AGRICULTURAL LAND CLASSIFICATION

RIPON LOCAL PLAN

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CONTENTS

MAP

RIPON LOCAL PLAN

AGRICULTURAL LAND CLASSIFICATION REPORTS ON VARIOUS SITES AROUND RIPON

(NB See also April 1990 report covering eight other Local Plan Sites around the town).

SECTION 1: INTRODUCTION AND SURVEY METHODS

Land covering a total area of 71 hectares was surveyed on 5 separate sites on the outskirts of the town. Seventy eight per cent of this land is in agricultural production.

Survey work was carried out in January 1991 when soils were examined by hand auger borings at points pre-determined by the National Grid. The overall survey density was approximately one boring per hectare with additional borings being made, where necessary, to refine grade boundaries and check soil variability.

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

SECTION 2: LAND AT BELLWOOD LANE

Location

The site is located around national grid reference SE 313694 between Bellwood Farm on the A61 and Thorpe Cottage.

Land Use

The total area covered by the site is 19 hectares all of which is ploughed except for a small area of rough pasture to the south of Thorpe Cottage.

Climate

The average annual rainfall is approximately 669 mm. Accumulated temperature above 0°C between January and June is 1362 days 0°, and the land is at field capacity for 168 days/yr. The rainfall and temperature figures indicate that there is no overall climatic limitation on ALC grade.

Relief

The site is gently undulating at average altitude of about 35 m above Ordnance datum. Maximum slopes are about 4° and there is thus no restriction on the use of agricultural machinery.

Geology and Soils

Soils are formed on boulder clay and coarse glaciofluvial drift which forms a thick cover over the underlying Permian limestones and mudstones. Topsoils vary from sandy loam to medium clay loam on occasionally heavy clay loam and overlie similarly variable subsoils. The heavier clay loam and clay subsoils are gleyed and slowly permeable below about 35 cm depth and fall within Wetness Class IV. Other soils, depending on texture and depth to slowly permeable subsoil material, fall within Wetness Classes I-III.

Agricultural Land Classification

ALC grades occurring on the site are as follows.

Grade/Subgrade	Hectares	% Total
2	1.2	6.2
3a	11.4	59.0
3b	4.7	24.4
4	1.2	6.2
Urban	0.8	4.2
	19.3	100.0

Grade 2

Land in this grade occurs in a small area on the NW boundary of the site. Soils consist of free draining (Wetness Class I), sandy and medium clay loam topsoils over similar subsoils. The only limiting factor on this land is slight surface stoniness.

Subgrade 3a

Subgrade 3a land is widespread especially in the east around Thorpe Cottage. Topsoils consist largely of medium clay loam over medium and heavy clay loam subsoils which are gleyed and slowly permeable below about 50-60 cm. Profiles of this type fall within Wetness Class III and are limited to subgrade 3a by slight wetness and workability problems.

Subgrade 3b

Land within this subgrade occurs in the centre of the site east of Bellwood Farm. Soils consist of medium and heavy clay loam topsoils over gleyed slowly permeable subsoils formed of heavy clay loam or clay. These soils, which are slowly permeable immediately below the topsoil, fall within Wetness Class IV and are limited by wetness and workability problems which are more severe than on the surrounding subgrade 3a land.

Grade 4

This grade is confined to a small area of disturbed land in the northern corner of site. Soils consist of sandy loam to a depth of 60 cm and contain a high percentage of cinders and other rubble which impose an overriding limitation on ALC grade.

Urban

These consist of Bellwood Farm in the west of the site and Thorpe Nurseries and Thorpe Cottage in the east.

LAND AT GREYSTONE LANE (NGR SE 313697)

Location

The site is located around National Grid Reference SE 313697 adjoining the Bellwood Farm Survey area between Greystone Land and the A61. It covers 8.1 hectares.

Land Use

All the site is in arable use.

Climate

Average Annual Rainfall is approximately 669 mm. Accumulated temperature above 0°C between January and June is 1362 day °C and the land is at field capacity for 168 days a year. The temperature and rainfall values for the site indicate that there is no overall climatic limitation on ALC grade.

Relief

Mean altitude is approximately 38 metres above OD and relief is gently undulating. Gradients seldom exceed 4° and do not restrict the use of agricultural machinery.

Geology and Soils

Soils are formed on fine loamy to clayey till and typically consist of clay loam topsoils and subsoils which are gleyed and slowly permeable at depth.

Agricultural Land Classification Grades

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

Grade/Subgrade	Hectares	Per cent of total site area
2	4.4	54.3
3a	3.0	37.0
3b	0.3	3.7
4	0.4	5.0
TOTAL	8.1	100%

Grade 2

Grade 2 land is widespread and consists of medium clay loam topsoils over heavy clay loam subsoils which are gleyed and slowly permeable below about 65 cm depth. All profiles fall within Wetness Class II and are limited by slight topsoil wetness and workability problems.

Subgrade 3a

Land in this subgrade occurs in the centre of the site. Soils are similar to those on the Grade 2 land, but profiles fall within Wetness Class III and are limited by wetness and workability problems more severe than on the adjacent grade 2 areas.

Subgrade 3b

A small area of subgrade 3b land occurs in the south western corner. Soils consist typically of medium clay loam topsoils over gleyed and slowly permeable heavy clay loam subsoils. These profiles meet the criteria for Wetness Class IV and are thus limited by soil wetness and workability problems.

Grade 4

To grade 4 land identified on the Bellwood Lane survey also extends into the north eastern corner of this site. Severe soil disturbance is the main restriction on ALC grade.

LAND AT BOROUGHBRIDGE ROAD

Location

The site is located around National Grid Reference SE 323706, east of the old railway line and north of the B6265. It covers 7.5 hectares.

Land Use

The site is in mixed arable and grassland use.

Climate

Average annual rainfall is approximately 633 mm. Accumulated temperature above 0°C between January and June is 1379 day °C and the land is at field capacity for 159 days a year. The rainfall and temperature values indicate that there is no overall climatic limitation on ALC grade.

Relief

Altitude is on average around 20 metres above Ordnance Datum. There are no slopes of more than 2-3° and thus no restriction on use of agricultural machinery.

Geology and Soils

The area is underlain by coarse textured glaciofluvial drift deposits on which have formed well drained coarse or fine loamy topsoils, sometimes over heavier subsoils.

Agricultural Land Classification

The ALC grades occurring on the site area as follows.

Grade	Hectares	Percentage of Total Site Area
2	6.5	86.7%
3b	0.6	8.0%
Urban	0.4	5.3%
	7.5	100%

Grade 2

This grade is widespread throughout the site. Soils consist of deep well drained sandy loams or sandy clay loams which are slightly stony, particularly at depth. All soils fall within Wetness Class I and are restricted to Grade 2 only by slight droughtiness.

Subgrade 3b

This consists of a small raised area in the eastern half of the site. Soils are similar to those elsewhere on the site, but have a much higher stone content. They are limited to subgrade 3b by droughtiness and topsoil stone content.

Urban

This includes two houses with associated gardens and buildings and the access road to the sewage works.

LAND AT DOUBLESTONES QUARRY

Location

The site is located around National Grid Reference SE 296714 on the west side of Ripon, immediately north of the River Laver. It covers 21.6 hectares.

Land Use

Almost all of the site is under permanent pasture.

Climate

Average annual rainfall is approximately 692 mm. Accumulated temperature above 0°C between January and June is 1350 day °C and the land is at field capacity for 174 days a year. The rainfall and temperature values indicate that there is no overall climatic limitation on ALC grade.

Relief

Altitude is on average around 45 metres above Ordnance Datum with steep slopes of up to 25° around the old quarry faces separating flat areas between. These slopes restrict the use of agricultural machinery and thus limit ALC grade.

Flood Risk

Although the land is high enough above the River Laver to escape river flooding, prolonged heavy rain can result in surface ponding in the flat quarry bottoms.

Geology and Soils

The site is a restored sand and gravel quarry and little of the original river terrace soil forming material remains. Soils now consist of a thin restored

clay loam over impenetrable stony material. Where the soil is undisturbed it tends to be heavy, consisting of silty clay loam topsoils over similar or heavier subsoils.

Agricultural Land Classification Grades

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

Grade	Hectares	Percentage of Total Site Area
2	1.7	7.7%
3b	11.2	50.4%
4	3.5	15.8%
5	5.2	23.4%
Non Agricultural	0.4	1.8%
Urban	0.2	0.9
TOTAL	22.2	100%

Grade 2

Land of this grade occurs on the southern tip of the site in an area which either has not been worked during the quarrying operations, or has been used as a soil storage area. As a result there is at least one metre of soil present. This consists of a sandy or silty clay loam topsoil over a heavier subsoil which is slowly permeable only at depth and limited only by slight wetness and workability problems.

Subgrade 3b

Subgrade 3b land is widespread. Soils in many places consists of restored often compacted medium clay loam material varying from 25-50 cm in thickness over an impenetrable layer of rubble or stone. Profiles of this type are subject to droughtiness and limited to subgrade 3b for this reason. In other places, where soils are deeper, slowly permeable layers at less than 45 cm depth impose a subgrade 3b wetness limitation.

Grade 4

The two areas of grade 4 land in the northern part of the site both contain thin stony soils of only 25 cm thickness over stone. Both are restricted to Grade 4 by droughtiness.

Grade 5

The steeply sloping sides of the quarry contain gradients of between 18° and 25° and are limited to Grade 5 for this reason.

Urban

The house and buildings in the north eastern part of the side fall within this category.

Non Agricultural

This consists of a small area of fenced off scrub along the north eastern boundary.

LAND AT QUARRY MOOR

Location

The site is located around National Grid Reference SE 309693 to the south of Ripon. It covers 13.8 hectares none of which is in agricultural use. The site is an SSSI.

Agricultural Land Classification

The Agricultural Land Classification for this site is as follows:

Land Use	Hectares	Per cent of Total Site Area
Non Agricultural	13.3	96.4%
Urban	0.5	3.6%
TOTAL	13.8	100%

Non Agricultural

Most of the area falls into this category it has open access to the public and is used for recreational and leisure purposes.

Urban

This consists of a residential dwelling in the north eastern corner of the site.