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Forest of Dean District Plan

AGRICULTURAL LAND CLASSIFICATION
REPORT OF SURVEY

Resource Planning Team
Taunton Statutory Unit

April 1994

ADAS

FOREST OF DEAN LOCAL PLAN

AGRICULTURAL LAND CLASSIFICATION

Report of Survey

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AGRICULTURAL LAND CLASSIFICATION

Report of Survey

1. SUMMARY

Land at 8 objector sites at Coleford, Lydney and Staunton amounting to 99.9 ha was surveyed in April 1994 using the MAFF Agricultural Land Classification (ALC). The surveys were carried out on behalf of MAFF as part of its statutory role in the preparation of the Forest of Dean Local Plan.

Fieldwork was carried out by ADAS Resource Planning Team, Taunton Statutory Unit, at a scale of 1:10,000. The information is correct at this scale but any enlargement would be misleading.

The distribution of ALC grades identified in the survey areas is detailed for each site in the appropriate section and illustrated on the accompanying maps.

Distribution of ALC grades: Coleford sites

Grade	Area (ha)	% of Survey Area	% of Agricultural Land (56.6 ha)
Site 495			
Grade 2	3.7	6.2	6.5
3b	2.6	4.4	4.6
4	0.5	0.8	0.9
TOTAL	6.8	11.4	
Site 312			
Grade 2	5.0	8.4	8.8
Non-agricultural	1.9	3.2	
TOTAL	6.9	11.6	
Site 1034			
Grade 2	25.7	43.3	45.4
3a	6.6	11.1	11.7
3b	5.0	8.4	8.8
4	2.1	3.5	3.7
Urban	0.2	0.3	
Farm buildings	0.4	0.7	
TOTAL	40.0	67.3	

Distribution of ALC grades: Coleford sites (Cont)

Grade	Area (ha)	% of Survey Area	% of Agricultural Land (56.6 ha)
Site 843			
Grade 3a	4.5	7.6	7.9
3b	0.9	1.5	1.6
Urban	0.1	0.2	
Farm buildings	0.2	0.3	
TOTAL	5.7	9.6	

Total survey area: 59.4 ha

80% of the agricultural land was found to be best and most versatile, with minor limitations mainly due to overall climate and some moderate limitations to workability.

Distribution of ALC grades: Lydney sites

Grade	Area (ha)	% of Survey Area	% of Agricultural Land (31.3 ha)
Site 595			
Grade 2	18.3	54.8	58.5
3a	10.3	30.8	32.9
3b	0.7	2.1	2.2
Urban	1.7	5.1	
Farm buildings	0.7	2.1	
TOTAL	31.4	94.0	
Site 642			
Grade 2	1.0	3.0	3.2
3b	1.0	3.0	3.2
TOTAL	2.0	6.0	

Total survey area: 33.4 ha

95% of the agricultural land was found to be best and most versatile with minor and moderate limitations due to droughtiness and workability.

Distribution of ALC grades: Staunton sites

Grade	Area (ha)	% of Survey Area	% of Agricultural Land	(4.3 ha)
Site 688				
Grade 1	3.5	49.3	81.4	
TOTAL	3.5	49.3		
Site 695				
Grade 1	0.8	11.3	18.6	
Urban	2.8	39.4		
TOTAL	3.6	50.7		

Total survey area: 7.1 ha

Agricultural land on these small sites was mapped as Grade 1, although some variation was noted.

2. INTRODUCTION

Land at 8 objector sites at Coleford, Lydney and Staunton amounting to 99.9 ha was surveyed using the MAFF Agricultural Land Classification system in April 1994. The surveys were carried out on behalf of MAFF as part of its statutory role in the preparation of the Forest of Dean Local Plan.

The fieldwork was carried out by ADAS Resource Planning Team, Taunton Statutory Unit, at a scale of 1:10,000, with one auger sample point approximately every hectare and a soil profile examination pit approximately every 20 ha. Details of the findings of the surveys and the distribution of grades are detailed below for each site. The information is correct at the published scale but any enlargement would be misleading.

The published provisional 1" to one mile ALC maps (MAFF, 1974 etc) show the grades of the sites at a reconnaissance scale, but this is considered inadequate for Local Plan purposes and the recent survey was undertaken to provide a more detailed representation of the agricultural land quality. It supersedes any previous survey. The recent survey also uses the Revised Guidelines and Criteria for Grading the Quality of Agricultural Land (MAFF, 1988).

The Agricultural Land Classification system provides a framework for classifying land according to the extent to which its physical or chemical characteristics impose long-term limitations on agricultural use. The grading takes account of the top 120 cm of the soil profile. A description of the grades used in the ALC system can be found in Appendix 2.

3. CLIMATE

The grade of the land is determined by the most limiting factor present. The overall climate is considered first because it can have an overriding influence on restricting land to a lower grade despite other favourable conditions.

Estimates of climatic variables were obtained for each site by interpolation from the 5-km grid Agricultural Climate Dataset (Meteorological Office, 1989) and are shown in the details for each site.

The parameters used for assessing overall climatic limitation are accumulated temperature, a measure of the relative warmth of a locality, and average annual rainfall, a measure of overall wetness. Climatic data on Field Capacity Days (FCD) and Moisture Deficits for wheat (MDW) and potatoes (MDP) are also shown. These data are used in assessing the soil wetness and droughtiness limitations referred to in later sections. A description of the Soil Wetness Classes used can be found in Appendix 3.

4. COLEFORD

4.1 59.4 ha of land at 4 objector sites around Coleford were surveyed in April 1994 by examining a total of 58 auger borings and 2 soil profile pits. There is no suitable detailed previous survey.

4.2 Climate

Climatic data for the site was interpolated as described in Section 3. The results are shown below and indicate that there is an overall climatic limitation to Grade 2 at all Coleford sites.

Grid Reference		SO 573119	SO 572104
Altitude (m)		220	175
Accumulated Temperature (day °)		1282	1334
Average Annual Rainfall (mm)		952	955
Overall Climatic Grade		2	2
Field Capacity Days		205	206
Moisture deficit (mm):	Wheat	74	79
	Potatoes	56	63

4.3 Relief and Landcover

Altitude ranges from 175 m to 220 m AOD. Slopes are mainly gentle and gently undulating, with small areas of steeper slopes on sites 495 and 1034, where slopes exceeding 7° limit the land to Subgrade 3b and slopes exceeding 11° limit the land to Grade 4.

At the time of survey, landcover was mainly grass.

4.4 Geology and Soils

The published 1:50,000 scale solid and drift geology map, sheet 233 (Geological Survey of England and Wales, 1978), indicates that the site is underlain by mixed carboniferous deposits, with sandstone on the higher parts of sites 1034 and 495 and various deposits of limestone and limestone shale on the lower slopes of these sites and on the other 2 sites.

Soils mapped by the Soil Survey of England and Wales (1983) indicate soils of the Neath and Dunkeswick Associations on the northern sites and Neath and Crwbin Associations on the southern sites. Neath soils are described as well drained fine loamy soils, often over rock. Some fine loamy soils with slowly permeable subsoils and slight seasonal waterlogging. Steep slopes occur locally. Dunkeswick soils are described as slowly permeable seasonally waterlogged fine loamy and fine loamy over clayey soils, associated with similar clayey soils. Crwbin Association is described as very shallow and shallow well drained loamy soils over limestone, often on steep slopes. Limestone pavement and other rock exposures may be common.

This distribution is largely borne out by the current survey, although part of site 1034 has been restored after opencast mining.

4.5 Agricultural Land Classification

The distribution of ALC grades identified in the survey is shown on the accompanying ALC map and summarised in the table below. The information is correct at the scale shown but any enlargement would be misleading.

Distribution of ALC grades: Coleford sites

Grade	Area (ha)	% of Survey Area	% of Agricultural Land (56.6 ha)
Site 495			
Grade 2	3.7	6.2	6.5
3b	2.6	4.4	4.6
4	0.5	0.8	0.9
TOTAL	6.8	11.4	
Site 312			
Grade 2	5.0	8.4	8.8
Non-agricultural	1.9	3.2	
TOTAL	6.9	11.6	
Site 1034			
Grade 2	25.7	43.3	45.4
3a	6.6	11.1	11.7
3b	5.0	8.4	8.8
4	2.1	3.5	3.7
Urban	0.2	0.3	
Farm buildings	0.4	0.7	
TOTAL	40.0	67.3	
Site 843			
Grade 3a	4.5	7.6	7.9
3b	0.9	1.5	1.6
Urban	0.1	0.2	
Farm buildings	0.2	0.3	
TOTAL	5.7	9.6	

Total survey area: 59.4 ha

Grade 2

Where disturbed and restored after opencast mining, a variable content of soft sandstone has been included in the subsoil. This was assessed at the pit site by sieving and water displacement and was found not to cause a droughtiness limitation. However, at other auger survey points where the profile had not been disturbed, there may be a slight wetness limitation with gleying evident at variable depths or a slight limitation due to workability where heavier topsoil textures occur. At other points where there is no evident soil limitation, the overall climatic limitation causes downgrading to Grade 2.

Subgrade 3a

Small areas of Subgrade 3a have been found at sites 1034 and 843 where a minor wetness limitation is indicated by gleying, giving Wetness Class II or III, with sandy silt loam or medium clay loam topsoil textures. A soil profile pit at site 1034 revealed extensive mottling below 42 cm, but no slowly permeable layer at this point.

Subgrade 3b

This grade is mapped where slopes are found between 8 and 11° on sites 1034 and 495 or where a moderate wetness limitation occurs, as on site 1034, with a slowly permeable layer giving rise to Wetness Class IV.

Areas of Grade 3b land in the northern fields at site 495 have been recently planted to amenity woodland, but this is not shown on the ALC map.

Grade 4

Small areas of land with severe limitations due to steeper slopes, sometimes 14°, are found at sites 495 and 1034. A small area of low-lying ground with a severe wetness limitation is found at site 843. In this case a slowly permeable layer giving rise to Wetness Class IV combines with a heavy silty clay loam topsoil texture.

Other Land

Small areas of other land categories relate to residential areas and farm buildings.

5. LYDNEY

5.1 34 ha of land at 2 objector sites to the south-east of Lydney were surveyed in April 1994 by examining a total of 34 auger borings and 2 soil profile pits. There is no previous suitable detailed survey.

5.2 Climate

Climatic data for the site was interpolated as described in Section 3. The results are shown below and indicate that there is no overall climatic limitation. No local climatic limitations were noted.

Grid Reference	SO 646036	SO 652027
Altitude (m)	45	15
Accumulated Temperature (day °)	1483	1517
Average Annual Rainfall (mm)	861	823
Overall Climatic Grade	1	1
Field Capacity Days	191	184
Moisture deficit (mm): Wheat	95	100
Potatoes	85	92

5.3 Relief and Landcover

Altitude ranges from 15 to 45 m AOD.

Slopes are gentle to very gentle and are not limiting, with drainage to the Severn Estuary to the south.

At the time of survey, landcover was mainly grass and winter cereals.

5.4 Geology and Soils

The published 1:50,000 scale solid and drift geology map, sheet 233 (Geological Survey of England and Wales, 1978), indicates that the sites are underlain by lower old red sandstone with superficial deposits of river gravels over much of the centre of the sites.

Soils mapped by the Soil Survey of England and Wales (1983) indicate soils of the Bromyard Association at the north end of site 595, with Whimple 1 over the remainder of the sites. Bromyard Association is described as well drained, reddish fine silty soils over shale and siltstone. Some similar soils with slowly permeable subsoils and slight seasonal waterlogging and some well drained coarse loamy soils over sandstone. Risk of water erosion. Whimple 1 is described as reddish fine loamy over clayey soils with slowly permeable subsoils and slight seasonal waterlogging. Associated with similar well drained soils, some over gravel.

5.5 Agricultural Land Classification

The distribution of ALC grades identified in the survey is shown on the accompanying ALC map and areas are summarised in the table below. The information is correct at the scale shown but any enlargement would be misleading.

Distribution of ALC grades: Lydney sites

Grade	Area (ha)	% of Survey Area	% of Agricultural Land (31.3 ha)
Site 595			
Grade 2	18.3	54.8	58.5
3a	10.3	30.8	32.9
3b	0.7	2.1	2.2
Urban	1.7	5.1	
Farm buildings	0.7	2.1	
TOTAL	31.4	94.0	
Site 642			
Grade 2	1.0	3.0	3.2
3b	1.0	3.0	3.2
TOTAL	2.0	6.0	

Total survey area: 33.4 ha

Grade 2

Areas mapped as Grade 2 suffer a minor limitation due to difficulties of workability, as in the north of site 595 where a medium clay loam topsoil is found. The droughtiness limitation caused by stone content in the river gravel deposits was less than expected, with maximum stone contents of up to 35% as recorded as pit 1 causing only a minor droughtiness limitation to Grade 2.

Subgrade 3a

Soils classified as Subgrade 3a have a moderate limitation, as described in Appendix 2, commonly due to wetness, where a pit in the north of site 595 indicated a slowly permeable layer from 36 cm, Wetness Class III, and other profiles in the south of the same site showed extensive gleying in the subsoil but without a slowly permeable layer, Wetness Class III.

Subgrade 3b

A small area to the south-west of Crump Farm had a slightly more serious slope limitation.

Other Land

Urban land includes a section of road, a disused railway, and a section of new road under construction which now cuts through the centre of the site. Agricultural buildings are also shown.

6. STAUNTON

6.1 7.1 ha of land at Staunton were surveyed in April 1994 by examining a total of 5 auger borings. The site had not previously been surveyed in detail.

6.2 Climate

Climatic data for the site was interpolated as described in Section 3. The results are shown below and indicate that there is no overall climatic limitation. No local climatic limitations were noted.

Grid Reference		SO 787291
Altitude (m)		22
Accumulated Temperature (day °)		1494
Average Annual Rainfall (mm)		666
Overall Climatic Grade		1
Field Capacity Days		146
Moisture deficit (mm):	Wheat	111
	Potatoes	104

6.3 Relief and Landcover

Altitude ranges from 20 m to 25 m AOD.

Slopes are gentle to very gentle and are not limiting.

At the time of survey, landcover was mainly grass with some arable cropping.

6.4 Geology and Soils

The published 1:50,000 scale solid and drift geology map, sheet 216 (*Geological Survey of England and Wales, 1988*), indicates that the sites are underlain by rocks of the Mercia Mudstone Group, previously known as Keuper Marl.

Soils mapped by the Soil Survey of England and Wales (1983) indicate soils of the Whimple 3 Association, reddish fine loamy or fine silty over clayey soils with slowly permeable subsoils and slight seasonal waterlogging.

6.5 Agricultural Land Classification

The distribution of ALC grades identified in the survey is shown on the accompanying ALC map and areas are summarised in the table below. The information is correct at the scale shown but any enlargement would be misleading.

Distribution of ALC grades: Staunton sites

Grade	Area (ha)	% of Survey Area	% of Agricultural Land (4.3 ha)
Site 688			
Grade 1	3.5	49.3	81.4
TOTAL	3.5	49.3	
Site 695			
Grade 1	0.8	11.3	18.6
Urban	2.8	39.4	
TOTAL	3.6	50.7	

Total survey area: 7.1 ha

Grade 1

Although some variation was found between auger borings, these small sites have been mapped as Grade 1.

Other Land

Remaining land was found to be in urban use.

APPENDIX 1

REFERENCES

GEOLOGICAL SURVEY OF ENGLAND AND WALES, 1978, Solid and Drift edition, sheet 233, Monmouth, 1:50,000 scale

GEOLOGICAL SURVEY OF ENGLAND AND WALES, 1988, Solid and Drift edition, sheet 216, Tewkesbury, 1:50,000 scale

MAFF (1967) Agricultural Land Classification Map, sheet 142, Provisional 1:63,360 scale

MAFF (1968) Agricultural Land Classification Map, sheet 143, Provisional 1:63,360 scale

MAFF (1971) Agricultural Land Classification Map, sheet 155, Provisional 1:63,360 scale

MAFF (1988), Agricultural Land Classification of England and Wales, Revised Guidelines and Criteria for Grading the Quality of Agricultural Land, MAFF Publications, Alnwick

METEOROLOGICAL OFFICE (1989), published climatic data extracted from the agroclimatic dataset, compiled by the Meteorological Office

SOIL SURVEY OF ENGLAND AND WALES (1983), sheet 5, Soils of South-west England, 1:250,000 scale

APPENDIX 2

DESCRIPTION OF ALC 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 include 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 and horticultural crops can usually be grown but on some land in the 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.

Grade 3 - good to moderate quality agricultural land

Land with moderate limitations which affect the choice of crops, timing and type of cultivation, harvesting or the level of yield. Where 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 level of yields. It is mainly suited to grass with occasional arable crops (eg cereals and forage crops) the yields of which are variable. In most 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 very severe limitations which restrict use to permanent pasture or rough grazing, except for occasional pioneer forage crops.

Descriptions of other land categories used on ALC maps

Urban

Built-up or 'hard' uses with relatively little potential for a return to agriculture including: housing, industry, commerce, education, transport, religious buildings, cemeteries. Also, hard-surfaced sports facilities, permanent caravan sites and vacant land; all types of derelict land, including mineral workings which are only likely to be reclaimed using derelict land grants.

Non-agricultural

'Soft' uses where most of the land could be returned relatively easily to agriculture, including: private park land, public open spaces, sports fields, allotments and soft-surfaced areas on airports/airfields. Also active mineral workings and refuse tips where restoration conditions to 'soft' after-uses may apply.

Agricultural buildings

Includes the normal range of agricultural buildings as well as other relatively permanent structures such as glasshouses. Temporary structures (eg polythene tunnels erected for lambing) may be ignored.

Open water

Includes lakes, ponds and rivers as map scale permits.

Land not surveyed

Agricultural land which has not been surveyed.

Where the land use includes more than one of the above landcover types, eg buildings in large grounds, and where may be shown separately. Otherwise, the most extensive cover type will usually be shown.

Source: MAFF (1988) Agricultural Land Classification of England and Wales (Revised Guidelines and Criteria for Grading the Quality of Agricultural Land), Alnwick.

APPENDIX 3

DEFINITION OF SOIL WETNESS CLASSES

Wetness Class I

The soil profile is not wet within 70 cm depth for more than 30 days in most years.

Wetness Class II

The soil profile is wet within 70 cm depth for 31-90 days in most years or, if there is no slowly permeable layer within 80 cm depth, it is wet within 70 cm for more than 90 days, but not wet within 40 cm depth for more than 30 days in most years.

Wetness Class III

The soil profile is wet within 70 cm depth for 91-180 days in most years or, if there is no slowly permeable layer within 80 cm depth, it is wet within 70 cm for more than 180 days, but only wet within 40 cm depth for between 31 and 90 days in most years.

Wetness Class IV

The soil profile is wet within 70 cm depth for more than 180 days but not within 40 cm depth for more than 210 days in most years or, if there is no slowly permeable layer within 80 cm depth, it is wet within 40 cm depth for 91-210 days in most years.

Wetness Class V

The soil profile is wet within 40 cm depth for 211-335 days in most years.

Wetness Class VI

The soil profile is wet within 40 cm depth for more than 335 days in most years.

Notes: The number of days specified is not necessarily a continuous period. *'In most years' is defined as more than 10 out of 20 years.*

Source: Hodgson, J M (in preparation) Soil Survey Field Handbook (revised edition).

GVP513

SITE NAME	PROFILE NO.	SLOPE AND ASPECT	LAND USE		PARENT MATERIAL
Coleford	Pit 1, ASP 11-6	3° South-west	Permanent Grassland	Av Rainfall: ATO:	Lower Limestone Shale
JOB NO.	DATE	GRID REFERENCE	DESCRIBED BY	FC Days: 205	SOIL SAMPLE REFERENCES
38/94	29/4/94	SO 574 118	G M Shaw/H Lloyd-Jones	Climatic Grade: 2 Exposure Grade:	HLJ 39

Horizon No.	Lowest Av. Depth (cm)	Matrix (Ped Face) Colours	Texture	Stoniness: Size, Type, and Field Method	Mottling Abundance, Contrast, Size and Colour	Structure: Ped Development Size and Shape	Pores (Fissures)	Structural Condition	Consistence	Roots: Abundance and Size	Calcium Carbonate Content	Mangan Concs	Horizon Boundary: Distinctness and form
1	26	10YR33	MCL	0% (Visual)	None	-	-	-	-	Many v fine, fine	None	None	Abrupt smooth
2	42	10YR42	MCL	0% (Visual)	None	MDMSAB	Good	Good	Friable	Many fine + v fine	None	None	Abrupt wavy
3	65	2.5Y20 2.5YR46	HCL	0% (Visual)	Many distinct ochreous + pale mottles in the black. None in the red!	MDCSAB	Good	Moderate	Friable	Common fine + v fine	None	None	Clear irregular
4	120	10YR64	HCL	0% (Visual)	Many, distinct 10YR62 7.5YR58	MDCSAB	Poor	Moderate	Firm	Few fine	None	None	-

Profile Gleyed From: 65

Depth to Slowly Permeable Horizon: N/A

Wetness Class: II

Wetness Grade: 3a

VP336-10

Available Water Wheat:

Potatoes:

Moisture Deficit Wheat:

Potatoes:

Moisture Balance Wheat:

Potatoes:

Droughtiness Grade:

Final ALC Grade: 3a

Main Limiting Factor(s): Wetness

Remarks:

H3 contains irregular areas of black material (carbon desposits?) which is porous.
H3 has thin layer of ochreous and pale mottles at the top of the black band.

SITE NAME	PROFILE NO.	SLOPE AND ASPECT	LAND USE		PARENT MATERIAL
Coleford	Pit 2, ASP 4	5° East	Permanent Grassland	Av Rainfall: ATO: FC Days: 205 Climatic Grade: 2 Exposure Grade:	Carboniferous Sandstone*
JOB NO.	DATE	GRID REFERENCE	DESCRIBED BY		SOIL SAMPLE REFERENCES
38/94	29.4.94	SO 573 119	P Barnett/G M Shaw		PB 118

Horizon No.	Lowest Av. Depth (cm)	Matrix (Ped Face) Colours	Texture	Stoniness: Size,Type, and Field Method	Mottling Abundance, Contrast, Size and Colour	Structure: Ped Development Size and Shape	Pores (Fissures)	Structural Condition	Consistence	Roots: Abundance and Size	Calcium Carbonate Content	Mangan Concs	Horizon Boundary: Distinctness and form
1	22	10YR32	MSL	10% MSST (Visual)	RRC only	-	-	-	-	MFVF	0	0	Ab smooth
2	100+	10YR53	MSL	16% >2cm 22% >2mm 38% MSST (S+D)	0	WCAB	<½%	Moderate	Firm	FFVF	0	0	

Profile Gleyed From: Not gleyed

Depth to Slowly Permeable Horizon: No SPL

Wetness Class: I

Wetness Grade: 1

VP336-10

Available Water	Wheat:	117 mm
	Potatoes:	84 mm
Moisture Deficit	Wheat:	74 mm
	Potatoes:	56 mm
Moisture Balance	Wheat:	43 mm
	Potatoes:	28 mm
Droughtiness Grade:		1

Final ALC Grade: 2

Main Limiting Factor(s): OC

Remarks:

* Restored after opencast.

38-94 COLEFORD

	HA	ACRES	% AGRICULTURAL LAND	% TOTAL LAND
Grade 1	0.0	0.0	0.0	0.0
Grade 2	34.4	85.1	60.9	57.9
Subgrade 3a	11.1	27.4	19.6	18.6
Subgrade 3b	8.5	20.9	14.9	14.2
Grade 4	2.6	6.4	4.6	4.3
Grade 5	0.0	0.0	0.0	0.0
Total Agri. Land =	56.6	139.7	100	95.1
Urban	0.3	0.8	-	0.6
Non-Agricultural	1.9	4.8	-	3.2
Woodland	0.0	0.0	-	0.0
Ag-Buildings	0.6	1.6	-	1.1
Open Water	0.0	0.0	-	0.0
Land Not Surveyed	0.0	0.0	-	0.0
Total Site Area =	59.5	146.9	-	100.0