CHESTER-LE-STREET LOCAL PLAN

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

December 1998

Resource Planning Team Northern Region FRCA, Leeds RPT Job Numbers: 91-114/98 MAFF Reference: EL 10263 LURET Job Number:ME1ACJK

ļ

CONTENTS

-

.

.

		Page
1.	INTRODUCTION	1
2.	SUMMARY	1
3.	CLIMATE	3
4.	 SCORERS LANE, GREAT LUMLEY (198/5) 4.1 Location, Land Use, and Relief 4.2 Climate 4.3 Geology and Soils 4.4 Agricultural Land Classification 	4
5.	LAND NORTH OF PLAWSWORTH (134/1)	6
	 5.1 Location, Land Use, and Relief 5.2 Climate 5.3 Geology and Soils 5.4 Agricultural Land Classification 	
6.	LAND WEST OF BOURNMOOR (DD 249)	8
	 6.1 Location, Land Use, and Relief 6.2 Climate 6.3 Geology and Soils 6.4 Agricultural Land Classification 	
7.	BARRAS HILL, SACRISTON (DD 208/1)	10
	 7.1 Location, Land Use and Relief 7.2 Climate 7.3 Geology and Soils 7.4 Agricultural Land Classification 	
8.	LAND AT PELTON (DD 170)	12
	 8.1 Location, Land Use and Relief 8.2 Climate 8.3 Geology and Soils 8.4 Agricultural Land Classification 	

9.	NORTH OF OUSTON (DD 166)	14
	9.1 Location, Land Use and Relief	
	9.2 Climate	
	9.3 Geology and Soils	
	9.4 Agricultural Land Classification	
10.	WEST OF PELTON FELL (136/7)	16
	10.1 Location, Land Use, and Relief	
	10.2 Climate	
	10.3 Geology and Soils	
	10.4 Agricultural Land Classification	
11.	THE CRESCENT, CHESTER MOOR (134/3)	18
	11.1 Location, Land Use, and Relief	
	11.2 Climate	
	11.3 Geology and Soils	
	11.4 Agricultural Land Classification	
12.	LAND WEST OF NETTLESWORTH (131/8)	20
	12.1 Location, Land Use, and Relief	
	12.2 Climate	
	12.3 Geology and Soils	
	12.4 Agricultural Land Classification	
13.	WALDRIDGE LANE, CHESTER MOOR (130/1-4)	22
	13.1 Location, Land Use, and Relief	
	13.2 Climate	
	13.3 Geology and Soils	
	13.4 Agricultural Land Classification	
14.	CHESTER MOOR FARM (130/1-4)	24
	14.1 Location, Land Use, and Relief	
	14.2 Climate	
	14.3 Geology and Soils	
	14.4 Agricultural Land Classification	

.

--

15.	LAND EAST OF A167/A6127, CHESTER-LE-STREET (130/1-4)	26
	15.1 Location, Land Use, and Relief	
	15.2 Climate	
	15.3 Geology and Soils	
	15.4 Agricultural Land Classification	
16.	LAND EAST OF BOURNMOOR (DD 127)	27
	16.1 Location, Land Use, and Relief	
	16.2 Climate	
	16.3 Geology and Soils	
	16.4 Agricultural Land Classification	
17.	WEST OF OUSTON (162/1)	29
	17.1 Location, Land Use, and Relief	
	17.2 Climate	
	17.3 Geology and Soils	
	17.4 Agricultural Land Classification	
18.	STELLA GILL (DD 169)	31
	18.1 Location, Land Use, and Relief	
	18.2 Climate	
	18.3 Geology and Soils	
	18.4 Agricultural Land Classification	
19.	NEWFIELD FARM, PELTON (DD 177/8 AND DD 177/2)	33
	19.1 Location, Land Use, and Relief	
	19.2 Climate	
	19.3 Geology and Soils	
	19.4 Agricultural Land Classification	
20.	HIGH FLATTS FARM, CHESTER-LE-STREET (DD 177/7)	35
	20.1 Location, Land Use, and Relief	
	20.2 Climate	
	20.3 Geology and Soils	
	20.4 Agricultural Land Classification	

21. CHESTER MOOR (DD 254/1)

- 21.1 Location, Land Use, and Relief
- 21.2 Climate
- 21.3 Geology and Soils
- 21.4 Agricultural Land Classification

22. LAND EAST OF PLAWSWORTH (265/1)

- 22.1 Location, Land Use, and Relief
- 22.2 Climate
- 22.3 Geology and Soils
- 22.4 Agricultural Land Classification

23. MORTON HOUSE, FENCEHOUSES (DD 171)

- 23.1 Location, Land Use, and Relief
- 23.2 Climate
- 23.3 Geology and Soils
- 23.4 Agricultural Land Classification

SOURCES OF REFERENCE

APPENDIX I

38

CHESTER-LE-STREET LOCAL PLAN

AGRICULTURAL LAND CLASSIFICATION REPORT

1. INTRODUCTION

- 1.1 This report presents the findings of detailed Agricultural Land Classification (ALC) surveys of 20 sites within Chester-Le-Street District. Most of the surveys were carried out between October and December 1998 although 4 sites had been surveyed in past years between 1989 and 1996.
- 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 Chester-le-Street 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 scales of 1:5,000. They are 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 2.1.

Table 2.1: Area of grades and other land

	Area (ha)						
Site	Grade	Grade	Subgrade	Subgrade	Grade	Grade	Other
}	1	2	- 3a	3b	4	5	Land/
							Not
	1						Surveyed
Scorer's Lane, Great	-	-	-	2.6	-	-	-
Lumley							
Land North of	-	-	0.8	0.3	0.4	-	0.3
Plawsworth							
Land West of	-	-	-	7.8	-	-	0.3
Bournmoor							
Barras Hill, Sacriston	-	-	-	9.3	-	-	0.6
Land at Pelton	•	-	4.2	3.3	-	-	-
North of Ouston	-	-	3.7	13.1	-	-	-
Sunnyside, Nettlesworth		L	and not surve	eyed due to a	ccess prob	lems	
North of Nettlesworth		La	and not surve	eyed due to a	ccess prob	lems	
Kimbleworth Cricket		La	and not surve	eyed due to a	ccess prob	lems	
Club						_	
West of Pelton Fell	-	2.3	18.8	5.0	-	-	2.4
The Crescent, Chester	-	1.4	0.5	3.8	-	-	1.8
Moor							
Land West of	-	-	3.6	8.4	-	-	-
Nettlesworth							
Waldridge Lane, Chester	-	4.1	3.1	0.7	-	-	-
Moor							
Chester Moor Farm	-	2.4	5.9	7.2	-	-	2.2
Land East of	-	-	-	2.9	-	•	-
A167/A6127			-				
Tan Hills, Nettlesworth	Land not surveyed due to access problems						
Land East of Bournmoor	-	-	-	21.8	-	-	~
West of Ouston	-	_	7.9	18.8	-	-	0.2
Stella Gill	-	-	-	2.1	3.1	-	4.3
Newfield Farm, Pelton	-	-	8.0	1.0	-	1.0	7.6
High Flatts Farm,	-	•	-	70.1	-	-	2.8
Chester-Le-Street							
Chester Moor	-	-	-	3.7	-	•	-
Land East of Plawsworth	-	-	4.7	0.3	1.9	•	4.2
Morton House,	-	-	-	16.9	-	-	0.6
Fencehouses							

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 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 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. Most of the sites surveyed are limited by their climate to Grade 2 although a few lower-lying sites have no climatic limitation on ALC grade.

4. SCORERS LANE, GREAT LUMLEY (198/5)

4.1 Location, Land Use, and Relief

This site lies on the north-eastern edge of the village of Great Lumley. At the time of survey all of the land was under permanent grass. The land is level to gently sloping $(0-3^{\circ})$ with variable aspect and as such gradient does not limit ALC grade at any point. Equally, flood risk is not a grade-limiting factor. However, much of the site appears to have been disturbed and it may be the site of an old sewage works. The presence of a number of drainage channels and manhole covers, particularly in the north, mean that most of the site is incapable of intensive arable production. For this reason the north of the site has been placed in Subgrade 3b.

4.2 Climate

Factor	Units	Values
Grid reference	N/A	NZ 297 496
Altitude	m, AOD	65
Accumulated Temperature	day°C (Jan-June)	1293
Average Annual Rainfall	mm	642
Field Capacity Days	days	163
Moisture Deficit, Wheat	mm	93
Moisture Deficit, Potatoes	mm	79
Overall climatic grade	N/A	Grade 2

Table 4.1: Climatic and altitude data, Scorer's Lane, Great Lumley

4.3 Geology and Soils

Till overlies Carboniferous Coal Measures (BGS, Sheet 21). The soils have been mapped as belonging to the Dunkeswick association (Soils of England and Wales, Sheet 1) and are imperfectly to poorly drained, falling in Wetness Classes III and IV. Typically medium-textured topsoils and upper subsoils overlie gleyed and slowly permeable heavy clay loam or clay.

Grade/Other land	Area (hectares)	% surveyed area	% site area
Subgrade 3b	2.6	100	100
Total surveyed area Total site area	2.6 2.6	100	- 100

4.4.1 Subgrade 3b

All of this site falls in Subgrade 3b, moderate quality agricultural land. The soils are imperfectly or poorly drained, falling in Wetness Classes III and IV. In most cases profiles consist of medium clay loam topsoils and upper subsoils overlying gleyed and slowly permeable heavy clay loam or clay at between 35cm and 50cm depth. Much of the north and west of the site has been disturbed and the presence of a number of drainage channels and manhole covers suggests that the site may once have been a sewage treatment works. The ALC grade of this site is limited to Subgrade 3b. The grade-limiting factors are soil wetness in the south, and the presence of the drainage channels and manhole covers in the north and west, which effectively prevent the use of this land for intensive arable production.

RPT File No: 20,429

5. LAND NORTH OF PLAWSWORTH (134/1)

5.1 Location, Land Use, and Relief

This site is located to the rear of houses bordering the A167(T) in Plawsworth village. The eastern part of the site is currently laid out as small paddocks and stabling with an exercise arena for horses. The large field occupying the western part of the site is used for grazing horses. This field in part slopes strongly to the south and west.

5.2 Climate

Factor	Units	Values
Grid reference	N/A	NZ 263 480
Altitude Accumulated Temperature Average Annual Rainfall Field Capacity Days Moisture Deficit, Wheat Moisture Deficit, Potatoes	m, AOD day ^o C (Jan-June) mm days mm mm	85 1271 681 170 90 76
Overall climatic grade	N/A	Grade 2

Table 5.1: Climatic and altitude data, Land North of Plawsworth

5.3 Geology and Soils

The geology of the area is made up of glacial sand and gravel drift deposits overlying Carboniferous Coal Measures (BGS Sheet 20, Newcastle upon Tyne). Soils on the site are medium to light textured and have been mapped as Newport 1 association by the Soil Survey of England and Wales.

Table 5.2:	Area of	grades and	other land
------------	---------	------------	------------

Grade/Other land	Area (hectares)	% surveyed area	% site area
	0.8	53.3	44.4
3b	0.3	20.0	16.7
4	0.4	26.7	22.2
Other Land	0.3	N/A	16.7
Total surveyed area	1.5	100	-
Total site area	1.8	-	100

5.4.1 Subgrade 3a

An area of good quality agricultural land, Subgrade 3a, occupies the lower lying area in the south west of the site. Stoneless medium clay loam topsoils overlie variable subsoils ranging from heavy clay loam to sandy clay, with occasional coarse sand horizons. The profile pit showed that in the lowest lying parts of the field the water table stood just over 40cm below the surface. The profiles fall into Wetness Class III. Grade is limited by soil wetness.

5.4.2 Subgrade 3b

A small area of land (0.3ha) in the north of the site has been classified as Subgrade 3b, moderate quality agricultural land. This area mostly lies on a strong slope (8°) and this therefore is the grade limiting factor.

5.4.3 Grade 4

Grade 4, poor quality agricultural land, has been mapped in the east of the field. This area is moderately steeply sloping (>11°), which therefore limits ALC grade.

5.4.4 Other land

An area of 0.3ha in the east of the site is occupied by a collection of small paddocks, stabling and an exercise arena for horses.

6. LAND WEST OF BOURNMOOR (DD 249)

Average Annual Rainfall

Moisture Deficit, Wheat

Overall climatic grade

Moisture Deficit, Potatoes

Field Capacity Days

6.1 Location, Land Use, and Relief

This site lies immediately west of the village of Bournmoor, on the south side of the A183. This site was surveyed in October 1998 when the agricultural land was in permanent grass. A small area of woodland was mapped in the west of the site.

The land on this site contains a series of small hummocks and has an irregular relief, although neither slopes, microrelief nor flood risk are grade limiting factors.

6.2 Climate

Factor	Units	Values
Grid reference	N/A	NZ 303 513
Altitude Accumulated Temperature	m, AOD day°C (Jan-June)	50 1309

mm

days

mm

mm

N/A

640

162

94

82

Grade 1

Table 6.1: Climatic and altitude data, Land West of Bournmoor

6.3 Geology and Soils

Pelaw Clay overlies Carboniferous Coal Measures at Bournmoor (BGS Sheet 21). The soils are poorly drained, with a medium to heavy-textured topsoil overlying a clayey subsoil. The soils belong to the Dunkeswick association as mapped by the Soil Survey of England and Wales (Soils of England and Wales, Sheet 1).

Table 6.2:	Area of	grades	and	other	land

Grade/Other land	Area (hectares)	% surveyed area	% site area
3b	7.8	100	96.3
Other Land	0.3	N/A	3.7
Total surveyed area	7.8	100	-
Total site area	8.1	-	100

6.4.1 Subgrade 3b

All of the agricultural land on the site falls in Subgrade 3b. Topsoils consist of medium or heavy clay loam and overlie a clay or silty clay subsoil. Profiles are gleyed and slowly permeable within 40cm depth and fall in Wetness Class IV (poorly drained). Soil wetness and topsoil workability restrictions limit the ALC grade of this land to Subgrade 3b.

6.4.2 Other Land

This comprises a small parcel of woodland in the west of the site.

RPT File Nos: 20,431 and 20,415

7. BARRAS HILL, SACRISTON (DD 208/1)

7.1 Location, Land Use and Relief

This site lies on the eastern edge of the village of Sacriston. At the time of survey most of the agricultural land had been recently ploughed although an area of permanent grass occurred in the north-west and some woodland in the east. The land on the site is level to moderately sloping $(1-7^{\circ})$ with a northerly aspect. As such gradient does not limit ALC grade at any point and, equally, neither flood risk nor microrelief are of significance on this site.

7.2 Climate

The key climatic variables for this site are given in Table 7.1.

Factor	Units	Values
Grid reference	N/A	NZ 247 470
Altitude	m, AOD	155
Accumulated Temperature	day ^o C (Jan-June)	1193
Average Annual Rainfall	mm	714
Field Capacity Days	days	176
Moisture Deficit, Wheat	mm	81
Moisture Deficit, Potatoes	mm	63
Overall climatic grade	N/A	Grade 2

7.3 Geology and Soils

Published geological information for this site (BGS, Sheet 26) shows till overlying Carboniferous Coal Measures, with the Coal Measures outcropping to the surface in places. The soils have been mapped as belonging to the Brickfield 3 association in the far north, with restored opencast coal workings in the centre and south (Soils of England and Wales, Sheet 1). The field survey found that the soils in the south of the site had probably been restored following opencast coal extraction. All of the soils on the site, however, were poorly drained (Wetness Class IV), with medium clay loam topsoils overlying slowly permeable medium clay loam, heavy clay loam, clay or silty clay subsoils.

7.4 Agricultural Land Classification

Grade/Other land	Area (hectares)	% surveyed area	% site area
3b	9.3	100	93.9
Other Land	0.6	N/A	6.1
Total surveyed area	9.3	100	_
Total site area	9.9	-	100

 Table 7.2: Area of grades and other land

7.4.1 Subgrade 3b

Subgrade 3b, moderate quality land, covers all of the agricultural land on the site. The soils are generally poorly drained (Wetness Class IV) and in the south the soils appear to have been restored following opencast coal extraction. In most cases medium clay loam topsoils overlie slowly permeable medium clay loam, heavy clay loam, clay or silty clay subsoils at between 25cm and 35cm depth. Soil wetness is the factor which limits this land to Subgrade 3b.

7.4.2 Other land

Other, non-agricultural, land on this site occurs in the east and consists of a block of woodland.

RPT File: 20,432

8. LAND AT PELTON (DD 170)

8.1 Location, Land Use and Relief

The site is located west of Pelton to the south of the A693. It lies on a moderate east facing slope and at the time of the survey was sown to cereals.

8.2 Climate

Factor	Units	Values
Grid reference	N/A	NZ 243 531
Altitude	m, AOD	95
Accumulated Temperature	day°C (Jan-June)	1259
Average Annual Rainfall	mm	701
Field Capacity Days	days	174
Moisture Deficit, Wheat	mm	89
Moisture Deficit, Potatoes	mm	74
Overall climatic grade	N/A	Grade 2

Table 8.1: Climatic and altitude data, Land at Pelton

8.3 Geology and Soils

The site lies within an area of Coal Measures overlain by boulder clay and undifferentiated glacial drift (BGS Sheet 20, Newcastle upon Tyne). Soils are medium textured topsoils overlying medium to heavy textured subsoils and have been mapped as Brickfield 3 association by the Soil Survey of England and Wales.

Table 8.2:	Area of	grades and	l other land	
------------	---------	------------	--------------	--

Grade/Other land	Area (hectares)	% surveyed area	% site area
3a	4.2	56.0	56.0
3b	3.3	44.0	44.0
Other Land	-	N/A	-
Total surveyed area	7.5	100	-
Total site area	7.5	-	100

8.4.1 Subgrade 3a

Land classified as Subgrade 3a, good quality agricultural land, occupies the west of the site. Profiles typically consist of very slightly or slightly stony medium clay loam topsoils overlying sandy clay loam subsoils which become slowly permeable at 45 to 60 cm depth. These profiles fall into Wetness Class III. ALC grade is limited by soil wetness. Although an area in the north of the unit mapped as Subgrade 3a has been subject to the dumping of colliery waste on the topsoil in past years, laboratory analyses show that heavy metal levels are not sufficient to merit downgrading this land.

8.4.2 Subgrade 3b

Land falling into Subgrade 3b lies on the eastern side of the site and is composed of very slightly or slightly stony medium clay loam topsoils mainly overlying heavy clay loam or sandy clay loam subsoils. These are gleyed and slowly permeable within 40 cm of the surface and fall into Wetness Class IV. Soil wetness is the main limitation on grade.

9. NORTH OF OUSTON (DD 166)

9.1 Location, Land Use and Relief

The site lies north of the settlement of Ouston. At the time of survey all the land was in agricultural use growing winter cereals. Land slopes gently to steeply $(2^{\circ} \text{ to } 11^{\circ})$ towards the stream which bisects the site. Slopes tend to be steepest closest to the stream and in several places they limit ALC grade.

9.2 Climate

Factor	Units	Values
Grid reference	N/A	NZ 255 552
Altitude Accumulated Temperature Average Annual Rainfall Field Capacity Days Moisture Deficit, Wheat Moisture Deficit, Potatoes	m, AOD day°C (Jan-June) mm days mm mm	50 1309 679 170 94 82
Overall climatic grade	N/A	Grade 2

9.3 Geology and Soils

Soils are all drift derived. This drift is mostly sand and gravel although land in the south and east of the site contains heavier textured material which is probably boulder clay.

Table 9.2:	Area of	grades and	other land
------------	---------	------------	------------

Grade/Other land	Area (hectares)	% surveyed area	% site area
За	3.7	22.0	22.0
3b	13.1	78.0	78.0
Other Land	-	N/A	-
Total surveyed area	16.8	100	-
Total site area	16.8	-	100

9.4.1 Subgrade 3a

Two separate areas of Subgrade 3a land were mapped. Both contain freely drained (Wetness Class I) soils which are light textured. Topsoils are typically medium sandy loam or loamy medium sand over medium sand subsoils. Droughtiness limits the ALC grade of this land.

9.4.2 Subgrade 3b

Remaining land is all Subgrade 3b. Slopes of between 8° and 11° limit ALC grade over much of this area. In the east and south of the site are soils which are slowly permeable within 40 cm depth (Wetness Class IV). Soil wetness and workability limit the ALC grade.

RPT File: 20,434

10. WEST OF PELTON FELL (136/7)

10.1 Location, Land Use, and Relief

The site lies to the west of Pelton Fell and south of the B6313. At the time of survey, most of the site was in either set aside or arable use. Non agricultural uses include woodland in the south east, farm buildings at Whitehill Farm and two wet hollows in the centre and west. Generally slopes were variable, and mostly less than 6°. However, land with slopes of over 7° was identified in the centre of the site. These will limit ALC grade.

10.2 Climate

Factor	Units	Values
Grid reference	N/A	NZ 250 512
Altitude Accumulated Temperature Average Annual Rainfall Field Capacity Days Moisture Deficit, Wheat Moisture Deficit, Potatoes	m, AOD day ^o C (Jan-June) mm days mm mm	80 1276 702 174 91 77
Overall climatic grade	N/A	Grade 2

10.3 Geology and Soils

Soils are all derived from drift which is mostly light textured. Medium sandy loam is a common topsoil texture. Subsoils are more variable. They are often very light textured, typically a medium sand. Most horizons were only very slightly stony. These profiles are Wetness Class I. Towards the centre of the site, clayey subsoils are more common. These profiles are generally Wetness Class III or IV.

10.4 Agricultural Land Classification

Grade/Other land	Area (hectares)	% surveyed area	% site area
2	2.3	8.8	8.1
3a	18.8	72.0	66.0
3b	5.0	19.2	17.5
Other Land	2.4	N/A	8.4
Total surveyed area	26.1	100	-
Total site area	28.5	_	100

Table 10.2: Area of grades and other land

10.4.1 Grade 2

This grade was mapped in the centre of the site. Soils are mostly a deep fine sandy loam, topsoil and subsoil. Occasionally subsoils are slightly lighter textured. Overall climate limits the ALC grade of this land.

10.4.2 Subgrade 3a

This subgrade is widespread. Topsoils are generally a medium sandy loam. Where subsoils are light textured, droughtiness limits the ALC grade. Towards the centre of the site, subsoils are heavier textured and soil wetness and workability limit ALC grade.

10.4.3 Subgrade 3b

In the extreme north and south of the site very light textured and often stony soils are found. Droughtiness limits ALC grade. Subgrade 3b land in the centre of the site is limited by slopes of between 8° and 11°. A small area of this subgrade is mapped east of the Grade 2. This contains over 15% stones and other inert material such as bricks and rubble in the topsoil. This limits the ALC grade.

10.4.4 Other Land

This comprises two wet hollows, woodland and farm buildings.

RPT File: 20,438

11. THE CRESCENT, CHESTER MOOR (134/3)

11.1 Location, Land Use, and Relief

The site surrounds The Crescent housing estate at Chester Moor. It is practically adjacent to the Waldridge Lane site (130/1-4) and overlaps the Chester Moor Farm site (130/1-4). The land lies mainly on a gentle south-east facing slope. At the time of the survey two of the fields were in arable use, while a third field was used for grazing horses. Part of the site was in use as a playing field.

11.2 Climate

Factor	Units	Values
Grid reference	N/A	NZ 263 494
Altitude	m, AOD	75
Accumulated Temperature	day°C (Jan-June)	1282
Average Annual Rainfall	mm	689
Field Capacity Days	days	172
Moisture Deficit, Wheat	mm	92
Moisture Deficit, Potatoes	mm	76
Overall climatic grade	N/A	Grade 2

Table 11.1: Climatic and altitude data, The Crescent, Chester Moor

11.3 Geology and Soils

The geology of the area is shown as glacial till over Coal Measures (BGS Sheet 20, Newcastle). Soils on the site are medium to light textured, and have been mapped as Newport 1 association by the Soil Survey of England and Wales.

11.4 Agricultural Land Classification

Table 11.2:	Area of grades and other land
-------------	-------------------------------

Grade/Other land	Area (hectares)	% surveyed area	% site area
2	1.4	24.6	18.7
3a	0.5	8.8	6.7
3Ь	3.8	66.6	50.6
Other land	1.8	N/A	24.0
Total surveyed area	5.7	100	-
Total site area	7.5	-	100

11.4.1 Grade 2

Land falling into ALC Grade 2 is found in the north-eastern part of the site, being made up of fine sandy loam topsoils overlying loamy fine sand and fine sand subsoils. Profiles fall into Wetness Class I and ALC grade is limited by climate.

11.4.2 Subgrade 3a

A small area (0.5 ha) of Subgrade 3a land is located to the south of the Grade 2 land. Topsoils here are slightly heavier, consisting of medium clay loam, with heavy clay loam subsoils. Profiles become slowly permeable at 40 cm depth, and fall into Wetness Class III. Grade is limited by soil wetness.

11.4.3 Subgrade 3b

Land in the eastern part of the site falls into Subgrade 3b, moderate quality agricultural land. Soils in this area are variable, with some borings showing better quality land, however these profiles did not occur in a consistent pattern, and the variability itself imposes a limitation. The majority of the area is made up of medium clay loam topsoils over heavy clay loam or clay subsoils. Profiles are generally poorly drained, falling into Wetness Class IV. Grade is limited by soil wetness.

11.4.4 Other Land

A field to the north of the houses is currently used as a playing field.

RPT File: 20,439

12. LAND WEST OF NETTLESWORTH (131/8)

12.1 Location, Land Use, and Relief

This site lies to the west of Nettlesworth. At the time of survey most of it was in winter cereals with the remainder awaiting a crop to be sown. Land slopes down from a high point along the B6312 in the south. Slopes reach a maximum of about 6° in the north east of the site. The north east of the site has been restored following extraction of coal by opencast methods.

12.2 Climate

Table 12.1: Climatic and altitude data, l	Land west of Nettlesworth
---	---------------------------

Factor	Units	Values
Grid reference	N/A	NZ 253 479
Altitude Accumulated Temperature Average Annual Rainfall Field Capacity Days Moisture Deficit, Wheat Moisture Deficit, Potatoes	m, AOD day°C (Jan-June) mm days mm mm	95 1260 689 172 89 74
Overall climatic grade	N/A	Grade 2

12.3 Geology and Soils

Soils are derived from drift deposits. These comprise sandy textured material in the east and heavier textured clayey material in the west. Land in the extreme north east of the site has been restored following extraction of coal by opencast methods. Soils derived from sandy drift typically have a medium sandy loam topsoil over a similar textured upper subsoil. Lower subsoils are often a medium sand. Remaining soils typically comprise a medium clay loam topsoil over a clay subsoil. These are Wetness Class IV.

Table 12.2:	Area of grades and other land	

Grade/Other land	Area (hectares)	% surveyed area	% site area
3a	3.6	30.0	30.0
3b	8.4	70.0	70.0
Other land	-	N/A	-
Total surveyed area	12.0	100	-
Total site area	12.0	-	100

12.4.1 Subgrade 3a

This land is found in a strip running through the centre of the site, north - south. Soils are freely drained (Wetness Class I) and light textured. Some profiles meet the criteria for Grade 2 but do not occur in mapped areas. This land is subject to a Subgrade 3a droughtiness limitation.

12.4.2 Subgrade 3b

This subgrade mostly comprises poorly drained soils (Wetness Class IV) with a medium clay loam topsoil which are limited by soil wetness and workability problems. It also includes a small area in the east of the site where topsoil stoniness limits the ALC grade.

RPT File: 20,440

13. WALDRIDGE LANE, CHESTER MOOR (130/1-4)

13.1 Location, Land Use, and Relief

This site lies to the north of Waldridge Lane, and is practically adjacent to the area covered by the site at The Crescent, Chester Moor. The land is level to moderately sloping $(0-4^\circ)$, with a generally easterly aspect although some undulations are contained within the site where evidence of water erosion and deposition can be seen. At the time of the survey all the fields were sown to cereals.

13.2 Climate

Table 13.1: Climatic and altitude data, Waldridge Lane, Chester Moor

Factor	Units	Values
Grid reference	N/A	NZ 259 492
Altitude Accumulated Temperature Average Annual Rainfall Field Capacity Days Moisture Deficit, Wheat Moisture Deficit, Potatoes	m, AOD day°C (Jan-June) mm days mm mm	85 1271 697 173 91 76
Overall climatic grade	N/A	Grade 2

13.3 Geology and Soils

The geology of the area is shown as glacial till over Coal Measures (BGS Sheet 20, Newcastle). Soils on the site are medium to light textured, and have been mapped as Newport 1 association by the Soil Survey of England and Wales.

Table 13.2:	Area of	grades and	other	land
-------------	---------	------------	-------	------

Grade/Other land	Area (hectares)	% surveyed area	% site area
2	4.1	51.9	51.9
3a	3.1	39.2	39.2
3b	0.7	8.9	8.9
Other land	-	N/A	-
Total surveyed area	7.9	100	-
Total site area	7.9	-	100

13.4.1 Grade 2

Land in the eastern part of the site falls into Grade 2, very good quality agricultural land. Profiles consist mostly of fine sandy loam topsoils overlying fine sandy loam or fine sand subsoils. These are well drained, falling into Wetness Class I. Grade is limited by climate.

13.4.2 Subgrade 3a

Land falling into Subgrade 3a, good quality agricultural land, is located in the western part of the site. Topsoils are medium clay loam, with upper subsoils of sandy clay loam overlying clay lower subsoils. Profiles become slowly permeable at approximately 50 cm depth, and fall into Wetness Class III. Grade is limited by soil wetness.

13.4.3 Subgrade 3b

A small area of Subgrade 3b land occupies the south western corner of the site. Medium clay loam topsoil to approximately 30 cm depth overlies gleyed and slowly permeable heavy clay loam or clay subsoil. Profiles fall into Wetness Class IV. Soil wetness limits ALC grade.

RPT File: 20,441

14. CHESTER MOOR FARM (130/1-4)

14.1 Location, Land Use, and Relief

The site is located to the south of Chester-Le-Street and lies adjacent to the A167(T). The land on the site is level to moderately sloping $(0-6^{\circ})$ and at no point does gradient restrict the ALC grade of the land. Equally, neither micro-relief nor flood risk are grade-limiting factors on this site. Most of the land is in arable use, although a small paddock in the extreme north east is permanent grassland, with the adjacent field under a grass ley at the time of the survey.

14.2 Climate

Factor	Units	Values
Grid reference	N/A	NZ 266 495
Altitude Accumulated Temperature Average Annual Rainfall Field Capacity Days Moisture Deficit, Wheat Moisture Deficit, Potatoes	m, AOD day ^o C (Jan-June) mm days mm mm	65 1294 681 171 93 79
Overall climatic grade	N/A	Grade 2

Table 14.1: Climatic and altitude data, Chester Moor Farm

14.3 Geology and Soils

The geology of the area is shown as glacial till overlying Coal Measures (BGS Sheet 20, Newcastle). Although mapped as Newport 1 association (Soils of England and Wales, Sheet 1), soils across the site are variable, comprising medium clay loams and fine to medium sandy loam topsoils, generally overlying loamy sand or clay loam.

Grade/Other land	Area (hectares)	% surveyed area	% site area
2	2.4	15.5	13.6
3a	5.9	38.1	33.3
3b	7.2	46.4	40,7
Agricultural land not surveyed	1.2	N/A	6.8
Other land	1.0	N/A	5.6
Total surveyed area	15.5	100	-
Total site area	17.7	-	100

Table	14 2	Агеа	of	grades	and	other	land
10010	1.4.4	- cu va	v	Slades	ana	outor	turne.

14.4.1 Grade 2

An area of Grade 2, very good quality agricultural land, lies towards the centre of the site. This consists of very slightly stony fine to medium sandy loam topsoils overlying loamy medium sand upper subsoils, with a lower subsoil of heavy clay loam or clay starting at between 45 and 65 cm depth. Profiles are imperfectly drained, falling into Wetness Class III. Grade is limited by soil wetness.

14.4.2 Subgrade 3a

Areas of Subgrade 3a land are scattered throughout the site. These generally comprise very slightly stony medium clay loam topsoils overlying sandy clay loam or heavy clay loam subsoils. Profiles fall into Wetness Class III, and are limited to Subgrade 3a by soil wetness.

14.4.3 Subgrade 3b

Land falling into Subgrade 3b, moderate quality agricultural land, is located in the west, north and east of the site. Very slightly stony medium clay loam topsoils overlie slowly permeable heavy clay loam or clay subsoils. These profiles are poorly drained, falling into Wetness Class IV, with grade being limited by soil wetness.

14.4.4 Agricultural Land Not Surveyed

An area of 1.2 ha of agricultural land in the east of the site was not surveyed as no access had been agreed.

14.4.5 Other Land

Two areas were not in agricultural use, being occupied by a house and garden centre.

RPT File: 20,442

15. LAND EAST OF A167/A6127, CHESTER-LE-STREET

15.1 Location, Land Use, and Relief

This site is located about $1\frac{1}{2}$ km south east of Chester le Street town centre, east of and adjacent to the A167(T). Land is level or gently sloping and at the time of survey was in permanent grass used for horse grazing.

15.2 Climate

Table 15.1: Climatic and altitude data, Land east of A167/A6127, Chester-le-Street

Factor	Units	Values
Grid reference	N/A	NZ 275 502
Altitude	m, AOD	30
Accumulated Temperature	day°C (Jan-June)	1333
Average Annual Rainfall	mm	654
Field Capacity Days	days	166
Moisture Deficit, Wheat	mm	98
Moisture Deficit, Potatoes	mm	86
Overall climatic grade	N/A	Grade 1

15.3 Geology and Soils

Soils are derived from medium to heavy textured drift, probably boulder clay. Soils are rather variable. Topsoils are mostly a medium clay loam, but subsoils vary from clay to loamy medium sand.

15.4 Agricultural Land Classification

Table 15.2: Area of grades and other land

Grade/Other land	Area (hectares)	% surveyed area	% site area
3b	2.9	100	100
Other land	ļ -	N/A	-
Total surveyed area	2.9	100	-
Total site area	2.9	-	100

15.4.1 Subgrade 3b

This subgrade applies to the whole site. Although soils are variable the most common profile comprises a medium clay loam topsoil over a clayey subsoil. These soils are Wetness Class IV and limited to this subgrade by soil wetness and workability problems.

16. LAND EAST OF BOURNMOOR (DD 127)

16.1 Location, Land Use, and Relief

This site lies immediately east of the village of Bournmoor, on the south side of the A183. The land was surveyed in April 1996 when a crop of winter cereals had been sown.

The land on this site is level and as such gradient does not restrict ALC grade at any point. Equally, neither microrelief nor flood risk are grade limiting factors.

16.2 Climate

Table 16.1: Climatic and altitude data, Land East of	of Bournmoor
--	--------------

Factor	Units	Values
Grid reference	N/A	NZ 314 515
Altitude	m, AOD	46
Accumulated Temperature	day°C (Jan-June)	1315
Average Annual Rainfall	mm	645
Field Capacity Days	days	163
Moisture Deficit, Wheat	mm	95
Moisture Deficit, Potatoes	mm	83
Overall climatic grade	N/A	Grade 1

16.3 Geology and Soils

Laminated clay overlies Carboniferous Coal Measures on this site (BGS Sheet 21). The soils are poorly drained, with a medium clay loam topsoil overlying a clayey subsoil. The soils belong to the Dunkeswick association as mapped by the Soil Survey of England and Wales (Soils of England and Wales, Sheet 1).

Table 16.2: Are	a of grades	and other land
-----------------	-------------	----------------

Grade/Other land	Area (hectares)	% surveyed area	% site area
Subgrade 3b	21.8	100	100
Total surveyed area Total site area	21.8 21.8	100	- 100

16.4.1 Subgrade 3b

All of the land on the site falls in Subgrade 3b. Topsoils consist of medium clay loam and overlie a clay or silty clay subsoil. Most profiles are gleyed and slowly permeable within 35cm depth, and fall in Wetness Class IV (poorly drained). However, occasional Wetness III (imperfectly drained) profiles also occur. Soil wetness and topsoil workability restrictions limit the ALC grade of most of this land. Although those profiles which fall in Wetness Class III meet the criteria for Subgrade 3a, they are too randomly distributed to be mapped as a separate unit.

RPT File Nos: 20,011 and 20,445

17. WEST OF OUSTON (162/1)

17.1 Location, Land Use, and Relief

This survey examined a 26.9 ha parcel of land south west of Urpeth. At the time of survey all agricultural land was in arable use. A small area of derelict land was mapped in the north of the site. Land contains moderate slopes in the south and is mostly level in the north.

17.2 Climate

Factor	Units	Values
Grid reference	N/A	NZ 250 541
Altitude Accumulated Temperature Average Annual Rainfall Field Capacity Days Moisture Deficit, Wheat Moisture Deficit, Potatoes	m, AOD day°C (Jan-June) mm days mm mm	75 1281 692 172 91 78
Overall climatic grade	N/A	Grade 2

Table 17.1: Climatic and altitude data, West of Ouston

17.3 Geology and Soils

Two distinct soil types were found on the site. In the south soils are derived from boulder clay and are medium to heavy textured and Wetness Class IV. In the north sand and gravel deposits have produced light textured freely drained soils (Wetness Class I). Much of the southern portion of the site has been restored following open cast coal extraction over 40 years ago.

Table 17.2:	Area of	grades and	other land
-------------	---------	------------	------------

Grade/Other land	Area (hectares)	% surveyed area	% site area
3a	7.9	29.6	29.4
3b	18.8	70.4	69.9
Other land	0.2	N/A	0.7
Total surveyed area	26.7	100	-
Total site area	26.9	-	100

17.4.1 Subgrade 3a

Soils here typically comprise a medium sandy loam topsoil and upper subsoil over a sand lower subsoil. Stone content generally increases with depth. Droughtiness limits the ALC grade of this land.

17.4.2 Subgrade 3b

Most of the land in this subgrade has medium to heavy textured soils that are Wetness Class IV. Soil wetness and workability limit the ALC grade of the this land. In the north of this subgrade are very light textured soils, with a high subsoil stone content. Droughtiness limits the ALC grade here.

17.4.3 Other Land

This comprises derelict land.

RPT File: 20,446

18. STELLA GILL (DD 169)

18.1 Location, Land Use, and Relief

Stella Gill lies around 1.5km west of Chester-Le-Street town centre. Most of the agricultural land on this site was surveyed in 1989 (RPT reference 36/89) which found that the land fell in Subgrade 3b and Grade 4. At that time the land was under permanent grass. No additional field survey work was carried out because most of the additional areas proposed for development in 1998 are either non-agricultural land or are limited to Grade 4 or Grade 5 by their gradient.

Although neither flood risk nor microrelief were grade limiting factors on this site, the land surveyed in 1989 had slopes of between 8° and 18° which restricted most of the west of the surveyed area to Subgrade 3b (where slopes of 8°-9° were recorded) and the east of the surveyed area to Grade 4 (where slopes of 16°-18° were recorded).

18.2 Climate

Factor	Units	Values
Grid reference	N/A	NZ 260 518
Altitude Accumulated Temperature Average Annual Rainfall Field Capacity Days Moisture Deficit, Wheat Moisture Deficit, Potatoes	m, AOD day°C (Jan-June) mm days mm mm	40 1321 672 169 96 84
Overall climatic grade	N/A	Grade 1

Table 18.1: Climatic and altitude data, Stella Gill

18.3 Geology and Soils

Till (in the west) and glacial sand and gravel and alluvium (in the east) overlie Carboniferous Coal Measures on this site (BGS Sheet 20). The surveyed soils are generally poorly drained, with medium-textured topsoils and thin upper subsoils overlying gleyed and slowly permeable heavy clay loam or clay. Occasional disturbed profiles were found in the north-west and south-west. The soils have been mapped as belonging to the Brickfield 3 association (Soils of England and Wales, Sheet 1).
18.4 Agricultural Land Classification

Grade/Other land	Area (hectares)	% surveyed area	% site area
3b	2.1	40.4	22.1
4	3.1	59.6	32.6
Land not surveyed	4.3	N/A	45.3
Total surveyed area	5.2	100	-
Total site area	9.5	-	100

 Table 18.2: Area of grades and other land

18.4.1 Subgrade 3b

The western part of the area surveyed in 1989 fell in Subgrade 3b. The profiles were poorly drained, falling in Wetness IV, although some disturbed profiles were also found. Light to medium textured topsoils overlay medium-textured upper subsoils and gleyed and slowly permeable heavy clay loam or clay lower subsoils. Most of this land was limited to Subgrade 3b by soil wetness restrictions and slopes of 8°-9° provided a further limitation to this subgrade.

18.4.2 Grade 4

Grade 4 land occurred in the east of the area surveyed in 1989. In this case slopes of 16° -18° were recorded and these are sufficient to limit the land to Grade 4.

18.4.3 Land not surveyed

A total of 4.3 ha in the far west, centre and east were not surveyed as a result of difficulties in gaining access. Much of this land is either not in agricultural use or is limited to Grade 4 or Grade 5 by steep slopes.

RPT File Nos: 2FCS 4401 and RPT 20,447

19. NEWFIELD FARM, PELTON (DD 177/8 AND DD 177/2)

19.1 Location, Land Use, and Relief

This site is located to the south west of Pelton and is partly occupied by a school and associated playing fields. It lies mainly on a gentle to moderate north to north-easterly slope, falling from 100m AOD in the south to 80m AOD in the north-east. The site is given over to a variety of land uses, with set-aside occupying the most northerly field and the most southerly field under permanent pasture. The largest portion of agricultural land is in arable use, including both cereals and oilseed rape.

19.2 Climate

The key climatic variables for this site are given in Table 19.1.

Factor	Units	Values
Grid reference	N/A	NZ 246 526
Altitude Accumulated Temperature Average Annual Rainfall Field Capacity Days Moisture Deficit, Wheat Moisture Deficit, Potatoes	m, AOD day°C (Jan-June) mm days mm	95 1259 702 175 89 74
Overall climatic grade	mm N/A	Grade 2

19.3 Geology and Soils

This site lies on an area of Carboniferous Coal Measures overlain by glacial till. Soils are mostly medium textured and have been mapped as Brickfield 3 association by the Soil Survey of England and Wales. Some parts of the site show evidence of having been disturbed in the past through mineral working.

19.4 Agricultural Land Classification

Table 19.2:	Area of	grades and	other land
-------------	---------	------------	------------

Grade/Other land	Area (hectares)	% surveyed area	% site area
3a	8.0	80.0	45.4
3b	1.0	10.0	5.7
5	1.0	10.0	5.7
Other land	7.6	N/A	43.2
Total surveyed area	10.0	100,0	-
Total site area	17.6	-	100.0

19.4.1 Subgrade 3a

Land in this subgrade, defined as good quality agricultural land, covers most of the agricultural land on the site. The profiles are typically moderately well or imperfectly drained, falling in Wetness Classes II and III. In most cases medium clay loam or medium sandy loam topsoils overlie medium sandy loam, medium clay loam or sandy clay loam upper subsoils and medium sandy loam, sandy clay loam or heavy clay loam lower subsoils. Where present, slowly permeable layers generally begin at about 50cm depth. Both topsoils and subsoils are very slightly to slightly stony, containing between 3% and 10% sandstones in most cases. The ALC grade of this land is limited by soil wetness, and by a pattern restriction which prevents those profiles which meet the criteria for Grade 2 from being mapped together as a separate unit.

19.4.2 Subgrade 3b

Subgrade 3b land (moderate quality agricultural land) occurs in the east of the site where the soils have been restored following opencast coal extraction. The soils are poorly drained (Wetness Class IV) and consist of medium-textured topsoils overlying slowly permeable, medium to heavy-textured subsoils. The ALC grade of this area is limited by soil wetness restrictions.

19.4.3 Grade 5

Grade 5, very poor quality agricultural land, occurs in the far south of the site on a restored pit heap. Thin medium clay loam and heavy clay loam topsoils overlie colliery overburden at between 10cm and 20cm depth in this area. Ploughing of this land would lead to contamination of the topsoil with overburden and for this reason it has been placed in Grade 5.

19.4.4 Other land

Other land on this site consists of a school and playing fields, and the farmhouse and outbuildings at Newfield Farm.

RPT File No: 20,448

20. HIGH FLATTS FARM, CHESTER-LE-STREET (DD 177/7)

20.1 Location, Land Use, and Relief

This 72.9 ha site lies between High Flatts Farm and the settlement of Pelton. The highest land is found in the west of the site. Land slopes away from the west towards lower ground in the south. At the time of survey the site was in a mixture of arable and grass uses. Land around High Flatts Farm was surveyed in 1989 in relation to a proposed residential development.

20.2 Climate

Table 20.1: Climatic and altitude data, High Flatts Farm, Chester-le-Street

Factor	Units	Values
Grid reference	N/A	NZ 259 526
Altitude Accumulated Temperature Average Annual Rainfall Field Capacity Days Moisture Deficit, Wheat Moisture Deficit, Potatoes	m, AOD day ^o C (Jan-June) mm days mm mm	65 1292 682 170 93 79
Overall climatic grade	N/A	Grade 2

20.3 Geology and Soils

Topsoils are typically medium clay loam over clayey subsoils. Profiles are Wetness Class IV. Much of the site has been restored following opencast coal activity.

20.4 Agricultural Land Classification

Grade/Other land	Area (hectares)	% surveyed area	% site area
3b	70.1	100.0	96.2
Other land	2.8	N/A	3.8
Total surveyed area	70.1	100.0	
Total site area	72.9	-	100.0

20.4.1 Subgrade 3b

All agricultural land was classed as 3b. Soil wetness and workability limit the ALC grade of this land.

20.4.2 Other Land

This comprises a Public House, High Flatts Farm and the road that bisects the site.

RPT File: 20,449

21. CHESTER MOOR (DD 254/1)

21.1 Location, Land Use, and Relief

This survey comprises 3.7 ha of agricultural land, presently in arable use, south of the settlement of Chester Moor. It is level.

21.2 Climate

Factor	Units	Values
Grid reference	N/A	NZ 264 491
Altitude Accumulated Temperature Average Annual Rainfall Field Capacity Days Moisture Deficit, Wheat Moisture Deficit, Potatoes	m, AOD day ^o C (Jan-June) mm days mm mm	68 1290 684 171 93 79
Overall climatic grade	N/A	Grade 2

Table 21.1: Climatic and altitude data, Chester Moor

21.3 Geology and Soils

Soils are derived from medium textured drift, probably boulder clay. Soils on the site have been restored following opencast coal activity over 40 years ago. Topsoils and subsoils are medium clay loam. Subsoils are compacted and slowly permeable. Profiles are Wetness Class IV.

21.4 Agricultural Land Classification

Table 21.2:	Area	of	grades	and	other	land
-------------	------	----	--------	-----	-------	------

Grade/Other land	Area (hectares)	% surveyed area	% site area
3b	3.7	100	100
Other land	-	N/A	-
Total surveyed area	3.7	100.0	-
Total site area	3.7	-	100.0

21.4.1 Subgrade 3b

The whole site is Subgrade 3b. Soil wetness and workability limit the ALC grade of this land.

22. LAND EAST OF PLAWSWORTH (265/1)

22.1 Location, Land Use, and Relief

This land lies immediately east and south-east of the village of Plawsworth. All but the far south of the site had been subject to detailed ALC surveys in 1989 and 1997 (RPT references 30/89 and 52/97 respectively). These surveys found that most of the land in the north and centre fell in Subgrade 3a while steeper land in the south-west was limited to Subgrade 3b or Grade 4 by slopes of greater than 7°. At the time of the 1998 survey the agricultural land was in set aside or permanent pasture. The land on this site varies between level and steeply sloping (0-16°). A small area in the west is limited to Subgrade 3b by slopes of approximately 8° while land in the south-west is limited to Grade 4 by slopes of around 16°. However, neither flood risk nor microrelief are grade-limiting factors on this site.

22.2 Climate

The key climatic variables for this site are given in Table 22.1.

Factor	Units	Values
Grid reference	N/A	NZ 267 478
Altitude	m, AOD	90
Accumulated Temperature	day ^o C (Jan-June)	1266
Average Annual Rainfall	mm	679
Field Capacity Days	days	170
Moisture Deficit, Wheat	mm	90
Moisture Deficit, Potatoes	mm	75
Overall climatic grade	N/A	Grade 2

Table 22.1: Climatic and altitude data, Land East of Plawsworth

22.3 Geology and Soils

Deposits of glacial and sand and gravel overlie Carboniferous Coal Measures (BGS, Sheet 26). The soils have been mapped as belonging to the Newport 1 association. The profiles are well drained (Wetness Class I) and typically consist of medium sandy loam toposils and upper subsoils overlying loamy medium sand or medium sand lower subsoils.

22.4 Agricultural Land Classification

Grade/Other land	Area (hectares)	% surveyed area	% site area
3a	4.7	68.1	42.4
3b	0.3	4.4	2.7
4	1.9	· · · 27.5	17.1
Other land	4.2 '	N/A	37.8
Total surveyed area	6.9	100.0	-
Total site area	11.1	-	100.0

Table 22.2: Area of grades and other land

22.4.1 Subgrade 3a

Most of the north of the site falls in this subgrade. The soils are well drained (Wetness Class I) and consist of medium sandy loam topsoils and upper subsoils overlying loamy medium sand or medium sand lower subsoils. Topsoils and subsoils are very slightly to slightly stony, with 4-7% hard stones in the topsoil and 5-8% hard stones in the subsoil. The ALC grade of this land is limited by soil droughtiness.

22.4.2 Subgrade 3b

A small area of Subgrade 3b land occurs in the west of the site. The soils are similar to those on the adjoining Subgrade 3a land but a slope of approximately 8° limits this area to Subgrade 3b.

22.4.3 Grade 4

Grade 4 land occurs in the south-western corner. Slopes of around 16° in this area severely restrict the safe and efficient use of agricultural machinery and it is this factor which limits the land to Grade 4.

22.4.4 Other land

Other, non-agricultural, land consists of part of the existing quarry in the west and woodland in the south-east.

RPT FileNos: 2 FCS 4359 RPT 20,229 RPT 20,451

23. MORTON HOUSE, FENCEHOUSES

23.1 Location, Land Use, and Relief

The area surveyed lies to the south of the settlement of Fencehouses. It is level to gently sloping and was in arable use at the time of survey.

23.2 Climate

Factor	Units	Values
Grid reference	N/A	NZ 314 502
Altitude	m, AOD	45
Accumulated Temperature	day°C (Jan-June)	1314
Average Annual Rainfall	mm	640
Field Capacity Days	days	162
Moisture Deficit, Wheat	mm	95
Moisture Deficit, Potatoes	mm	83
Overall climatic grade	N/A	Grade 2

Table 23.1: Climatic and altitude data, Morton House, Fencehouses

23.3 Geology and Soils

Soils are derived from clayey drift. Topsoils are medium to heavy clay loam over a clayey, slowly permeable subsoil. Soils are Wetness Class IV.

23.4 Agricultural Land Classification

Table 23.2:	Area o	f grades	and	other	land
-------------	--------	----------	-----	-------	------

Grade/Other land	Area (hectares)	% surveyed area	% site area	
3b	16.9	100	96.6	
Other land	0.6	N/A	3.4	
Total surveyed area Total site area	16.9 17.5	100.0 -	- 100.0	

23.4.1 Subgrade 3b

All agricultural land was Subgrade 3b. Soil wetness and workability limit the ALC grade of this land.

23.4.2 Other Land

This comprises roads and buildings.

4

.

RPT File No: 20,451

Resource Planning Team Northern Region FRCA Leeds

•

SOURCES OF REFERENCE

British Geological Survey (1978) Sheet No. 21, Sunderland, Solid and Drift Geology. BGS: London.

British Geological Survey (1978) Sheet No. 26, Wolsingham, Solid and Drift Geology. BGS: London.

British Geological Survey (1992) Sheet No. 20, Newcastle, Solid and Drift Geology. 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 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. 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.