FRCA

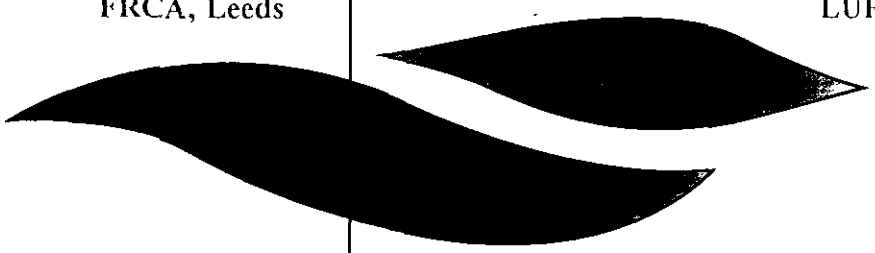
SELBY LOCAL PLAN
NORTH YORKSHIRE

Agricultural Land Classification (ALC)
Report and Maps

MARCH 1998

Resource Planning Team
Northern Region
FRCA, Leeds

RPT Job Number: 9-14/98
MAFF Reference: EL
LURET Job Number: ME1AJYH



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FARMING AND RURAL CONSERVATION AGENCY
An Executive Agency of the Ministry of Agriculture, Fisheries and Food and the Welsh Office

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AGRICULTURAL LAND CLASSIFICATION REPORT

SELBY LOCAL PLAN - OBJECTORS' SITES

INTRODUCTION

1.1 This report presents the findings of a detailed Agricultural Land Classification (ALC) survey of five sites within Selby District. All of the surveys were carried out in March 1998 with the exception of the land east of Garnet Lane, Tadcaster, which had been surveyed in 1989. The work was carried out by the Farming and Rural Conservation Agency (FRCA) for the Ministry of Agriculture, Fisheries and Food (MAFF), in connection with Selby Local Plan. This report and the accompanying maps supersedes previous ALC information for these areas.

1.2 The work was conducted by members of the Resource Planning Team in the Northern Region of FRCA . The land has been graded in accordance with the published MAFF ALC guidelines and criteria (MAFF, 1988). A description of the ALC grades and subgrades is given in Appendix I.

SUMMARY

1.3 Fieldwork was conducted at an average density of one boring per hectare and additional borings were carried out where necessary to refine (two borings per hectare for the land east of Garnet Lane, Tadcaster) grade boundaries.

1.4. The findings are shown on the attached ALC maps which are drawn at a scale of 1:5,000 (1:2,500 in the case of the land east of Garnet Lane, Tadcaster. They are accurate at the scale at which they have been drawn but any enlargement would be misleading. The areas of ALC grades and subgrades are given in Table 1.

Table 1: Area of grades and other land

Site	Area (ha)			
	Grade 2	Subgrade 3a	Subgrade 3b	Other land
East of Broadacres Garth, Carlton	-	6.3	-	-
East of St Mary's Church, Church Fenton	-	-	4.5	-
Teasel Hall Farm, Weeland Road, Eggborough	-	4.4	4.4	1.2
Land south of A64, Bramham	17.5	14.0	10.4	0.7
East of Garnet Lane, Tadcaster	2.0	2.2	3.9	-

EAST OF BROADACRES GARTH, CARLTON

Climate

The key climatic variables for this site are given in Table 2.

Table 2: Climatic and altitude data, east of Broadacres Garth, Carlton

Factor	Units	Values
Grid reference	N/A	SE 652 244
Altitude	m, AOD	6
Accumulated Temperature	day°C (Jan-June)	1407
Average Annual Rainfall	mm	605
Field Capacity Days	days	126
Moisture Deficit, Wheat	mm	111
Moisture Deficit, Potatoes	mm	104
Overall climatic grade	N/A	Grade 1

The combination of rainfall and accumulated temperature at this site means that there is no climatic limitation on ALC grade.

Land Use

At the time of survey all of this site was sown to winter cereals.

Site

This site is level (0-1°) and as such gradient does not restrict ALC grade at any point. Equally, neither flood risk nor microrelief are of significance on this site.

Geology and soils

This area is underlain by Bunter Sandstone (BGS Sheet 79) over which lie deposits of glacial sand and gravel.

The soils on this site have been mapped as belonging to the Newport 1 association (Soils of England and Wales, Sheet 1). Profiles are well drained and consist of loamy sand topsoils and upper subsoils overlying loamy sand or sand lower subsoils.

AGRICULTURAL LAND CLASSIFICATION

Subgrade 3a

All of this site has been mapped as Subgrade 3a, good quality agricultural land. The soils are well drained (Wetness Class I) and consist of loamy medium sand topsoils and upper subsoils overlying loamy medium sand or medium sand lower subsoils. Both topsoils and subsoils are almost stoneless, containing up to 1% small rounded hard stones. Subsoils are well structured. The ALC grade of this land is limited by soil droughtiness.

RPT File: 20,318

EAST OF ST MARY'S CHURCH, CHURCH FENTON

Climate

The key climatic variables for this site are given in Table 3.

Table 3: Climatic and altitude data, east of St Mary's Church, Church Fenton

Factor	Units	Values
Grid reference	N/A	SE 516 368
Altitude	m, AOD	8
Accumulated Temperature	day°C (Jan-June)	1403
Average Annual Rainfall	mm	626
Field Capacity Days	days	139
Moisture Deficit, Wheat	mm	107
Moisture Deficit, Potatoes	mm	99
Overall climatic grade	N/A	Grade 1

The combination of rainfall and accumulated temperature at this site means that there is no climatic limitation on ALC grade.

Land Use

At the time of survey all of this site was mainly in arable use, with a small area of permanent grass in the centre.

Site

The land on this site is level (0°) and as such gradient does not restrict ALC grade at any point. Neither flood risk nor microrelief are grade-limiting on this site.

Geology and soils

Lower Red Sandstone underlies the site (BGS Sheet 70) but this is overlain by deposits of glaciolacustrine clay. Although mapped as belonging to the Ryther and Stockbridge series (Soils of the Leeds District), the field survey work suggests the soils belong to the Fenton series which consists of non-calcareous gley soils.

AGRICULTURAL LAND CLASSIFICATION

Subgrade 3b

All of this site falls in Subgrade 3b, moderate quality agricultural land. The soils are poorly drained (Wetness Class IV) and typically consist of medium clay loam or heavy clay loam topsoils overlying loamy gleyed and slowly permeable clay or silty clay subsoils. The gleyed and slowly permeable horizons begin at between 25cm and 30cm depth and the ALC grade of this land is limited by the combination of soil wetness and topsoil texture.

RPT File: 20,319

TEASEL HALL FARM, WEELAND ROAD, EGGBOROUGH

Climate

The key climatic variables for this site are given in Table 4.

Table 4: Climatic and altitude data, Teasel Hall Farm

Factor	Units	Values
Grid reference	N/A	SE 559 238
Altitude	m, AOD	15
Accumulated Temperature	day°C (Jan-June)	1399
Average Annual Rainfall	mm	608
Field Capacity Days	days	12
Moisture Deficit, Wheat	mm	108
Moisture Deficit, Potatoes	mm	100
Overall climatic grade	N/A	Grade 1

The combination of rainfall and temperature at this site means that there is no climatic limitation on agricultural land quality.

Land Use

At the time of survey the entire site was under permanent grassland except for the area of farm buildings at Teasel Hall, which falls within the category of Other land.

Site

This site is level and as such gradient does not restrict ALC grade at any point. Equally, neither flood risk nor microrelief are of significance on this site.

Geology and soils

The area is underlain by the red Triassic Sherwood Sandstone (BGS Sheet 79) over which there is a thick cover of glacial deposits, principally sand and gravel. The soils have been identified as belonging to the Newport I association (Soils of England and Wales, Sheet 1).

AGRICULTURAL LAND CLASSIFICATION

Subgrade 3a

Land within this subgrade, which is of good quality, occurs in the eastern part of the site. The soils are well drained (Wetness Class I) or moderately well drained (Wetness Class II) and consist of stoneless or very slightly stony medium sandy loam topsoils over loamy medium sand upper subsoils. Lower subsoils are more variable and can be of medium sandy loam, sandy clay loam or occasionally heavy clay loam. Waterlogging is common in winter below about 80cm depth. The ALC grade of this land is limited by slight soil droughtiness.

Subgrade 3b

Subgrade 3b, moderate quality agricultural land, occurs in the western part of the site to the north and south of Teasel Hall. The soils are well drained (Wetness Class I) and consist of stoneless, or occasionally very slightly stony, loamy medium and topsoils over loamy medium sand or medium sand subsoils. Iron enriched, hardened layers occur at depth in places. The ALC grade of this land is limited by soil droughtiness.

Other land

This category consists of the farm buildings and house at Teasel Hall.

RPT File: 20,320

LAND SOUTH OF THE A64, BRAMHAM

Climate

The key climatic variables for this site are given in Table 5.

Table 5: Climatic and altitude data, land south of the A64, Bramham

Factor	Units	Values
Grid reference	N/A	SE 450 407
Altitude	m, AOD	50
Accumulated Temperature	day°C (Jan-June)	1355
Average Annual Rainfall	mm	649
Field Capacity Days	days	152
Moisture Deficit, Wheat	mm	107
Moisture Deficit, Potatoes	mm	89
Overall climatic grade	N/A	Grade 1

The combination of rainfall and temperature at this site means that there is no climatic limitation on agricultural land quality.

Land Use

The entire site was in arable use at the time of survey except for a small grass paddock adjoining Beck House Farm and the house and gardens at Headley Bar, which fall within the category of Other land.

Site

The site is gently undulating with maximum gradients of no more than about 3°. Gradient, therefore, does not restrict ALC grade at any point. Equally, neither flood risk nor microrelief impose any limitation on this site.

Geology and soils

The area is underlain by Permian Magnesian Limestone (BGS Sheet 70) over which there is a thin layer of loamy or clayey drift derived from weathering of the limestone. In places, where this weathered surface layer is very thin, fragmented limestone occurs at the surface resulting in thin very stony soils. The soils have been identified as belonging to the Aberford association (Soils of England and Wales, Sheet 1).

AGRICULTURAL LAND CLASSIFICATION

Grade 2

A large area in the central, slightly lower lying part of the site, falls within Grade 2, very good quality agricultural land. The soils are well drained (Wetness Class I) and consist of very slightly stony to slightly stony medium clay loam topsoils and upper subsoils. Lower subsoils below about 50cm depth are more variable, but are commonly of heavy clay loam, clay, or occasionally sandy loam. Fragmented limestone bedrock occurs below 80cm depth in places. The ALC grade of this land is limited by very slight soil droughtiness.

Subgrade 3a

Land within this subgrade, good quality agricultural land, is found in the eastern and western parts of the site. Soils are well drained (Wetness Class I), but somewhat stonier than those on the Grade 2 land. they consist of slightly stony medium clay loam topsoils and subsoils overlying fragmented limestone bedrock at between 60cm and 80cm depth. The ALC grade of this land is limited by slight soil droughtiness.

Subgrade 3b

This subgrade, which is of moderate quality, occurs on the higher ground near the western and eastern edges of the site. Soils are well drained (Wetness Class I) except for a few isolated patches of imperfect or poor drainage (Wetness Class III or IV). They consist of slightly stony to very stony medium clay loam topsoils over thin, very stony medium clay loam subsoils which pass into fragmented limestone bedrock within 40cm to 50cm of the surface. In some places very stony topsoils directly overlie limestone bedrock. The ALC grade of this land is limited by soil droughtiness and topsoil stoniness.

Other land

Other land on this site occurs in the north east and consists of the house at Headley Bar and its garden.

RPT File: 20,322

LAND EAST OF GARNET LANE, TADCASTER

Climate

The key climatic variables for this site are given in Table 6.

Table 6: Climatic and altitude data, land east of Garnet Lane

Factor	Units	Values
Grid reference	N/A	SE 474 425
Altitude	m, AOD	20
Accumulated Temperature	day°C (Jan-June)	1388
Average Annual Rainfall	mm	644
Field Capacity Days	days	151
Moisture Deficit, Wheat	mm	104
Moisture Deficit, Potatoes	mm	95
Overall climatic grade	N/A	Grade 1

The combination of rainfall and temperature at this site means that there is no climatic limitation on ALC grade.

Land Use

The site was in arable use in March 1998.

Site

The land is not subject to any microrelief or flood risk limitations.

Geology and soils

This site is underlain by Upper Magnesian Limestone (BGS Sheet 70). Most of the soils are derived from weathering limestone (which typically occurs at between 30cm and 90cm depth) but in the north-west an area of soils derived from till occurs. The soils have been mapped as belonging to the Aberford series, the Wothersome series and the Saxton complex (Soils of the Leeds District).

AGRICULTURAL LAND CLASSIFICATION

Grade 2

Grade 2, very good quality agricultural land, occurs in the south-west of the site. The soils are well drained (Wetness Class I) and consist of medium clay loam topsoils and upper subsoils overlying either heavy clay loam or weathering limestone. The weathering typically begins at between 70cm and 100cm depth and soil droughtiness is the factor which limits this land to Grade 2.

Subgrade 3a

Land in this subgrade, defined as good quality agricultural land, occurs in the centre and south-east. Again, the soils are well drained (Wetness Class I), and typically consist of medium clay loam topsoils and subsoils overlying weathering limestone at between 50cm and 60cm depth. Profiles are shallower than on the adjoining Grade 2 land and therefore are somewhat more droughty. This soil droughtiness restriction further limits the ALC grade to Subgrade 3a.

Subgrade 3b

Subgrade 3b, moderate quality agricultural land, covers 48% of the site. In most areas the soils are well drained (Wetness Class I) and consist of medium clay loam topsoils overlying weathering limestone at between 30cm and 40cm depth. These soils have a low water-holding capacity due to their limited depth and are limited to Subgrade 3b by soil droughtiness. In the north-western corner of the site some profiles are poorly drained (Wetness Class IV) and consist of medium clay loam or heavy clay loam topsoils overlying heavy clay loam, clay or silty clay subsoils. These soils become gleyed and slowly permeable at between 25cm and 40cm depth. In this case the combination of soil wetness and topsoil texture is what limits the land to Subgrade 3b.

RPT File: 20,323

SOURCES OF REFERENCE

British Geological Survey (1974) *Sheet No. 70, Leeds (Solid geology) 1:50,000 scale.* BGS: London.

Soil Survey of England and Wales (1970) *Soils of the Leeds District.* SSEW: Harpenden.

British Geological Survey (1951) *Sheet No. 70, Leeds (Drift geology) 1:63,360 scale.* BGS: London.

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Ministry of Agriculture, Fisheries and Food (1988) *Agricultural Land Classification of England and Wales: Revised guidelines and criteria for grading the quality of agricultural land.* MAFF: London.

Met. Office (1989) *Climatological Data for Agricultural Land Classification.* Met. Office: Bracknell.

Soil Survey of England and Wales (1983) *Sheet 1, Soils of Northern England, 1:250,000 scale.* SSEW: Harpenden.

Soil Survey of England and Wales (1984) *Soils and their Use in Northern England* SSEW: Harpenden

APPENDIX I

DESCRIPTIONS OF THE GRADES AND SUBGRADES

Grade 1: Excellent Quality Agricultural Land

Land with no or very minor limitations to agricultural use. A very wide range of agricultural and horticultural crops can be grown and commonly includes top fruit, soft fruit, salad crops and winter harvested vegetables. Yields are high and less variable than on land of lower quality.

Grade 2: Very Good Quality Agricultural Land

Land with minor limitations which affect crop yield, cultivations or harvesting. A wide range of agricultural or horticultural crops can usually be grown but on some land of this grade there may be reduced flexibility due to difficulties with the production of the more demanding crops such as winter harvested vegetables and arable root crops. The level of yield is generally high but may be lower or more variable than Grade 1 land.

Grade 3: Good to Moderate Quality Land

Land with moderate limitations which affect the choice of crops, the timing and type of cultivation, harvesting or the level of yield. When more demanding crops are grown, yields are generally lower or more variable than on land in Grades 1 and 2.

Subgrade 3a: Good Quality Agricultural Land

Land capable of consistently producing moderate to high yields of a narrow range of arable crops, especially cereals, or moderate yields of a wide range of crops including cereals, grass, oilseed rape, potatoes, sugar beet and the less demanding horticultural crops.

Subgrade 3b: Moderate Quality Agricultural Land

Land capable of producing moderate yields of a narrow range of crops, principally cereals and grass, or lower yields of a wider range of crops or high yields of grass which can be grazed or harvested over most of the year.

Grade 4: Poor Quality Agricultural Land

Land with severe limitations which significantly restrict the range of crops and/or the level of yields. It is mainly suited to grass with occasional arable crops (e.g. cereals and forage crops) the yields of which are variable. In moist climates, yields of grass may be moderate to high but there may be difficulties in utilisation. The grade also includes very droughty arable land.

Grade 5: Very Poor Quality Agricultural Land

Land with severe limitations which restrict use to permanent pasture or rough grazing, except for occasional pioneer forage crops.