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Devon Structure Plan Exeter
AGRICULTURAL LAND CLASSIFICATION
REPORT OF SURVEY

Resource Planning Team
Taunton Statutory Unit

December 1993

ADAS 

DEVON STRUCTURE PLAN EXETER

AGRICULTURAL LAND CLASSIFICATION

Report of Surveys

1 SUMMARY

Land in four parts of Exeter City Council were surveyed using the Agricultural Land Classification (ALC) System in December 1993. The surveys were carried out on behalf of MAFF as part of its statutory role in the preparation of the Devon Structure Plan. Land at the following locations was surveyed: Countess Wear, Matford Bridge, Monkerton and Pinwood Lane.

The 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 and categories identified in the survey area is detailed below and illustrated on the accompanying ALC maps.

Distribution of ALC grades Countess Wear

Grade	Area (ha)	% of Survey Area	% of Agricultural Land
1	5.6	2.2	4.7
2	65.8	26.3	55.1
3a	34.7	13.9	29.1
3b	4.6	1.8	3.9
4	8.6	3.4	<u>7.2</u>
Urban	36.8	14.7	100%
Non Agric	47.0	18.7	(119.3ha)
Not Surveyed	<u>47.7</u>	<u>19.0</u>	
TOTAL	250.8	100%	

Distribution of ALC grades Matford Bridge

Grade	Area (ha)	% of Survey Area	% of Agricultural Land
3a	4.0	9.2	9.8
3b	3.7	8.5	9.1
4	32.9	75.8	<u>81.0</u>
Urban	<u>2.8</u>	<u>6.5</u>	100%
TOTAL	43.4	100%	(40.6ha)

Distribution of ALC grades Monkerton

Grade	Area (ha)	% of Survey Area	% of Agricultural Land
1	74.6	62.5	70.8
2	15.6	13.1	14.8
3a	6.5	5.4	6.2
3b	8.6	7.2	<u>8.2</u>
Urban	9.6	8.0	100%
Non Agric	3.9	3.3	(105.3ha)
Farm Bdgs	<u>0.6</u>	<u>0.5</u>	
TOTAL	119.4	100%	

Distribution of ALC grades Pinwood Lane

Grade	Area (ha)	% of Survey Area	% of Agricultural Land
3b	6.5	54.2	78.3
4	1.8	15.0	<u>21.7</u>
Not Surveyed	<u>3.7</u>	<u>30.8</u>	100%
TOTAL	12.0	100%	(8.3ha)

2 INTRODUCTION

Land at four parts of Exeter City Council were surveyed using the Agricultural Land Classification (ALC) System in December 1993. The surveys were carried out on behalf of MAFF as part of its statutory role in the preparation of the Devon Structure Plan. Land at the following locations was surveyed: Countess Wear, Matford Bridge, Monkerton and Pinwood Lane.

The fieldwork was carried out by ADAS (Resource Planning Team, Taunton Statutory Unit) at a scale of 1:10,000 (approximately one sample point every hectare). The information is correct at this scale but any enlargement would be misleading. Details of the findings of the surveys and the distribution of the grades are detailed below for each area surveyed.

The recent surveys supercede any previous surveys and were undertaken to provide a more detailed representation of the agricultural and quality using the Revised Guidelines and Criteria for grading the quality of agricultural land (MAFF 1988). These guidelines provide 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 120cm 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 interpolated for each site from the Agricultural Climate Dataset (Meteorological Office 1989). The data are shown in later sections.

The parameters used for assessing overall climatic conditions 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 Wetness Classes used in quantifying the degree of wetness can be found in Appendix 3.

4 COUNTESS WEAR

4.1 Two hundred and fifty hectares of land at Countess Wear, Exeter were surveyed in December 1993. The only existing ALC information is from the one

inch to the mile national ALC map series sheet 176 (MAFF 1972) The scale of the map is considered inadequate for local plan purposes and the area has been resurveyed The recent survey now supersedes any previous ALC information The majority of the agricultural land surveyed is of best and most versatile quality A total of 123 auger sample points and 7 soil profile pits were examined

4.2 Climate

Climatic data for the site was interpolated as described in Section 3 The results are shown in Table 1 and indicate that there is no overall climatic limitation for the site There is however an important boundary in terms of the number of days that the site is at Field Capacity The boundary runs to the east of the railway in the north and then to the east of the M5 in the south To the east of the boundary the site is at field capacity under 175 days and to the west over 175 days This means that the same soil will be slightly less workable to the west

Table 1 Climatic Interpolations Countess Wear

Grid Reference	SX 969 887	SX 953 907
Altitude (m)	5	44
Accumulated Temperature (day deg)	1595	1550
Average Annual Rainfall (mm)	818	869
Overall Climatic Grade	1	1
Field Capacity Days	172	180
Moisture Deficit Wheat (mm)	113	105
Moisture Deficit Potatoes (mm)	108	98

4.3 Relief and Landcover

The area surveyed is gently sloping except in the south east corner where there are some steeper slopes down to the River Clyst The highest part of the survey area is in the north west at 45m AOD and the lowest part is by the River Clyst at 5m AOD

A significant part of the area surveyed is not in agricultural use comprising of a golf course and depot The agricultural land was being used for a mix of arable crops nurseries and grass

4.4 Geology and Relief

The published 1:63,360 scale drift geology map sheet 325 (Geological Survey of England and Wales 1971) shows the site to consist of Valley Gravels Breccia and Conglomerate Lower Sandstone and Alluvium The latter is confined to the southeastern edge of the site along the River Clyst The lower ground to the south and west is underlain by Valley Gravels Lower Sandstones are

predominant throughout the site particularly in the north To the north west of the site on the higher ground there is a large area of Breccia and Conglomerate

The Soil Survey of England and Wales mapped the soils in 1972 at a scale of 1:63,360 In the south west the Rudway Series is mapped described as loamy soils Soils at the Bridgets Nurseries are the Crediton Series described as well drained gritty reddish loamy soils over breccia The central area is mapped as the Bridgnorth Series described as well drained sandy and coarse loamy soils The Crannymoor Series mapped around the railway in the north are sandy soils A small area of the Bromsgrove Series is mapped around the Hospital

The soils found in the recent survey were generally well drained sandy loams with increasing stone contents down the profile Some parts of the area had stoneless soils

4.5 Agricultural Land Classification

The distribution of ALC grades identified in the survey area is detailed in Table 2 and shown on the accompanying ALC map The information is correct at the scale shown but any enlargement would be misleading

Table 2 Distribution of ALC grades Countess Wear

Grade	Area (ha)	% of Survey Area	% of Agricultural Land
1	5.6	2.2	4.7
2	65.8	26.3	55.1
3a	34.7	13.9	29.1
3b	4.6	1.8	3.9
4	8.6	3.4	7.2
Urban	36.8	14.7	100%
Non Agric	47.0	18.7	(119.3ha)
Not Surveyed	<u>47.7</u>	<u>19.0</u>	
TOTAL	250.8	100%	

Grade 1

A small area of land between the railway and M5 has been mapped as Grade 1 These soils are well drained and stoneless They are Wetness Class I The soil is a medium sandy loam throughout the profile and is able to hold sufficient water for the soil to be Grade 1 A soil profile pit was dug in this unit to confirm the subsoil structural condition

Grade 2

A significant part of the agricultural land has been mapped as Grade 2. These soils are also Wetness Class I but have varying stone contents. The stone content varies both up and down the profile and also within the unit. Three soil pits were dug in this mapping unit. These showed that the topsoil stone content which was predominantly less than 2cm in size was between 8 and 15%. At depth some horizons had no stones whilst others had up to 30% hard stones. The soils are medium sandy loams in the higher parts of the profile and sometimes loamy sands were found at depth. These soils have a slight droughtiness limitation because of the light textures and the stone contents.

Subgrade 3a

Several areas of Subgrade 3a have been mapped. These are similar to the Grade 2 soils except that there are higher stone contents in the profile which restricts the amount of water available to crops. Three soil profile pits were dug in these areas to assess the subsoil structural condition and the stone content. Topsoil stone contents were found to be similar to the Grade 2 pits. However subsoil stone contents were much higher measured to be 65% in the lower horizons in two of the pits. The substructural condition was found to be good. The upper horizons have sandy loam textures whilst the lower horizons have loamy sand textures.

Subgrade 3b

A small area of land near Newcourt Hospital has been mapped as Subgrade 3b. Here the droughtiness limitation is much greater and the soils have been downgraded. The stone content is greater at a higher depth in the profile. There are also two small areas in the south east where the gradients exceed 7 degrees and the land is downgraded on the basis that the versatility is limited by the gradient.

Grade 4

The land beside the River Clyst is likely to be wet for long periods of the year. It is assessed to be Wetness Class IV and with a heavy clay loam topsoil is limited to Grade 4. There is also a small area where the slope gradient exceeds 11 degrees and this area is downgraded to Grade 4.

Not Surveyed

An area of 48 hectares north of Old Rydon Lane was not surveyed because permission for access was not granted on the majority of it. It is likely that this land would be of best and most versatile quality.

Other Land

Two sports fields and a golf course make up most of the non agricultural land. The areas mapped as urban are housing, roads, Newcourt Hospital, a military depot and buildings connected with the golf course and St Bridgets Nursery.

5 MATFORD BRIDGE

5.1 Forty three hectares of land at Matford Bridge were surveyed in December 1993. The area had been surveyed in 1986 but under the original Land Classification System. The site has now been resurveyed using the Revised Guidelines (MAFF 1988) and this survey supersedes any previous ALC information. A total of 43 auger sample points and two soil profile pits were examined.

5.2 Climate

Climate data for the site was interpolated as described in Section 3. The results are shown in Table 3 and indicate that there is no overall climatic limitation.

Table 3 Climatic Interpolations Matford Bridge

Grid Reference	SX 927 899	SX 933 893
Altitude (m)	3	3
Accumulated Temperature (day deg)	1598	1598
Average Annual Rainfall (mm)	845	846
Overall Climatic Grade	1	1
Field Capacity Days	177	177
Moisture Deficit Wheat (mm)	112	111
Moisture Deficit Potatoes (mm)	106	106

5.3 Relief and Landcover

The site is flat and crossed by a series of ditches. At the time of survey there was winter cereals and grass growing in the fields.

5.4 Geology and Soils

The published 1:63,360 scale drift geology map sheet 325 (Geological Survey of England and Wales 1971) shows the entire site is underlain with alluvium. To the south of the site there is breccia and conglomerate of the Triassic and Permian period.

The Soil Survey of England and Wales mapped the soils in 1972 at a scale of 1:63,360. The map shows the soils in the north to be of the Uton Series, clayey.

soils derived from riverine alluvium and in the south to be the Exminster Series a clayey soil derived from estuarine alluvium

The recent survey found two broad soil types. A small area of soils in the north of the site comprises slightly stony medium clay loam topsoils over clay loam subsoils. Below a depth of approximately 65cm the subsoils are medium sandy loam textures. The majority of the site comprises stonefree reddish clay soils with silty clay topsoils. At approximately 80-90cm medium sandy loam subsoils were found.

5.5 Agricultural Land Classification

The distribution of ALC grades identified in the survey area is detailed in Table 4 and shown on the accompanying ALC map. The information is correct at the scale shown but any enlargement would be misleading.

Table 4 Distribution of ALC grades Matford Bridge

Grade	Area (ha)	% of Survey Area	% of Agricultural Land
3a	4.0	9.2	9.8
3b	3.7	8.5	9.1
4	32.9	75.8	81.0
Urban	2.8	6.5	100%
TOTAL	43.4	100%	(40.6ha)

Subgrade 3a

A small area in the north of the site has been mapped as Subgrade 3a. This relates to the lighter textured soils described above. Profiles are gleyed at 30cm but no slowly permeable layer was found in these soils. The soils are Wetness Class II which with a medium clay loam topsoil limits the soils to Subgrade 3a.

Subgrade 3b

The small area of 3b land comprises heavy clay loam topsoils with clay subsoils. However gleying and slowly permeable layers are not evident until 40cm. These soils are Wetness Class III. The soils have a moderately severe wetness limitation and are limited to Subgrade 3b.

Grade 4

Over 80% of the land has been mapped as Grade 4. These soils have silty clay loam topsoils and slowly permeable clay subsoils starting within 40cm. This

severely impedes the drainage of the soils and they are Wetness Class IV and Grade 4

Other Land

A new road and industrial development occupies the western part of the survey area

6 MONKERTON

6.1 One hundred and nineteen hectares at Monkerton were surveyed in 1988 and 1989 and checked for changes in December 1993. The 1988 and 1989 surveys were carried out using the Revised Guidelines and at a scale of 1:10 000 so it was not necessary to resurvey the agricultural land. The 1988 and 1989 surveys had been published and the new map takes account of changes in the extent of urban land. The recent map now supersedes the 1988 and 1989 maps. The majority of the agricultural land surveyed is of best and most versatile land.

6.2 Climate

Climatic data for the site was interpolated as described in Section 3. The results are shown in Table 5 and indicate that there is no overall climatic limitation for the site.

Table 5 Climatic Interpolation Monkerton

Grid Reference	SX 958 935	SX 966 931
Altitude (m)	53	15
Accumulated Temperature (day deg)	1538	1581
Average Annual Rainfall (mm)	821	800
Overall Climatic Grade	1	1
Field Capacity Days	172	169
Moisture Deficit Wheat (mm)	107	113
Moisture Deficit Potatoes (mm)	100	107

6.3 Relief

The survey area is gently sloping generally to the east but with a series of shallow valleys cut into the slopes. The highest point is in the west at 55m AOD and the lowest point in the east is at 15m AOD.

6 4 Geology and Soils

The published 1 63 360 scale drift geology map sheet 325 (Geological Survey of England and Wales 1971) shows the site is dominated by Lower Sandstone In the north along a watercourse alluvium occurs and to the north east and south east there are two blocks of breccia and conglomerate

The Soil Survey of England and Wales mapped the soils in 1972 at a scale of 1 63 360 The whole site was mapped as the Bridgnorth Series These are described as well drained sandy and coarse loamy soils over soft sandstone

The soils found in the 1989 survey were well drained and light in texture typical of the Bridgnorth Series

6 5 Agricultural Land Classification

The distribution of ALC grades identified in the survey area is detailed in Table 6 and shown on the accompanying ALC map The information is correct at the scale shown but any enlargement would be misleading

Table 6 Distribution of ALC grades Monkerton

Grade	Area (ha)	% of Survey Area	% of Agricultural Land
1	74.6	62.5	70.8
2	15.6	13.1	14.8
3a	6.5	5.4	6.2
3b	8.6	7.2	<u>8.2</u>
Urban	9.6	8.0	100%
Non Agric	3.9	3.3	(105.3ha)
Farm Bdgs	<u>0.6</u>	<u>0.5</u>	
TOTAL	119.4	100%	

Grade 1

The majority of the site has been mapped as Grade 1 These soils are well drained and are Wetness Class I The topsoil textures in this area are sandy loams The profiles are stoneless Typically they are sandy loams to depth or grade into sandy clay loam textures The soils have good subsoil structural conditions Sometimes there is clay deep in the profile The clay is slowly permeable but at too great a depth to have a limiting effect on the profiles In the north east the Grade 1 land occupies the gentle slopes Here the topsoil texture is slightly heavier The deep medium clay loam topsoil grades into heavy clay loams There are very low stone contents in this soil The substructural condition of these

soils is moderate. The soils are also Wetness Class I. Neither of the soils types have any limitations and with adequate soil water availability are Grade 1.

Grade 2

The areas mapped as Grade 2 have a droughtiness limitation caused by loamy sands in the subsoil. Deep medium sandy loam topsoils distinctly overlie a subsoil of loamy medium sand which extends below 120cm. The profiles are typically stonefree and show no evidence of wetness. They are Wetness Class I. The presence of the loamy sand at about 50cm reduces the available water in the profile despite good subsoil structural conditions.

Subgrade 3a

The majority of the floodplain area in the north has been downgraded as a result of soil wetness. The soils are heavier and have medium clay loam topsoils and have increasing clay contents with depth. The clay subsoils are slowly permeable and are gleyed. The soils are Wetness Class III and are Subgrade 3a. In the south the 3a soils are droughty. Loamy medium sand subsoils occur at a shallow depth than those described as Grade 2 soils. This increases the droughtiness of the soils.

Subgrade 3b

Where the gradients exceed 7 degrees the land has been downgraded. This is because the versatility of the soil is reduced since not all agricultural machinery can be safely used on these slopes.

Other land

Housing and roads make up the urban land. The non agricultural land is a playing field and there are some agricultural buildings.

7 PINWOOD LANE

7.1 Twelve hectares of land south of Pinwood Lane were surveyed in December 1993. The only existing ALC information is from the one inch to the mile national map series sheet 176 (MAFF 1972). The scale of this map is considered inadequate for local plan purposes and the site has been resurveyed. The recent survey now supersedes any previous ALC information. A total of 5 auger sample points and one soil profile pit were examined.

7 2 Climate

Climate data for the site was interpolated as described in Section 3 The results are shown in Table 7 and indicate that there is no overall climatic limitation

Table 7 Climatic Limitations Pinwood Lane

Grid Reference	SX 951 947	SX 948 948
Altitude (m)	58	80
Accumulated Temperature (day deg)	1532	1507
Average Annual Rainfall (mm)	817	830
Overall Climatic Grade	1	1
Field Capacity Days	171	173
Moisture Deficit Wheat (mm)	107	104
Moisture Deficit Potatoes (mm)	100	96

7 3 Relief and Landcover

The site forms part of a spur aligned north west - south east The land is sloping and in the east there is some steep land with gradients over 11 degrees The land in the west has gradients of over 7 degrees

The site was in grass at the time of survey

7 4 Geology and Soils

The 1 63 360 scale drift geology map sheet 325 (Geological Survey of England and Wales 1971) shows the whole site to be underlain by Carboniferous Culm Measures of grits and shales

The Soil Survey of England and Wales mapped the soils in the area in 1972 at a scale of 1 63 360 In the west the soils were mapped as the Halstow Series clayey soils over Culm Shales In the east the Dunsford Series was mapped fine loamy soils over Culm Shale

During the recent survey the soils at the site were found to be slightly stony and poorly drained The reddish soils are gleyed and have slowly permeable subsoils

7 5 Agricultural Land Classification

The distribution of ALC grades identified in the survey area is detailed in Table 8 and shown on the accompanying ALC map The information is correct at this scale but any enlargement would be misleading

Table 8 Distribution of ALC grades Pinwood Lane

Grade	Area (ha)	% of Survey Area	% of Agricultural Land
3b	6.5	54.2	78.3
4	1.8	15.0	<u>21.7</u>
Not Surveyed	<u>3.7</u>	<u>30.8</u>	100%
TOTAL	12.0	100%	(8.3ha)

Subgrade 3b

In the west of the site the land is limited to Subgrade 3b on the basis of limiting slopes. Here the gradients are over 7 degrees. This restricts the versatility of the land because not all types of agricultural machinery can be safely used on these slopes. The remaining Subgrade 3b land has been downgraded because the soils are poorly drained. The soils are stony but have slowly permeable subsoils. The soils are Wetness Class IV. The topsoil texture is heavy silty clay loam.

Grade 4

The remaining agricultural land has slopes with gradients over 11 degrees. Here the restriction on types of machinery that can be safely used is greater and the land is therefore less versatile.

Other land

The remaining land is mapped as not surveyed. These areas are wooded and covered in scrub.

APPENDIX 1

REFERENCES

GEOLOGICAL SURVEY OF ENGLAND AND WALES (1971) Drift edition Sheet 325 Exeter 1 63 360 scale

MAFF (1972) Agricultural Land Classification Map sheet 176 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) Alnwick

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

SOIL SURVEY OF ENGLAND AND WALES (1972) Sheet 325 and 339 1 63 360

APPENDIX 2

DESCRIPTION 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 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 land cover types eg buildings in large grounds and where map scale permits the cover types 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 70cm depth for more than 30 days in most years

Wetness Class II

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

Wetness Class III

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

Wetness Class IV

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

Wetness Class V

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

Wetness Class VI

The soil profile is wet within 40cm 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)

SITE NAME		PROFILE NO	SLOPE AND ASPECT	LAND USE	Av Rainfall	819 mm	PARENT MATERIAL		
Mount Howe Topsham		Pit 1	2° SE	Scrub	ATO	1584 day °C	Lower Sandstone		
JOB NO		DATE	GRID REFERENCE	DESCRIBED BY	FC Days	172	SOIL SAMPLE REFERENCES		
118/94		9/11/94	SX 969 878	N A Done	Climatic Grade	1	NAD/156		
					Exposure Grade	1			

Horizon No	Lowest Av Depth (cm)	Texture	Matrix (Ped Face) Colours	Stoniness Size Type and Field Method	Mottling Abundance Contrast Size and Colour	Mangan Concs	Structure Ped Development Size and Shape	Consistence	Structural Condition	Pores (Fissures)	Roots Abundance and Size	Calcium Carbonate Content	Horizon Boundary Distinctness and form
1	35	MSL	10YR32	8% HR							Many F+VF few M		Clear/ smooth
2	90+	MSL	75YR44	15% HR vis est Stones decrease below 90 cm			WDCSAB	V Friable	G	G	Common F + VF		

Profile Gleyed From
Depth to Slowly Permeable Horizon
Wetness Class 1
Wetness Grade 1

NL336j

Available Water Wheat 140 mm
Potatoes 100 mm
Moisture Deficit Wheat 111 mm
Potatoes 106 mm
Moisture Balance Wheat +26 mm
Potatoes -6 mm
Droughtiness Grade 2 (Calculated to 120 cm)

Final ALC Grade 2
Main Limiting Factor(s) Drought

Remarks