils

As with Sites 3 and 4 the underlying solid geology of the area consists of Permo-Triassic Sherwood (Bunter) Sandstone over which there is a thick cover of glaciofluvial sands and gravels. Soils at Site 5 are very similar to those in Sites 3 and 4, i.e. predominantly light in texture and slightly to moderately stony.

AGRICULTURAL LAND CLASSIFICATION GRADES

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

<u>Grade/Subgrade</u>	<u>Hectares</u>	<u>Percentage of Total Area</u>
2	1.7	51.5
3a	1.6	48.5
TOTALS	3.3	100

Grade 2

Grade 2 land occupies the northern part of the site and consists, as with Site 4, of well drained (Wetness Class I) sandy clay loam topsoils over mainly medium sandy loam or occasionally heavy clay loam subsoils. Slight droughtiness is the main limitation on ALC grade.

Subgrade 3a

Most of the southern and central areas of the site fall within this subgrade. Typical profiles consist of well drained medium sandy loam topsoils over loamy sand subsoils. Droughtiness is more restricting than on the adjoining Grade 2 land and is the main limitation on ALC grade.

SITE 6

Site 6 is located around National Grid Reference SE640215 and lies to the south of Bourn Mill Balk Road, to the west of Butt Lane and east of the Pontefract Road (A645).

The site covers 5.2 hectares, all of which is under agricultural production. At the time of survey the area was under wheat.

Geology and Soils

As with the previous sites the underlying solid geology consists of Permo-Tiassic (Bunter) Sandstone over which there is a thick cover of glaciofluvial sands and gravels.

Soils are again light textured and well drained and range from sandy clay loams to medium sandy loams, loamy sands and sands. Profiles vary from stoneless to moderately stony.

AGRICULTURAL LAND CLASSIFICATION GRADES

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

<u>Grade/Subgrade</u>	<u>Hectares</u>	<u>Percentage of Total Area</u>
3a	4.8	92.3
3b	0.4	7.7
	<hr/>	<hr/>
TOTAL	5.2	100
	<hr/>	<hr/>

Subgrade 3a

Most of the central and eastern parts of the site fall within this subgrade. Profiles consist of well drained medium sandy loam topsoils over loamy sand subsoils. Droughtiness is the main factor on ALC grade.

Subgrade 3b

A small area in the north western part of the site falls within Subgrade 3b. Profiles in this area consist of medium sandy loam or loamy medium sand topsoils over loamy sand or medium sand subsoils. Droughtiness is very limiting and this area is restricted to Subgrade 3b for this reason.

SITE 7

Site 7 is located on the western side of Snaith, immediately to the east of the Pontefract Road (A645), around National Grid Reference SE637217.

The site covers an area of 4.5 hectares, all of which is under agricultural production. At the time of the survey the crop was potatoes.

Geology and Soils

At this site the underlying Permo-Triassic Sherwood (Bunter) Sandstone occurs close to the surface and soils are formed in weathered sandstone. Typical profiles are very light and consist of well drained stoneless loamy medium sand topsoils over loose medium sand subsoils.

AGRICULTURAL LAND CLASSIFICATION GRADES

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

<u>Grade/Subgrade</u>	<u>Hectares</u>	<u>Percentage of Total Area</u>
3b	4.5	100
	—	—
TOTALS	4.5	100
	—	—

Subgrade 3b

The whole of Site 7 falls within Subgrade 3b. Soils consist almost entirely of stoneless, deep (> 1 m) medium loamy sand topsoils over medium sand, or occasionally loamy sand subsoils. Droughtiness is severely restricting and the whole site is limited to Subgrade 3b for this reason.

PART 3: Sites Around Crowle

INTRODUCTION

Land covering an area of approximately 18 hectares was surveyed on 5 separate sites (Nos 2, 3, 11, 12, 13, numbered according to Local Authority plans) to the north, north east and south west of Crowle. Survey work was carried out in July 1992 when soils were examined at points predetermined by the National Grid. Sites 3, 11, 12 and 13 were surveyed at a density of four borings per hectare. Site 2 was surveyed at one boring per hectare. All assessments of agricultural land quality were made using methods described in the Agricultural Land Classification of England and Wales. (MAFF 1988)

Climate

Average annual rainfall around Crowle is 604 mm. Accumulated temperature above 0°C (January - June) is approximately 1405 day °C and the average duration of field capacity is 127 days. The above combination of rainfall and temperature figures indicate that there is no overall climatic limitation on ALC grade.

Land Use

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

Geology and Soils

Sites 2, 11, 12 and 13 are covered with sandy drift. Site 3 is covered by medium textured drift. The Mercia Mudstone (Keuper Marl) which underlies all three sites occurs at a depth of less than one metre only on parts of Site 13.

Soils on the sandy drift consist mainly of typical sandy gley soils mapped as part of the Blackwood Association by the Soil Survey of England and Wales, although gleyed profiles are now mainly well drained and most fall within Wetness Class I.

SITE 2

Site 2 is located around National Grid Reference SE775133, north of Low Cross Street, between Newbigg Road and Slack Lane, on the northern edge of Crowle.

The site covers 8.2 hectares, 92.7% of which is in agricultural use. At the time of survey all agricultural land was being used for arable crops. Non-agricultural land consists of farm and urban buildings.

Geology and Soils

Sandy drift covers the whole site and the underlying Mercia Mudstone is not present within one metre of the surface. Typical profiles consist of sandy loam or loamy sand topsoils over similar or lighter subsoils.

AGRICULTURAL LAND CLASSIFICATION GRADES

The ALC grades occurring on this site are as follows.

<u>Grade/Subgrade</u>	<u>Hectares</u>	<u>Percentage of Total Area</u>
3a	1.2	14.6
3b	6.4	78.1
Urban	0.6	7.3
	<hr/>	<hr/>
TOTAL	8.2	100
	<hr/>	<hr/>

Subgrade 3a

Subgrade 3a occurs in the south east corner of the site. Soils consist of well drained (Wetness Class I) sandy loam topsoils over loamy sand subsoils. Soil droughtiness is the main limiting factor.

Subgrade 3b

Subgrade 3b covers most of the site. Profiles generally have lighter topsoils and subsoils than those on the Subgrade 3a land and droughtiness, which is the main restricting factor, is even more limiting than on the adjoining Subgrade 3a land.

Urban

This consists of several farm and urban buildings.

SITE 3

Site 3 is located around National Grid Reference SE775134, north of the cemetery on the eastern side of Crowle. The site covers 1.9 hectares, 79% of which is in agricultural use. At the time of survey all agricultural land was being used for arable crops. Non agricultural land consists of a strip of waste ground on the western edge of the site adjoining the disused railway.

Geology and Soils

Loamy drift derived from the underlying Mercia Mudstone covers much of the site. Solid Mercia Mudstone (Keuper Marl) does not occur within one metre of the surface. Soils are medium textured except in the south east where profiles are formed on deep sandy drift. Profiles are generally well drained and most soils fall within Wetness Class I.

AGRICULTURAL LAND CLASSIFICATION GRADES

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

<u>Grade/Subgrade</u>	<u>Hectares</u>	<u>Percentage of Total Area</u>
2	0.9	47.4
3b	0.6	31.6
Non Agricultural	0.4	21.0
	<hr/>	<hr/>
TOTAL	1.9	100
	<hr/>	<hr/>

Grade 2

Grade 2 land occurs in the centre and northern parts of the site. Soils consist of sandy clay loam or medium clay loam topsoils over medium sandy loam or sandy clay loam subsoils. Profiles are generally well or moderately well drained (Wetness Class I or II) and soil droughtiness is the main limiting factor.

Subgrade 3b

Subgrade 3b land occurs in the south east of the site. Soils consist of medium sandy loam topsoils over medium sand subsoils. Although gleyed profiles are now well drained (Wetness Class I), droughtiness is much more restricting than on the Grade 2 land, and is the overriding limiting factor.

Non-Agricultural

This consists of a strip of waste ground on the western edge of the site.

SITE 11

Site 11 is located around National Grid Reference SE768122, north of Godnow Road, on the south western edge of Crowle. The site covers 3.2 hectares, 78.1% of which is in agricultural use. At the time of survey all agricultural land was under arable crops. Urban land consists of house and gardens.

Geology and Soils

Sandy Alluvium covers the whole site and the underlying Mercia Mudstone (Keuper Marl) is not present within one metre of the surface. All soils are light textured and well drained (Wetness Class I) although gleying remains as a relic feature.

AGRICULTURAL LAND CLASSIFICATION GRADES

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

<u>Grade/Subgrade</u>	<u>Hectares</u>	<u>Percentage of Total Area</u>
3b	2.5	78.1
Urban	0.7	21.9
	-----	-----
TOTAL	3.2	100
	-----	-----

Subgrade 3b

Subgrade 3b land occurs over all agricultural land on the site. Profiles consist mainly of well drained loamy medium sand topsoils over medium sand Subsoils. Severe droughtiness is the main factor limiting this land to Subgrade 3b.

Urban

This consists of houses on the south eastern edge of the site and gardens on the south western edge.

SITE 12

Site 12 is located around National Grid Reference SE768124, south of Windsor Lane on the south western edge of Crowle. The site covers 1.0 hectares, all of which is in agricultural use. At the time of survey all agricultural land was under arable crops.

Geology and Soils

Sandy drift covers the whole site and the underlying Mercia Mudstone (Keuper Marl) does occur within one metre of the surface. All soils are light textured and now well drained (Wetness Class I) although gleying remains as a relic feature.

AGRICULTURAL LAND CLASSIFICATION GRADES

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

<u>Grade/Subgrade</u>	<u>Hectares</u>	<u>Percentage of Total Area</u>
3a	0.4	40.0
3b	0.6	60.0
	<hr/>	<hr/>
TOTAL	1.0	100
	<hr/>	<hr/>

Subgrade 3a

Subgrade 3a land occurs in the north western half of the site. Soils consist of loamy medium sand topsoils over sandy loam subsoils. Profiles are well drained (Wetness Class I) but limited to Subgrade 3a by droughtiness.

Subgrade 3b

This subgrade occurs in the south eastern half of the site. Although profiles have the same loamy medium sand topsoils as the Subgrade 3a land subsoils are lighter, consisting of medium sand. This increases droughtiness which is severely restricting and this part of the site is limited to Subgrade 3b for this reason.

SITE 13

Site 13 is located around National Grid Reference SE768126, north of Windsor Lane, on the western edge of Crowle. The site covers 4.2 hectares, all of which is in agricultural use. At the time of survey all agricultural land was under arable crops.

Geology and Soils

Sandy drift covers the whole site but is relatively thin towards the northern end where the underlying Mercia Mudstone (Keuper Marl) occurs at about 50 cm from the surface. All soils are light textured at the surface. Subsoils are also light except in the north where they consist of heavy clay loam or clay.

AGRICULTURAL LAND CLASSIFICATION GRADES

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

<u>Grade/Subgrade</u>	<u>Hectares</u>	<u>Percentage of Total Area</u>
2	1.7	40.5
3a	2.1	50.0
3b	0.4	9.5
	-----	-----
TOTAL	4.2	100
	-----	-----

Grade 2

Grade 2 land occurs in the central and northern parts of the site. Soils consist of medium sandy loam topsoils over slowly permeable heavy clay loam subsoils. Most profiles fall within Wetness Class III (imperfectly drained) but are limited to Grade 2 by droughtiness which is the overriding limiting factor.

Subgrade 3a

Subgrade 3a land occurs in the south and west of the site. Soils consist of well drained sandy loam topsoils over loamy sand subsoils. Droughtiness is the main limiting factor.

Subgrade 3b

This subgrade occurs in the eastern corner of the site. Soil profiles consist of well drained (Wetness Class I) sandy loam topsoils over medium sand subsoils. Droughtiness is severely limiting and this part of the site is restricted to Subgrade 3b for this reason.

PART 4:Site at Newport

INTRODUCTION

Land covering an area of 3.1 hectares was surveyed on a site (no. 9 according to Local Authority Plans) located on the east side of the Market Weighton Canal, approximately 500 m north of the village centre

Survey work was carried out in July 1992 when soils were examined at points predetermined by the National Grid. The overall survey density was 2 soil observations per hectare. All assessments of agricultural land were made using the methods described in the Agricultural Land Classification of England and Wales (MAFF 1988).

Climate

Average annual rainfall around Newport is 608 mm. Accumulated temperature above 0°C (January - June) is 1401 day °C and the mean duration of Field Capacity is 134 Field Capacity Days. The combination of these factors indicates that there is no overall climatic limitation on ALC grade.

Land Use

At the time of the survey the agricultural land was in ley for the production of hay.

SITE - 9

The site is located around National Grid Reference SE856308 adjacent and east of the Market Weighton Canal approximately 500 m north of the village centre.

Geology and Soils

The Mercia Mudstone Series (formerly Keuper Marl) underlies the Newport area. Drift deposits of clay and silt or sand and gravel overlie this in a complex manner. Soils consist of heavy or medium clay loam topsoils overlying clay in the southern part of the field and lighter textured loamy sand or medium sand in the northern part of the field.

AGRICULTURAL LAND CLASSIFICATION GRADES

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

<u>Grade/Subgrade</u>	<u>Hectares</u>	<u>Percentage of Total Area</u>
3a	1.6	51.6
3b	1.5	48.4
	<hr/>	<hr/>
TOTAL	3.1	100
	<hr/>	<hr/>

Subgrade 3a

Subgrade 3a land covers approximately half of the site with the boundary with the Subgrade 3b land running from south west to north east. Soils consist of medium clay loam topsoils over slowly permeable medium silty clay loam and heavy silty clay loam subsoils in the north east of the field, soil wetness (Wetness Class III) being the limiting factor here. The remainder of the Subgrade 3a land consists of medium clay loam topsoils over medium sand or loamy medium sand subsoils. Profiles are mottled and well drained but limited to this subgrade by droughtiness.

Subgrade 3b

Subgrade 3b land occurs over much of the southern part of the site. Profiles consist of heavy and medium clay loam topsoils over heavy clay loam or stoneless clay subsoils. All are slowly permeable (Wetness Class IV) and gleyed with prominent mottling and limited to Subgrade 3b by wetness and workability problems.

PART 5: Sites Around North Cave

INTRODUCTION

Land covering an area of 6.5 hectares was surveyed at two sites (8 and 9 on Local Authority plans) to the south east of North Cave, approximately 500 m from the village centre, off Everthorpe Road.

Survey work was carried out in July 1992 when soils were examined at points predetermined by the National Grid. The overall survey density was 2 borings per hectare. 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 the North Cave area is 647 mm. Accumulated Temperature above 0°C (January - June) is approximately 1382 day °C and the mean duration of Field Capacity is approximately 146 days. The combination of these factors indicates there is no overall climatic limitation on ALC grade.

Land Use

At the time of the survey site 8 was in wheat production and site 9 in linseed production.

Geology and Soils

The area is underlain by Jurassic (Lias) clays and mudstones over which there is a drift cover of lacustrine and post glacial sand and gravel deposits. Soils on Site 8 consist mainly of loamy sand topsoils over heavy clay loam and clay subsoils at depth. Site 9 contains sandy clay loam and sandy loam topsoils over sandy clay loam and sandy loam subsoils passing to sandy clay or, in places, sand at depth.

SITE 8

Site 8 is located around National Grid Reference SE897323, south east of the village centre, north of Everthorpe Road. It covers an area of 2.5 hectares all of which is in agricultural use apart from a footpath along the eastern edge of the site.

Geology and Soils

The Lias clays underlying this area are covered by thick drift deposits of sand and gravel.

Soils consist of moderately well drained loamy sands over sands with heavy clay loam and clay at depth. Soils vary between light, medium and heavy textures.

AGRICULTURAL LAND CLASSIFICATION

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

<u>Grade/Subgrade</u>	<u>Hectares</u>	<u>Percentage of Total Area</u>
3a	2.3	92
Urban	0.2	8
	-----	-----
TOTAL	2.5	100
	-----	-----

Subgrade 3a

This subgrade covers the whole of the area apart from a footpath running along the eastern edge. Soils consist of loamy medium sand topsoils over medium sand passing to heavy clay loam and clay at depth. Profiles are permeable but with mottling in the subsoil and fall into Wetness Class I or II. Droughtiness is the main limiting factor on ALC grade.

Urban

This consists of a footpath along the eastern edge of the site.

SITE 9

Site 9 is located around National Grid Reference SE897321 south east of the village centre, south of Everthorpe Road. It covers an area of 4 hectares, all of which is in agricultural use.

Geology and Soils

The Lias clays underlying the site are covered by drift deposits of sand and gravel and lacustrine clay.

Soils consist of sandy clay loam topsoils in the north of the site, sandy loam in the central area and mixed loamy sand and sandy loam in the south. Subsoils consist of sandy loam with clay at depth except in the south, where the deeper subsoil is light sandy material.

AGRICULTURAL LAND CLASSIFICATION

The ALC grades occurring on this site are as follows:

<u>Grade/Subgrade</u>	<u>Hectares</u>	<u>Percentage of Total Area</u>
2	1.3	41.3
3a	2.1	45.7
3b	0.6	13.0
	—	—
TOTAL	4.0	100
	—	—

Grade 2

Grade 2 land occurs in the central part of the site at its lowest point around the Littlewood Drain. North of the drain soils consist mainly of sandy loam topsoils with slowly permeable mottled sandy clay and clay subsoils at depth. South of the drain subsoils are formed of freely drained sandy loam.

Soils north of the drain fall into Wetness Class II or III with soil wetness the limiting factor. South of the drain profiles are permeable and limited to Grade 2 by droughtiness.

Subgrade 3a

Subgrade 3a consists of two strips north and south of the Grade 2 land. Topsoils in the northern strip consist of sandy clay loam with sandy clay loam and sandy loam subsoils. Both profiles contain a high proportion of chalk and flint stones. Profiles are permeable and droughtiness is the main limiting factor. Subgrade 3a soils to the south of the Grade 2 area consist of loamy sand or sandy loam topsoils with sandy loam subsoils and sandy clay at depth. Profiles are freely drained (Wetness Class I) but contain relic mottling at depth. The main limiting factor is droughtiness.

Subgrade 3b

Subgrade 3b land is limited to the southernmost part of the site at its highest point near the football ground. Soils consist of sandy loam and loamy sand topsoils over sand subsoils. Profiles are freely drained (Wetness Class I) and permeable but limited to Subgrade 3b by severe droughtiness.

PART 6:Site at Ealand

INTRODUCTION

Land covering an area of 4.5 hectares was surveyed on a site (B on Local Authority Plans) to the south east of Ealand between Bonnyhale road and the Crowle Wharf area.

Survey work was carried out in July 1992 when soils were examined to a depth of 1 m at points predetermined by the National Grid. The overall survey density was 2 borings per hectare. All assessments of agricultural land were made using the methods described in the Agricultural Land Classification of England and Wales (MAFF 1988).

Climate

Average annual rainfall around the Ealand area is 594 mm. Accumulated temperature above 0°C (January - June) is approximately 1411 day °C and the mean duration of field capacity is approximately 125 Field Capacity Days. The above combination of rainfall and temperature indicates there is no overall climatic limitation on ALC grade.

Land Use

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

EALAND SITE (Site B)

The site is located around National Grid Reference SE785113 to the south east of Ealand adjacent to Bonnyhale Road, within the Crowle Wharf area.

Geology and Soils

Drift, consisting of blown sand covers the underlying Mercia Mudstone (Keuper Marl). Soils reflect this and consist of either medium sandy loam or sandy clay loam topsoils overlying loamy sand and sand with clay occurring at depth.

AGRICULTURAL LAND CLASSIFICATION GRADES

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

<u>Grade/Subgrade</u>	<u>Hectares</u>	<u>Percentage of Total Area</u>
3b	4.5	100
TOTAL	4.5	100

Subgrade 3b

Subgrade 3b land covers the whole site. Soils consist of sandy clay loam or sandy loam topsoils over loamy sand and sand with a slowly permeable layer of clay or sandy clay below 90 cm. Profiles are well drained (Wetness Class I) with evidence of relic gleying present. Soil droughtiness is severe and is the overriding limiting factor.

PART 7: Sites Around Owston Ferry

INTRODUCTION

Land covering an area of 8.6 hectares was surveyed on four separate sites at Owston Ferry located north and south of High Street. Survey work was carried out in July 1992 when soils were examined to a depth of 1 m at points predetermined by the National Grid. All sites were surveyed at the rate of four borings per hectare. All assessments of agricultural land were made using methods described in the Agricultural Land Classification of England and Wales (MAFF 1988).

Climate

Average annual rainfall around Crowle is 588 mm. Accumulated temperature above 0°C (January - June) is approximately 1415 day °C and the average duration of field capacity is 121 days. There is no climatic limitation on ALC grade.

SITE 3

Site 3 is located around National Grid Reference SE811002, north of the High Street.

The site covers an area of 2.2 hectares, 77.2% of which is in agricultural use. At the time of survey, part of the agricultural land was under permanent pasture, the rest was used for arable crops. Urban land on the site consists of paths and gardens.

Geology and Soils

Estuarine alluvium (warp) covers the whole site and the underlying Mercia Mudstone is not present within 1 m. Soils are predominantly silty or fine loamy.

AGRICULTURAL LAND CLASSIFICATION

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

<u>Grade/Subgrade</u>	<u>Hectares</u>	<u>Percentage of Total Area</u>
2	0.3	13.6
3A	1.4	63.6
Urban	0.5	22.8
	<hr/>	<hr/>
TOTAL	2.2	100
	<hr/>	<hr/>

Grade 2

Grade 2 land occurs in a narrow strip running parallel to the gardens in the centre of the site. Soils in the western part of this strip consist of medium clay loam topsoils over medium silty clay loam subsoils. Profiles are permeable and well drained (Wetness Class I) and droughtiness is the main limiting factor restricting these soils to Grade 2. In the eastern half of the strip profiles consist of medium clay loam topsoils over clay subsoils.

Profiles are slowly permeable at depth, fall within Wetness Class II and are limited by slight wetness and workability problems.

Subgrade 3a

Subgrade 3a land covers the northern part of the site. Soils consist of medium clay loam topsoils over clay subsoils which are slowly permeable at depth and fall within Wetness Class III. Soil wetness and workability problems are the main limiting factors in this area.

Urban

This consists mainly of gardens at the southern end of the site.

SITE 4

Site 4 is located around National Grid Reference SE812002, north west of Crofts Lane, and covers an area of 2.1 hectares, 71.4% of which is in agricultural use. At the time of survey, all of the agricultural land was used for arable crops. Urban land on the site consists of buildings, paths and gardens.

Geology and Soils

Estuarine alluvium (warp) covers the whole site and the underlying Mercia Mudstone is not present within 1 m of the surface. Soils are predominantly silty and well drained.

AGRICULTURAL LAND CLASSIFICATION GRADES

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

<u>Grade/Subgrade</u>	<u>Hectares</u>	<u>Percentage of Total Area</u>
1	1.5	71.4
Urban	0.6	28.6
	<hr/>	<hr/>
TOTAL	2.1	100
	<hr/>	<hr/>

Grade 1

All agricultural land on the site falls within this grade. Soil consists of medium silty clay loam topsoils over silt loam or heavy silty clay loam subsoils. Profiles are permeable, well drained and easily cultivated and there are no overall limiting factors on the agricultural use of this land.

Urban

This consists mainly of gardens and associated buildings on the southern and eastern edges of the site.

SITE 5

Site 5 is located around National Grid Reference SE811000, north of Hemdyke House, and covers an area of 2.2 hectares, 81.8% of which is in agricultural use. At the time of survey, all of the agricultural land was used for arable crops. Urban land on the site consists of gardens.

Geology and Soils

Estuarine (warp) alluvium covers the whole site and the underlying Mercia Mudstone is not present within 1 m of the surface. Soils are predominantly silty and well or moderately well drained.

AGRICULTURAL LAND CLASSIFICATION GRADES

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

<u>Grade/Subgrade</u>	<u>Hectares</u>	<u>Percentage of Total Area</u>
2	1.8	81.8
Urban	0.4	18.2
	<hr/>	<hr/>

Grade 2

All agricultural land on this site falls within Grade 2. Soils consist of medium silty clay loam topsoils over medium to heavy silty clay loam subsoils, all of which are well or moderately well drained (Wetness Classes II or III). Droughtiness, however, is slightly limiting and the area is limited to Grade 2 for this reason.

Urban

This consists of an ornamental garden at the northern end of the site.

SITE 6

Site 6 is located around National Grid Reference SE819001, east of Station Road, and covers an area of 2.1 hectares, all of which is in agricultural use. At the time of survey, the site was used for arable crops.

Geology and Soils

Estuarine Alluvium (warp) covers the whole site and the underlying Mercia Mudstone is not present within 1 m of the soil surface. Soils are medium textured becoming heavy at depth.

AGRICULTURAL LAND CLASSIFICATION GRADES

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

<u>Grade/Subgrade</u>	<u>Hectares</u>	<u>Percentage of Total Area</u>
3a	2.1	100
TOTAL	2.1	100

Subgrade 3a

The whole site falls within this subgrade. In the area south of the recreation ground the soils consist of medium clay loam topsoils over heavy clay loam subsoils passing to sand at depth. Profiles are slowly permeable at depth and fall within Wetness Class III (imperfectly drained). This area is limited by soil wetness problems. Further west, where subsoils are somewhat lighter (sandy clay loam or medium clay loam) droughtiness is the main limiting factor.

PART 8: Sites Around Westwoodside

INTRODUCTION

Land covering a total area of 7.6 hectares was surveyed on two separate sites on the southern outskirts of Westwoodside. All of the land surveyed was in agricultural use.

Survey work was carried out in July 1992 when soils were examined to a depth of 1 m at an overall density of 2 borings per hectare at points pre-determined by the National Grid.

Climate

The average annual rainfall at Westwoodside is approximately 570 mm, with an accumulated temperature above 0°C (January to June) of 1417 day °C, and only 114 field capacity days per year. The above rainfall and temperature figures indicate that there is no overall climatic limitation on ALC grade. Moisture deficits 113 mm for wheat and 107 mm for potatoes indicate, however, that droughtiness could be limiting, especially on light textured soils.

Land Use

At the time of the survey all the land was in agricultural production; site 18 under wheat and site 6 under potatoes and carrots.

Geology and Soils

The whole area is underlain at depth by Mercia Mudstone (Keuper Marl) deposits over which there is at least a metre of drift deposits, consisting of aeolian sands and peat deposits.

Soils reflect this pattern closely with the very well drained sands being extremely droughty. The peat deposits have no limitations.

SITE 6

Site 6 is located around National Grid Reference SK748995, towards the centre of Westwoodside and south of the B1396.

At the time of the survey the site was under mixed horticultural production including carrots and potatoes.

Geology and Soils

The whole of the site is covered by deep sandy drift deposits of aeolian origin. Below this Mercia Mudstone (Keuper Marl) deposits occur but have no effect on soil textures above.

AGRICULTURAL LAND CLASSIFICATION GRADES

The ALC grades occurring on site 6 are as follows:-

<u>Grade/Subgrade</u>	<u>Hectares</u>	<u>Percentage of Total Area</u>
3b	3.5	100
	_____	_____
TOTAL	3.5	100
	_____	_____

Subgrade 3b

The whole site falls within this subgrade. Soils consist of loamy medium sand topsoils underlain by deep medium sand subsoils, with the occasional loamy sand upper subsoil. Profiles are well drained (Wetness Class I) but very droughty and are restricted to Subgrade 3b for this reason.

SITE 18

Site 18 is located around National Grid Reference SK744995, south of the B1396.

At the time of survey the site was under arable production, the present crop being wheat.

Geology and Soils

The northern part of the site is covered by deep sandy deposits. The southern part is covered by deep deposits of peat.

AGRICULTURAL LAND CLASSIFICATION GRADES

The ALC grades occurring on site are as follows:-

<u>Grade/Subgrades</u>	<u>Hectares</u>	<u>Percentage of Total Area</u>
1	2.3	56.1
3a	0.6	14.6
3b	1.2	29.3
	<hr/>	<hr/>
TOTAL	4.1	100
	<hr/>	<hr/>

Grade 1

This grade of land occurs exclusively over the peat deposits in the southern part of the site. Providing the deposits are of a sufficient depth there is no droughtiness limitation and they qualify as Grade 1. Where a significant amount of lighter material occurs in the profile with the peat the land is downgraded on droughtiness (see following sub-grades). The majority of borings consist of deep loamy peat (> 60 cm) overlying medium sand subsoils. Profiles are well drained (Wetness Class I) and there are not or only very minor limitations to agricultural use, thus placing this land within Grade 1.

Subgrade 3a

A small area of Subgrade 3a land occurs in the middle of the site. This is a transitional area between the very light textured soils and the pure peat deposits in the south of the field. Typical profiles consist of loamy medium sand topsoils overlying approximately 10 cm of peat over medium sand subsoils. Profiles of this type are droughty and limited to Subgrade 3a for this reason.

Subgrade 3b

The remainder of site 18, the northern portion, falls entirely within Subgrade 3b. Soils are very light textured and consist of loamy medium sand topsoils over loamy sand, or more commonly, medium sand subsoils. Droughtiness is severe and this area cannot be graded higher than Subgrade 3b.

PART 9: Sites Around Gilberdyke

INTRODUCTION

Land covering a total area of 25.1 hectares was surveyed on four different sites (Nos 3, 5, 8, 9) around Gilberdyke all of which were in agricultural use.

Survey work was carried out in July 1992 when soils were examined at a density of one boring per hectare, at points pre-determined by the National Grid.

Climate

The average annual rainfall at Gilberdyke is approximately 602 mm, with an accumulated temperature above 0°C (January - June) of approximately 1402 day °C, and a field capacity period of 131 days per year. The rainfall and temperature figures indicate that there is no overall limitation on ALC grade.

Soil moisture deficits of 113 mm for wheat and 107 mm for potatoes, however, indicate that soil droughtiness is likely to be a limitation on light textured soils.

Land Use

Of the land in agricultural production approximately 50% was under wheat or barley (Sites 3 and 5). The remainder was under a mixture of permanent pasture, ley grass or horticultural use.

Geology and Soils

The underlying solid geology of the area consists of Mercia Mudstone (Keuper Marl) deposits. This is overlain by a thick cover of more recent drift deposits of sand, silt and clay.

Soils reflect the differences in the drift deposits, the sands giving rise to lighter textured sandy loams over clay at depth, whilst the silt and clay deposits lead to heavy clay loams over slowly permeable clay subsoils.

SITE 3

Site 3 is located at National Grid Reference SE838297, just to the north of the B1230 and adjacent to Thornton Dam Lane.

Geology and Soils

The underlying solid geology is Mercia Mudstone with overlying drift deposits mainly of silt and clay, but with some sand in places. This leads to medium textured topsoils over sand and/or clay subsoils.

AGRICULTURAL LAND CLASSIFICATION

<u>Grade/Subgrade</u>	<u>Hectares</u>	<u>Percentage of Total Area</u>
3a	5.8	100
TOTAL	5.8	100

Subgrade 3a

The whole of Site 3 falls within Subgrade 3a. All soil observation points consisted of medium clay loam topsoils over medium sandy loam or sandy clay loam upper subsoils. Below 40 cm all borings passed into the typical slowly permeable Foggathorpe clay deposit placing them in Wetness Class III and thus Subgrade 3a, the main limitation being wetness.

SITE 5

Site 5 is located at National Grid Reference SE838292, on the south eastern side of Gilberdyke, south of the B1230 and Scalby Lane.

Geology and Soils

Solid deposits of Mercia Mudstone (Keuper Marl) are overlain by a considerable thickness of drift deposits of loamy material in the northern part of the site and silt and clay in the south. This leads to lighter textured clay loams in the north and heavy clay loams over clay elsewhere.

AGRICULTURAL LAND CLASSIFICATION

<u>Grade/Subgrade</u>	<u>Hectares</u>	<u>Percentage of Total Area</u>
2	1.8	25.4
3b	5.3	74.6
	<hr/>	<hr/>
TOTAL	7.1	100
	<hr/>	<hr/>

Grade 2

Grade 2 soils occupy an area in the north and east of Site 5 adjacent to Scalby Lane. This area is composed of a mixture of soils, the important characteristic of which is that the slowly permeable clay subsoil is deeper than 70 cm so placing them in Wetness Class III. They also contain slightly droughty medium textured upper subsoils and so are limited to Grade 2 on droughtiness. Typically profiles consist of medium or heavy clay loam topsoils over medium clay loam or sandy clay loam upper subsoils passing to typical slowly permeable Foggathorpe clay subsoils at depth.

Subgrade 3b

The rest of Site 5 is made up entirely of Subgrade 3b soils of the Foggathorpe series. These consist of a mixture of medium or heavy clay loam

topsoils directly overlying heavy clay loam or clay subsoils that are both gleyed and slowly permeable within 35 cm of the surface. Consequently they fall within Wetness Class IV and are limited by wetness to grade 3b.

SITE 8

Site 8 is located immediately to the south of Site 9 at National Grid Reference SE831289, on the western side of Gilberdyke adjacent to Clementhorpe Road and the main Leeds - Hull railway line.

Geology and Soils

Underlying deposits of Mercia Mudstone (Keuper Marl) are overlain by thick drift deposits of silt and clay. Soils reflect this and are composed of heavy textures throughout.

AGRICULTURAL LAND CLASSIFICATION

<u>Grade/Subgrade</u>	<u>Hectares</u>	<u>Percentage of Total Area</u>
3b	1.8	100
TOTAL	1.8	100

Subgrade 3b

The whole of Site 8 falls within Sub-grade 3b. Profiles consist of either medium or heavy clay loam topsoils over heavy clay loam or clay subsoils. They are all gleyed and slowly permeable within 35 cm of the surface and fall into Wetness Class IV and so are limited to Subgrade 3b by wetness.

SITE 9

Site 9 is located at National Grid Reference SE828291, on the western side of Gilberdyke immediately to the south of the B1230 and adjacent to Clementhorpe Road.

Geology and Soils

Underlying solid deposits of Mercia Mudstone are overlain by a thick cover of more recent drift deposits of silt and clay. Soil textures are mainly heavy throughout as a result of this, although some lighter textures occur in places.

AGRICULTURAL LAND CLASSIFICATION

<u>Grade/Subgrade</u>	<u>Hectares</u>	<u>Percentage of Total Area</u>
3a	1.9	18.2
3b	8.5	81.8
	—	—
TOTAL	10.4	100
	—	—

Subgrade 3a

Subgrade 3a land occurs in the south western part of the site. Soils consist of medium clay loam topsoils over heavy clay loam or clay subsoils. All are slowly permeable below 40 cm, and fall within Wetness Class III and thus with medium textured topsoils are limited to subgrade 3a by wetness.

Subgrade 3b

The remainder of Site 9 falls entirely within Subgrade 3b. Soils differ from those in Subgrade 3a in that topsoils all consist of heavy clay loam directly overlying typical lacustrine clay deposits. These are both gleyed and slowly permeable within 35 cm of the surface and thus fall within Wetness Class IV. They are limited to Subgrade 3b by wetness and workability problems.

PART 10: Sites Around Bubwith

INTRODUCTION

Land covering a total of 9.4 hectares was surveyed on 3 separate sites (No 2, 4, 5) around Bubwith all of which were in agricultural production. Survey work was carried out in July 1992 when soils were examined at points predetermined by the National Grid. The overall survey density was 2 borings per hectare.

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

Climate

Average annual rainfall around Bubwith is 598 mm. Accumulated temperature above 0°C (January - June) is approximately 1402 day °C and the mean duration of Field Capacity is approximately 128 days per year. These factors indicate that there is no overall climatic limitation on ALC grade.

Land Use

At the time of the survey, Sites 2 and 4 were in cereal production and Site 5 rough grazing.

Geology and Soils

The underlying solid geology consists of Triassic Sherwood (Bunter) Sandstone. This is overlain by a thick cover of more recent drift deposits of sand. Soils on Site 2 north of Bubwith consist of sandy loam topsoils over permeable well drained sandy loam subsoils.

Soils on Site 4 become progressively heavier southwards and graduate from sandy loam topsoils over heavy clay loam subsoils in the north to heavy clay loam topsoils over slowly permeable clay in the south. Site 5 contains clay subsoils. The heavy soils are all similar to those mapped as the Foggathorpe series by the Soil Survey of England and Wales.

SITE 2

Site 2 is located around National Grid Reference SE714365 off Main Street next to Chain Farm.

The site covers an area of 2.6 hectares, all of which is in agricultural use. At the time of the survey all agricultural land was in arable use.

Geology and Soils

Sandy drift covers the site. Soils consist of sandy loam topsoils over well drained sandy loam subsoils.

AGRICULTURAL LAND CLASSIFICATION GRADES

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

<u>Grade/Subgrade</u>	<u>Hectares</u>	<u>Percentage of Total Area</u>
2	2.6	100
TOTAL	2.6	100

Grade 2

Grade 2 land covers the whole of this site. Soils consist of medium sandy loam topsoils over medium sandy loam subsoils occasionally passing into sandy clay loam at depth. Soils, although mottled, are permeable, and fall within Wetness Class I (well drained). Soil droughtiness is limiting for winter wheat and restricts the area to Grade 2.

SITE 4

Site 4 is located around National Grid Reference SE718361 due south of Main Street and directly east of the sports ground.

The site covers an area of 4.7 hectares, all of which is in agricultural use. At the time of the survey all agricultural land had been harvested from arable crops.

Geology and Soils

The underlying Bunter Sandstone is at a considerable depth below the surface and soils are formed on drift deposits.

Sandy loam topsoils over clay cover the north of the site with soils becoming progressively heavier southwards into medium or heavy clay loam topsoils and clay subsoils to the south of the site.

AGRICULTURAL LAND CLASSIFICATION GRADES

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

<u>Grade/Subgrade</u>	<u>Hectares</u>	<u>Percentage of Total Area</u>
2	0.9	19.1
3a	1.3	27.7
3b	2.5	53.1
	—	—
TOTAL	4.7	100
	—	—

Grade 2

Grade 2 land covers the northern end of the site. Soils consist of sandy loam topsoils over medium sandy loam and sandy clay loam subsoils over clay. Soils are slowly permeable, mottled or gleyed at depth and fall within Wetness Class III. Profiles of this type are limited to Grade 2 by both slight wetness and droughtiness problems. Subgrade 3a

Subgrade 3a land occurs over the central part of the site. Soils consist of sandy clay loam or medium clay loam topsoils over gleyed and mottled slowly permeable stoneless clay subsoils which fall within Wetness Class III. Due to the heavier topsoils, this part of the site is limited to Subgrade 3a, the main limitation being wetness.

Subgrade 3b

Subgrade 3b occurs over the southern part of the site. Soils consist of heavy clay loam topsoils over mottled and gleyed slowly permeable stoneless heavy clay loam and clay subsoils which fall within Wetness Class III. Soils of this type suffer from appreciable wetness and workability problems and are limited to Subgrade 3b for this reason.

SITE 5

Site 5 is located around National Grid Reference SE716360 due south of Main Street and directly west of the sports ground. The site covers an area of 2.1 hectares, all of which is in agricultural use. At the time of the survey all agricultural land was in rough grazing.

Geology and Soils

Clay soils cover the whole of the site, with lighter medium clay loam topsoils in the east and heavy clay loam in the west. Subsoils all consist of slowly permeable lacustrine clay.

AGRICULTURAL LAND CLASSIFICATION GRADES

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

<u>Grade/Subgrade</u>	<u>Hectares</u>	<u>Percentage of Total Area</u>
3a	0.8	38.1
3b	1.3	61.9
	<hr/>	<hr/>
TOTAL	2.1	100
	<hr/>	<hr/>

Subgrade 3a

Subgrade 3a land occurs over the eastern half of the site. Soils consist of medium clay loam topsoils over gleyed and mottled slowly permeable stoneless clay subsoils. These fall within Wetness Class III, and are limited to Subgrade 3a by wetness.

Subgrade 3b

Subgrade 3b land occurs in the western half of the site. Soils consist of mottled heavy clay loam topsoils over gleyed and mottled, stoneless slowly permeable clay subsoils. These also fall within Wetness Class III, but

because of the heavier topsoils are limited to subgrade 3b by wetness and workability problems.

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