FRCA

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FARMING AND RURAL CONSERVATION AGENCY

An Executive Agency of the Ministry of Agriculture, Fisheries and Food and the Welsh Office

RYEDALE DISTRICT LOCAL PLAN

Agricultural Land Classification (ALC) of Objectors' Sites Maps and Report

May 1999

Resource Planning Team
Northern Region
FRCA, Leeds

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AGRICULTURAL LAND CLASSIFICATION REPORT

1. INTRODUCTION

1.1 This report presents the findings of detailed Agricultural Land Classification (ALC) surveys of five sites within Ryedale District. The surveys were carried out during May 1999.

1.2 The surveys were carried out by the Farming and Rural Conservation Agency (FRCA) for the Ministry of Agriculture, Fisheries and Food (MAFF), in connection with the non-inclusion of these sites in the Ryedale District Local Plan.

This report supersedes any previous ALC information for this land.

1.3 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.

2. SUMMARY

2.1 Fieldwork was conducted at an average density of one boring per hectare and a minimum of one soil pit was dug at each site.

2.2 The findings of the survey are shown on the attached ALC maps which are drawn at a scale of 1:5,000; it is accurate at this scale but any enlargement would be misleading.

2.3 The areas and proportions of the ALC grades and subgrades on the surveyed land are summarised in Table 1.

Table 1: Area of grades and other land

Site	ALC grade areas [ha]				
	2	3a	3b	other	total
Land East of Eden Camp, Malton (83/04)	3.6				**3.6**
Land West of Welham Road, Norton (96/16)			6.1	0.2	**6.3**
Land to the South of West Pasture, Pickering (102/37)		3.8		0.3	**4.1**
Land to the North of Pasture Lane, Malton (83/15)	1.0				**1**
Land at Rainbow Farm, Malton (83/16)			1.0		**1**

3. CLIMATE

3.1. Climate affects the grading of land through the assessment of an overall climatic limitation and also through interactions with soil characteristics.

3.2 The key climatic variables used for grading this site are given in the relevant section for each site and were obtained from the published 5km grid datasets using the standard interpolation procedures (Met. Office, 1989).

3.3 The climatic criteria are considered first when classifying land as climate can be overriding in the sense that severe limitations will restrict land to low grades irrespective of favourable site or soil conditions.

3.4 The main parameters used in the assessment of an overall climatic limitation are average annual rainfall (AAR), as a measure of overall wetness, and accumulated temperature (ATO, January to June), as a measure of the relative warmth of a locality.

4. LAND EAST OF EDEN CAMP, MALTON REF 083/04

4.1 Location, Land Use and Relief

The site is located to the north-west of the main A64/A169 roundabout north of Malton. At the time of the survey the entire site was in winter cereals. The land is level, lying at approximately 21 m AOD. Grade is not limited by micro-relief or flood risk.

4.2 Climate

Table 2 Climatic and altitude data

Factor	Units	Values
Grid reference	N/A	SE 800 735
Altitude	m, AOD	21
Accumulated Temperature	day°C (Jan-June)	1360
Average Annual Rainfall	mm	675
Field Capacity Days	days	165
Moisture Deficit, Wheat	mm	105
Moisture Deficit, Potatoes	mm	96
Overall climatic grade	N/A	Grade 1

4.3 Geology and Soils

The geology of the area is shown as post glacial drift comprising warp and lacustrine clay (BGS Sheet 53). Soils have been mapped as Foggathorpe 2 Association, possibly including some Landbeach Association (*Soils of England and Wales, Sheet 1*). On site the soils were found to be predominantly medium textured topsoils overlying lighter subsoils.

4.4 Agricultural Land Classification

4.4.1 Grade 2

The entire site falls into Grade 2, very good quality agricultural land. Soils generally comprise stoneless medium clay loam topsoil overlying sandy clay loam or medium sandy loam subsoils. Profiles are well-drained, falling into Wetness Class I. Grade is limited by soil droughtiness.

RPT file 20,529

5. LAND NORTH OF PASTURE LANE, MALTON REF 083/15

5.1 Location, Land Use and Relief

This site forms part of the old show ground at Malton, lying to the north of Pasture Lane. The field is in permanent grass and lies on a gentle to moderate east facing slope. There are no site characteristics which limit grade.

5.2 Climate

Table 3: Climatic and altitude data

Factor	Units	Values
Grid reference	N/A	SE 785 723
Altitude	m, AOD	30
Accumulated Temperature	day°C (Jan-June)	1356
Average Annual Rainfall	mm	679
Field Capacity Days	days	167
Moisture Deficit, Wheat	mm	102
Moisture Deficit, Potatoes	mm	92
Overall climatic grade	N/A	Grade 1

5.3 Geology and Soils

The site is underlain by Middle Coralline Oolite Limestone (BGS Sheet 53). Soils have been mapped as either Elmton 2 or Badsey 2 associations (Soils of England and Wales, Sheet 1). Topsoils are medium textured overlying medium to light textured subsoils.

5.4 Agricultural Land Classification

The entire site falls into Grade 2, very good quality agricultural land. Soils comprise very slightly stony medium clay loam topsoils overlying medium clay loam or sandy clay loam upper subsoils and a lower subsoil made up of 70% hard gravel. Profiles are well drained, falling into Wetness Class I, with grade being limited by soil droughtiness.

RPT file 20,532

6. LAND AT RAINBOW FARM, MALTON REF 083/16

6.1 Location, Land Use and Relief

This site comprises a strip of land forming part of a large field currently under winter cereals. It lies off the north west corner of Rainbow Lane and to the north of a housing estate. The land slopes gently to the north.

6.2 Climate

Table 4: Climatic and altitude data

Factor	Units	Values
Grid reference	N/A	SE 789 729
Altitude	m, AOD	30
Accumulated Temperature	day°C (Jan-June)	1357
Average Annual Rainfall	mm	678
Field Capacity Days	days	166
Moisture Deficit, Wheat	mm	103
Moisture Deficit, Potatoes	mm	93
Overall climatic grade	N/A	Grade 1

6.3 Geology and Soils

Due to the small size of the site and the scale of mapping it is not possible to interpret precisely either the published geology or soils for the site, which falls at the boundary between post-glacial sand and gravel and Middle Coralline Oolite in terms of geology, and between Landbeach and Elmton 2 soil associations. The soils in the field were very stony medium textured topsoils, becoming progressively more stony through to the lower subsoil.

6.4 Agricultural Land Classification

6.4.1 Subgrade 3b

The site has been graded as Subgrade 3b. Although two borings gave Subgrade 3a limited by soil droughtiness, the variability of the surface stone content across the site, and the indication of shallow very droughty (Grade 4) conditions at the top of the site has led to an overall grade of Subgrade 3b been assigned across the area.

RPT file 20533

7. LAND TO THE SOUTH OF WEST PASTURE, PICKERING REF 102/37

7.1 Location, Land Use and Relief

This site lies on the southern outskirts of Pickering, west of Goslipgate and north of the dismantled railway. It is level and at the time of survey comprised a pasture field in the west and a smaller parcel of land associated with a horticultural nursery in the east.

7.2 Climate

Table 5: Climatic and altitude data

Factor	Units	Values
Grid reference	N/A	SE 792 834
Altitude	m, AOD	30
Accumulated Temperature	day°C (Jan-June)	1351
Average Annual Rainfall	mm	689
Field Capacity Days	days	178
Moisture Deficit, Wheat	mm	100
Moisture Deficit, Potatoes	mm	90
Overall climatic grade	N/A	Grade 1

7.3 Geology and Soils

Soils are derived from thick deposits of post glacial sand and gravel, which overlie solid deposits of Kimmeridge Clay. Topsoils are typically medium textured over similar textured subsoils. Stoniness increases with depth from about 5 to 10% in the topsoil up to 50% in the subsoil. Soils are assessed as Wetness Class I

7.4 Agricultural Land Classification

7.4.1 Subgrade 3a

All agricultural land is Subgrade 3a. Soils are free drained but have a reduced water holding capacity due to the very stony subsoils. Droughtiness is the grade limiting factor.

7.4.2 Other land

This comprises hard structures associated with the horticultural nursery.

RPT file 20531

8. *LAND WEST OF WELHAM ROAD, NORTON, REF 96/16*

8.1 Location, Land Use and Relief

The site is located on the western outskirts of Norton, west of Welham Road. It is level and at the time of survey was all in grass. During the site inspection it was noted that the northern most field contained a significant amount of ragwort, which is classed as an injurious weed by the 1959 Weeds Act. It would be good practice to remove this hazard. The southern most field contained a horse training gallop.

8.2 Climate

Table 6 Climatic and altitude data

Factor	Units	Values
Grid reference	N/A	*SE 800 735*
Altitude	m, AOD	21
Accumulated Temperature	day°C (Jan-June)	1360
Average Annual Rainfall	mm	675
Field Capacity Days	days	165
Moisture Deficit, Wheat	mm	105
Moisture Deficit, Potatoes	mm	96
Overall climatic grade	N/A	Grade 1

8.3 Geology and Soils

Soils are derived from post glacial sand and gravel deposits. These have produced free draining soils , assessed as Wetness Class 1. Topsoils are typically loamy medium sand over similar upper subsoils. Lower subsoils are typically a medium sand. Profiles are generally stoneless.

8.4 Agricultural Land Classification

8.4.1 Subgrade 3b

All agricultural land was classed as Subgrade 3b. Although soils are freely drained they have a very low water holding capacity, due to their light texture. Droughtiness limits the ALC grade of this land.

8.4.2 Other Land

This comprises a residential dwelling in the south of the site.

RPT file 20530

SOURCES OF REFERENCE

British Geological Survey (1960) *Sheet No. 53, Pickering (Drift). 1:63,360 scale.* BGS: London.

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.

Ministry of Agriculture, Fisheries and Food (1982) *Agricultural Land Classification of England and Wales (Provisional) Sheet No. 92. 1:63,360 scale.*

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

Soil Survey of England and Wales (1983) *Sheet* 1 *Northern England.* 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.