TYNEDALE DISTRICT LOCAL PLAN
(SITES AROUND CORBRIDGE)

Agricultural Land Classification (ALC)
Report and Maps

DECEMBER 1997

Resource Planning Team
Northern Region
FRCA, Leeds

RPT Job Number: 25-28/97
MAFF Reference: EL 10046
LURET Job Number: ME1ANW0

AGRICULTURAL LAND CLASSIFICATION REPORT

TYNEDALE DISTRICT LOCAL PLAN - SITES AROUND CORBRIDGE

INTRODUCTION

1.1 This report presents the findings of detailed Agricultural Land Classification (ALC) surveys of four sites around Corbridge. The surveys were carried out in October 1997. 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 Tynedale District Local Plan. These surveys supersedes previous ALC information for this land.

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.

1.3. At the time of survey the land use on the site was as follows:

Howden Dene East

The east of this site was agriculturally derelict, consisting of untended pasture, while the west is non-agricultural land consisting of derelict buildings, scrub and a track.

Howden Dene South

Most of this site was sown to winter cereals. A small area of non-agricultural land occurs in the north-eastern corner.

Corchester Towers

All of this land was sown to winter cereals.

Station Road

All of this land had been sown with winter cereals.

SUMMARY

1.4 Fieldwork was conducted at an average density of one boring per hectare (four borings per hectare at Howden Dene East) and one soil pit was dug on each site.

1.5 The survey findings are shown on the attached ALC maps, which are drawn at a scale of 1:5,000 (1:2,500 for Howden Dene East). They are accurate at the scale at which they have been produced but any enlargement would be misleading. The areas of ALC grades and subgrades are shown in Table 1.

Table 1: Area of grades and other land

Site	Area (ha)			
	Grade 1	Grade 2	Subgrade 3b	Other land
Howden Dene East	-	0.4	-	0.2
Howden Dene South	-	3.5	0.4	0.2
Corchester Towers	-	-	3.9	-
Station Road	4.7	-	-	-

2. HOWDEN DENE EAST

Climate

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

Table 2: Climatic and altitude data, Howden Dene East

Factor	Units	Values
Grid reference	N/A	NZ 002 642
Altitude	m, AOD	65
Accumulated Temperature	day°C (Jan-June)	1293
Average Annual Rainfall	mm	641
Field Capacity Days	days	170
Moisture Deficit, Wheat	mm	92
Moisture Deficit, Potatoes	mm	77
Overall climatic grade	N/A	Grade 2

The combination of rainfall and temperature at this site means that there is an overall climatic limitation of Grade 2.

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 Millstone Grit (BGS, Sheet 20) over which lie river terrace deposits. The soils have been identified as belonging to the Ellerbeck association (Soils of England and Wales, Sheet 1).

AGRICULTURAL LAND CLASSIFICATION

Grade 2

All of the agricultural land on this site falls in Grade 2, very good quality. The soils are well drained (Wetness Class I) and consist of very slightly to slightly stony medium sandy loam topsoils and subsoils. Some profiles are underlain by gravel below 75 cm depth. The ALC grade of this land is limited by overall climate and by very slight soil droughtiness.

Other land

Other land on this site occurs in the west and consists of derelict buildings, scrub and a track.

File Ref: 20,184

3. HOWDEN DENE SOUTH

Climate

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

Table 3: Climatic and altitude data, Howden Dene South

Factor	Units	Values
Grid reference	N/A	NY 998 641
Altitude	m, AOD	55
Accumulated Temperature	day°C (Jan-June)	1305
Average Annual Rainfall	mm	639
Field Capacity Days	days	170
Moisture Deficit, Wheat	mm	93
Moisture Deficit, Potatoes	mm	79
Overall climatic grade	N/A	Grade 2

The combination of rainfall and temperature at this site means that there is an overall climatic limitation of Grade 2.

Site

The land is moderately to strongly sloping (4-10°) with a southerly aspect. Parts of the south of the site, where slopes exceed 7°, are limited by their gradient to Subgrade 3b. However, neither flood risk nor microrelief limit ALC grade at any point on this site.

Geology and soils

Millstone Grit underlies this site (BGS, Sheet 20), which is covered by river terrace deposits. The soils have been mapped as belonging to the Ellerbeck association (Soils of England and Wales, Sheet 1).

AGRICULTURAL LAND CLASSIFICATION

Grade 2

Most of the land falls in Grade 2, very good quality agricultural land. The soils are well drained (Wetness Class I) and consist of medium sandy loam topsoils and subsoils, with loamy medium sand or medium sand occurring at depth in places. Both topsoils and subsoils are typically very slightly to slightly stony, containing between 3% and 12% sandstones in most cases (2% greater than 2 cm in the topsoil). This land is moderately sloping (4° to 7°) and, given the light-textured nature of the topsoils, there is a slight risk of water erosion. The erosion risk limits the land to Grade 2, as do the overall climate of the area and, in places, slight soil droughtiness.

Subgrade 3b

An area of Subgrade 3b, moderate quality agricultural land, occurs in the south of the site. The soils are very similar to those on the Grade 2 land but this land is strongly sloping (8° to 10°) and is limited to Subgrade 3b by its gradient.

Other land

A small area of scrub occurs in the north-east of the site.

File Ref: 20,183

4. CORCHESTER TOWERS

Climate

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

Table 4: Climatic and altitude data, Corchester Towers

Factor	Units	Values
Grid reference	N/A	NY 985 651
Altitude	m, AOD	48
Accumulated Temperature	day°C (Jan-June)	1312
Average Annual Rainfall	mm	642
Field Capacity Days	days	171
Moisture Deficit, Wheat	mm	94
Moisture Deficit, Potatoes	mm	80
Overall climatic grade	N/A	Grade 1

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

Site

The land is level to gently sloping (1-3°) with a generally southerly aspect. As such, gradient does not limit ALC grade at any point, and neither microrelief nor flood risk are of significance on this site.

Geology and soils

Millstone Grit underlies this site but is overlain by drift deposits consisting of till and glacial lake sediments (BGS, Sheet 20). The soils are medium to heavy-textured and have been mapped as belonging to the Brickfield 3 association (Soils of England and Wales, Sheet 1), and, in a more detailed survey, Hallsworth series (Soils of the Hexham District).

AGRICULTURAL LAND CLASSIFICATION

Subgrade 3b

All of this site has been mapped as Subgrade 3b, moderate quality agricultural land. The soils are imperfectly or poorly drained (Wetness Classes III and IV) and consist of medium clay loam topsoils overlying heavy clay loam upper subsoils and heavy clay loam, heavy silty clay loam or clay lower subsoils. The profiles become gleyed and slowly permeable at between 25 cm and 45 cm depth. Although the imperfectly drained soils meet the criteria for Subgrade 3a, they form no apparent pattern. Soil wetness and a pattern limitation are, therefore, the factors which limit this land to Subgrade 3b.

File Ref: 20,186

5. STATION ROAD

Climate

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

Table 5: Climatic and altitude data, Station Road

Factor	Units	Values
Grid reference	N/A	NY 990 638
Altitude	m, AOD	26
Accumulated Temperature	day°C (Jan-June)	1338
Average Annual Rainfall	mm	636
Field Capacity Days	days	171
Moisture Deficit, Wheat	mm	96
Moisture Deficit, Potatoes	mm	84
Overall climatic grade	N/A	Grade 1

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

Site

This site is level and neither gradient nor microrelief limit ALC grade at any point. Although the land is close to the River Tyne the site and adjoining areas are protected by flood defenses which are designed to withstand floods with a return period of over fifty years. For this reason flood risk is not considered to be a grade-limiting factor on this site.

Geology and soils

Millstone Grit is overlain by river alluvium (BGS, Sheet 20). The soils are light-textured and well drained, and have been mapped as belonging to the Wharfe association (Soils of England and Wales, Sheet 1).

AGRICULTURAL LAND CLASSIFICATION

Grade 1

All of this site has been mapped as Grade 1, excellent quality agricultural land. The soils are well drained (Wetness Class I) and typically consist of fine or medium sandy loam topsoils and subsoils. Both topsoils and subsoils are stoneless to very slightly stony, containing up to 2% very small and small sandstones and hard stones. This site lies close to the south bank of the River Tyne but the area is protected by flood defenses (see page 8) and flood risk is not considered to be a grade-limiting factor.

Although lying in the valley bottom the exact location of the site and the loamy nature of the soils suggest that frost-risk is unlikely to be more significant than elsewhere.

Some alluvial soils alongside the River Tyne have problems with raised lead levels associated with lead-mining upstream. The lead levels at this site were assessed using the prescribed methodology and, although somewhat higher than background concentrations, the levels are not considered sufficiently high to merit downgrading the land.

This land, therefore, has no or only very minor limitations to agricultural use.

File Ref: 20,185
Resource Planning Team
Northern Region
FRCA, Leeds

SOURCES OF REFERENCE

British Geological Survey (1989) *Sheet No. 20, Newcastle-upon-Tyne. 1:50,000 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.

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.

Soil Survey of England and Wales (1977) *Soils of the Hexham District (Memoir and 1:63,360 scale map).* SSEW: Harpenden

[ALC Map]

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.

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1.3. At the time of survey the land use on the site was as follows:

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Most of this site was sown to winter cereals. A small area of non-agricultural land occurs in the north-eastern corner.

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Moisture Deficit, Potatoes	mm	77
Overall climatic grade	N/A	Grade 2

The combination of rainfall and temperature at this site means that there is an overall climatic limitation of Grade 2.

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 Millstone Grit (BGS, Sheet 20) over which lie river terrace deposits. The soils have been identified as belonging to the Ellerbeck association (Soils of England and Wales, Sheet 1).

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Subgrade 3b

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