



**SOUTH TYNESIDE UDP
TYNE AND WEAR**

***Agricultural Land Classification
of Objectors Sites
January 1997***

**Resource Planning Team
Leeds Statutory Group
ADAS Leeds**

**ADAS Reference: 118-125/97
MAFF Reference: EL30/07
LUPU Commission: N3017**

AGRICULTURAL LAND CLASSIFICATION REPORT

SOUTH TYNESIDE UDP, OBJECTORS SITES

Introduction

This report presents the findings of seven detailed Agricultural Land Classification (ALC) surveys covering 67 ha of land in South Tyneside. One further site was not subject to survey because it consisted entirely of non-agricultural land. The surveys were carried out in December 1996 and January 1997, at the request of the Ministry of Agriculture, Fisheries and Food (MAFF) Land Use Planning Unit in Northallerton in connection with the South Tyneside Unitary Development Plan. These surveys supersede any previous ALC surveys on these sites.

The work was conducted by members of the Resource Planning Team in the Leeds Statutory Group in ADAS. 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.

At the time of the surveys the land use on the sites was as follows:

Land adjacent to South Tyneside College, Hebburn

There is no agricultural land on this site and it consists entirely of playing fields and a track.

Land at South Lane, Boldon

Most of the land on this site was in arable use although parts of the far west were in permanent pasture. In addition to the agricultural land there was a small area of allotments.

Land at Boker Lane/Tiledshed Lane, East Boldon

The west of this site was sown to oilseed rape whilst the east was agriculturally derelict.

Land at Natley Avenue, East Boldon

All of this site was sown to oilseed rape.

Land at Moor Lane/Sunderland Road, Cleadon

Most of this site was in arable use at the time of survey although the southernmost part of the site appeared to be in set-aside.

Land at A19/A1290

All of this land was under winter cereals at the time of survey.

Land at "Whitburn Hotel", Whitburn

All of this site was in permanent grass at the time of survey.

Land at Wellands Farm, Whitburn

All of this site was in arable use at the time of survey.

Summary

With the exception of the land adjacent to South Tyneside College, Hebburn (which contained no agricultural land) all of the sites were surveyed at an auger boring density of one per hectare. At least one soil profile pit was dug on each site with the exception of the site already mentioned.

The findings of the surveys are shown on the enclosed ALC maps, which have been drawn at a scale of 1:5,000. They are accurate at this scale but any enlargement would be misleading.

The areas of the ALC grades and subgrades on the surveyed land are summarised in Table 1.

Table 1: Area of grades and other land

Site	Grade 2	Area (ha)		Other land
		Subgrade 3a	Subgrade 3b	
Land adjacent to South Tyneside College	-	-	-	5.9
Land at South Lane, Boldon	1.7	7.1	10.8	0.6
Land at Boker Lane, East Boldon	-	1.9	19.6	0.5
Land at Natley Avenue, East Boldon	-	-	1.6	-
Land at Moor Lane, Cleadon	-	-	10.3	-
Land at A19/A1290	-	-	3.3	-
Land at "Whitburn Hotel", Whitburn	-	0.8	0.9	-
Land at Wellands Farm, Whitburn	-	2.0	-	-

Land adjacent to South Tyneside College, Hebburn

None of this area is agricultural land and it consists of playing fields and tracks.

Land at South Lane, Boldon

The Grade 2 land in the south-west of this site consists of medium clay loam topsoils overlying medium clay loam or heavy clay loam subsoils, with gleyed and slowly permeable clay at depth in places. The soils are well or moderately well drained but the land is limited to Grade 2 by very slight soil wetness and by a pattern restriction. The Subgrade 3a land on this site consists of imperfectly drained soils where medium clay loam topsoils overlie ungleyed medium clay loam or heavy clay loam upper subsoils and, below 50 cm depth, gleyed and slowly permeable heavy clay loam or clay lower subsoils. Soil wetness and a pattern limitation are the grade-limiting factors. The remaining agricultural land on the site falls in Subgrade 3b. The soils are poorly drained, with medium clay loam or heavy clay loam topsoils overlying gleyed and slowly permeable heavy clay loam or clay subsoils. A more severe soil wetness

and topsoil workability limitation is the grade-limiting factor. Other land on this site consists of allotments in the north-west.

Land at Boker Lane/Tileshed Lane, East Boldon

A small area of Subgrade 3a land occurs in the north-west of the site where the profiles are generally imperfectly drained, with medium clay loam topsoils, permeable medium or heavy clay loam upper subsoils and gleyed and slowly permeable clay lower subsoils. Soil wetness limits this land to Subgrade 3a. The remainder of the agricultural land falls in Subgrade 3b. The soils are poorly drained and consist of medium or heavy clay loam topsoils overlying gleyed and slowly permeable heavy clay loam or clay subsoils. A more severe soil wetness and topsoil workability restriction further limits the ALC grade of this land to Subgrade 3b. Other land on this site consists of a lane in the centre and an area of scrub in the north-east.

Land at Natley Avenue, East Boldon

All of this site is Subgrade 3b due to a soil wetness and topsoil workability limitation. The profiles are poorly drained and consist of medium or heavy clay loam topsoils overlying gleyed and slowly permeable heavy clay loam or clay subsoils.

Land at Moor Lane/Sunderland Road, Cleadon

All of this site has been mapped as Subgrade 3b. The soils are poorly drained, with heavy clay loam topsoils overlying gleyed and slowly permeable clay or silty clay subsoils in most cases. Soil wetness and topsoil workability restrictions limit the land to Subgrade 3b in this case.

Land at A19/A1290

All of this site falls in Subgrade 3b. The soils are poorly drained, with medium clay loam or heavy clay loam topsoils overlying gleyed and slowly permeable clay subsoils. Soil wetness and topsoil workability limitations restrict this land to Subgrade 3b.

Land at "Whitburn Hotel", Whitburn

The centre and south-east of the site fall in Subgrade 3a. The soils vary between well and imperfectly drained, with medium clay loam topsoils overlying subsoils which vary in texture between loamy medium sand and clay. Soil wetness and a pattern restriction are the factors which restrict this area to Subgrade 3a. The remainder of the site falls in Subgrade 3b. The soils in this area consist of poorly drained profiles where medium clay loam topsoils overlie gleyed and slowly permeable clay subsoils at around 25 cm depth. A more severe soil wetness problem is the grade-limiting factor in this case.

Land at Wellands Farm, Whitburn

All of this site falls in Subgrade 3a. The soils are imperfectly drained, with medium clay loam topsoils and upper subsoils overlying gleyed and slowly permeable heavy clay loam or clay lower subsoils. Soil wetness is the grade-limiting factor.

Factors Influencing ALC Grade

Climate

Climate affects the grading of land through the assessment of an overall climatic limitation and also through interactions with soil characteristics.

The key climatic variables used for grading this site are given in Tables 2-8 and were obtained from the published 5 km grid datasets using the standard interpolation procedures (Met. Office, 1989).

The climatic criteria are considered first when classifying land as climate can be overriding in the sense that severe limitations will restrict land to low grades irrespective of favourable site or soil conditions.

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 (AT0, January to June), as a measure of the relative warmth of a locality.

Any other site factors which influence ALC grade are referred to under each site heading in the following pages.

LAND ADJACENT TO SOUTH TYNESIDE COLLEGE, HEBBURN

Agricultural Land Classification

The details of the classification of the site are shown on the attached ALC map and its area is given in Table 1.

Other land

None of this site consists of agricultural land and so no auger borings were carried out. The land consists entirely of playing fields and tracks.

File Ref: RPT 20,120

LAND AT SOUTH LANE, BOLDON

Climate

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

Table 2: Climatic and altitude data
Land at South Lane, Boldon

Factor	Units	Values
Grid reference	N/A	NZ 363610
Altitude	m, AOD	40
Accumulated Temperature	day°C (Jan-June)	1315
Average Annual Rainfall	mm	626
Field Capacity Days	days	152
Moisture Deficit, Wheat	mm	98
Moisture Deficit, Potatoes	mm	85

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

Site Factors

The land is level to gently sloping (0-2°) and as such gradient does not limit the ALC grade at any point. Equally, neither microrelief nor flood risk are of significance on this site.

Geology and Soils

Pelaw Clay overlies Middle Magnesian Limestone on this site (BGS, Sheet 21, Sunderland). Although mapped as Aberford association by the Soil Survey of England and Wales (Soils of Northern England), the field survey suggests the soils are more akin to the soils of the Nercwys association.

Agricultural Land Classification

The details of the classification of the site are shown on the attached ALC map and the area statistics of each grade are given in Table 1.

Grade 2

The south-west of this site falls in Grade 2. The soils are well or moderately well drained, falling in Wetness Classes I and II (see Appendix II). Typically stoneless to slightly stony medium clay loam topsoils (containing up to 7% hard stones and limestones) overlie permeable medium clay loam or heavy clay loam and, below 50 cm depth in places, gleyed and slowly permeable clay. The subsoils have a similar stone content to the topsoils and soil wetness and a pattern limitation are the factors which limit this land to Grade 2.

Subgrade 3a

Much of the north-west and the centre of the site have been mapped as Subgrade 3a. The soils are somewhat variable and the profiles fall in either Wetness Class I, II or III, being well to imperfectly drained. Medium clay loam topsoils overlie permeable medium clay loam or heavy clay loam upper subsoils and gleyed and slowly permeable heavy clay loam or clay lower subsoils. The lower subsoils begin at or below 50 cm depth. Both the topsoils and subsoils are stoneless to slightly stony, with up to 10% stones of mixed lithology. The ALC grade of the land is limited by soil wetness and by a pattern limitation which prevents any better quality land being mapped as a separate unit.

Subgrade 3b

The remainder of the agricultural land on the site falls in Subgrade 3b. The soils are poorly drained (Wetness Class IV) and consist of medium clay loam or heavy clay loam topsoils and, in places, thin upper subsoils, overlying gleyed and slowly permeable heavy clay loam or clay at between 25 cm and 40 cm depth. Both the topsoils and subsoils are very slightly stony, containing up to 5% stones of different lithologies. The grade-limiting factor in this case is soil wetness.

Other land

Other land on this site occurs in the north-west and consists of allotments.

File Ref: RPT 20,121

LAND AT BOKER LANE/TILESHED LANE, EAST BOLDON

Climate

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

Table 3: Climatic and altitude data
Land at Boker Lane/Tiledshed Lane, East Boldon

Factor	Units	Values
Grid reference	N/A	NZ 363618
Altitude	m, AOD	25
Accumulated Temperature	day°C (Jan-June)	1332
Average Annual Rainfall	mm	622
Field Capacity Days	days	150
Moisture Deficit, Wheat	mm	100
Moisture Deficit, Potatoes	mm	88

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

Site Factors

The land is level in the north and gently sloping (2°) with a northerly or north-westerly aspect in the south. At no point on the site does gradient restrict the ALC grade and neither microrelief nor flood risk are of significance.

Geology and Soils

This site is underlain by Lower Magnesian Limestone over which lie deep deposits of Pelaw Clay (BGS, Sheet 21, Sunderland). The soils on the site have been mapped as Foggathorpe 1 association by the Soil Survey of England and Wales (Soils of Northern England).

Agricultural Land Classification

The details of the classification of the site are shown on the attached ALC map and the area statistics of each grade are given in Table 1.

Subgrade 3a

A small area in the north-west has been mapped as Subgrade 3a. The soils are generally imperfectly drained (Wetness Class III) with medium clay loam topsoils overlying permeable medium clay loam or heavy clay loam upper subsoils and, at around 50 cm depth, gleyed and slowly permeable clay or sandy clay loam. The topsoils and subsoils are stoneless to very slightly stony, containing up to 2% sandstones and fragments of shale but it is a soil wetness restriction which limits this land to Subgrade 3a.

Subgrade 3b

The remainder of the agricultural land on the site falls in Subgrade 3b. The soils in this area are poorly drained (Wetness Class IV) and consist of medium or heavy clay loam topsoils overlying gleyed and slowly permeable heavy clay loam or clay subsoils at between 20 cm and 40 cm depth. A more severe soil wetness and topsoil workability limitation further restricts the ALC grade of this land to Subgrade 3b.

Other land

Other land on this site consists of a track in the centre and an area of scrub in the north-east.

File Ref: RPT 20,122

LAND AT NATLEY AVENUE, EAST BOLDON

Climate

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

Table 4: Climatic and altitude data
Land at Natley Avenue, East Boldon

Factor	Units	Values
Grid reference	N/A	NZ 372611
Altitude	m, AOD	25
Accumulated Temperature	day°C (Jan-June)	1332
Average Annual Rainfall	mm	619
Field Capacity Days	days	150
Moisture Deficit, Wheat	mm	100
Moisture Deficit, Potatoes	mm	88

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

Site Factors

The site is level and as such slope does not limit the ALC grade at any point. Equally, neither flood risk nor microrelief limit the ALC grade at any point.

Geology and Soils

Pelaw Clay overlies Middle Magnesian Limestone on this site (BGS, Sheet 21, Sunderland). The soils have been mapped as Foggathorpe 1 association by the Soil Survey of England and Wales (Soils of Northern England).

Agricultural Land Classification

The details of the classification of the site are shown on the attached ALC map and the area statistics of each grade are given in Table 1.

Subgrade 3b

All of this land falls in Subgrade 3b. The soils are poorly drained (Wetness Class IV) and consist of medium clay loam or heavy clay loam topsoils, occasional thin heavy clay loam upper subsoils and, at between 30 cm and 40 cm depth, gleyed and slowly permeable clay. The soils are stoneless to slightly stony, with up to 7% sandstones and fragments of shale, but it is the soil wetness and topsoil workability limitation which is the grade-limiting factor.

File Ref: RPT 20,123

LAND AT MOOR LANE/SUNDERLAND ROAD, CLEADON

Climate

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

Table 5: Climatic and altitude data
Land at Moor Lane/Sunderland Road, Cleadon

Factor	Units	Values
Grid reference	N/A	NZ 387616
Altitude	m, AOD	25
Accumulated Temperature	day°C (Jan-June)	1331
Average Annual Rainfall	mm	616
Field Capacity Days	days	147
Moisture Deficit, Wheat	mm	100
Moisture Deficit, Potatoes	mm	89

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

Site Factors

The land is typically gently sloping (2°) with a southerly aspect and at no point does gradient limit ALC grade. Neither microrelief nor flood risk are of significance on this site.

Geology and Soils

The site is underlain by Lower Magnesian Limestone (over most of the site), Upper Magnesian Limestone (in the far north-east) or Basal Permian Sands (in the far south-west). However, the solid geology is overlain by deep deposits of Pelaw Clay (BGS, Sheet 21, Sunderland). The soils have been mapped as Nercwys association by the Soil Survey of England and Wales (Soils of Northern England).

Agricultural Land Classification

The details of the classification of the site are shown on the attached ALC map and the area statistics of each grade are given in Table 1.

Subgrade 3b

All of this site has been mapped as Subgrade 3b. The soils are poorly drained (Wetness Class IV) and generally consist of stoneless heavy clay loam topsoils overlying stoneless but gleyed and slowly permeable clay or silty clay subsoils at around 25 cm depth. Soil wetness and topsoil workability problems are the factors which limit this land to Subgrade 3b.

File Ref: RPT 20,124

LAND AT A19/A1290

Climate

The key climatic variables for this site are given in Table 6.

Table 6: Climatic and altitude data
Land at A19/A1290

Factor	Units	Values
Grid reference	N/A	NZ 341597
Altitude	m, AOD	36
Accumulated Temperature	day°C (Jan-June)	1321
Average Annual Rainfall	mm	625
Field Capacity Days	days	154
Moisture Deficit, Wheat	mm	98
Moisture Deficit, Potatoes	mm	86

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

Site Factors

The land is level and as gradient does not limit the ALC grade at any point. Neither microrelief nor flood risk are of any significance on this site.

Geology and Soils

Middle Carboniferous Coal Measures underlie the site and there is a drift cover of Pelaw Clay (BGS, Sheet 21, Sunderland). The soils on the site have been mapped as Foggathorpe 1 association by the Soil Survey of England and Wales (Soils of Northern England).

Agricultural Land Classification

The details of the classification of the site are shown on the attached ALC map and the area statistics of each grade are given in Table 1.

Subgrade 3b

All of this site falls in Subgrade 3b. The soils are poorly drained, falling in Wetness Class IV, and consist of medium clay loam or heavy clay loam topsoils overlying gleyed and slowly permeable clay subsoils at between 20 cm and 35 cm depth. The topsoils and subsoils are very slightly to slightly stony, containing between 3% and 7% hard stones and sandstones, but it is a soil wetness and topsoil workability limitation which restricts this land to Subgrade 3b.

File Ref: RPT 20,125

LAND AT "WHITBURN HOTEL", WHITBURN

Climate

The key climatic variables for this site are given in Table 7.

Table 7: Climatic and altitude data
Land at "Whitburn Hotel", Whitburn

Factor	Units	Values
Grid reference	N/A	NZ 408635
Altitude	m, AOD	30
Accumulated Temperature	day°C (Jan-June)	1324
Average Annual Rainfall	mm	618
Field Capacity Days	days	146
Moisture Deficit, Wheat	mm	101
Moisture Deficit, Potatoes	mm	90

Although the above interpolated data suggest that there is no climatic limitation on ALC grade, the proximity of this site to the coast and the associated strong winds are likely to inhibit crop growth at critical periods. For this reason the land is actually limited to Grade 2 by climate.

Site Factors

The land is level and neither gradient, microrelief nor flood risk limit ALC grade at any point.

Geology and Soils

Upper Magnesian Limestone underlies the site and there is a drift cover of Pelaw Clay or, in the far west, glacial sand and gravel (BGS, Sheet 21, Sunderland). The soils on the site have been mapped as Nercwys association by the Soil Survey of England and Wales (Soils of Northern England).

Agricultural Land Classification

The details of the classification of the site are shown on the attached ALC map and the area statistics of each grade are given in Table 1.

Subgrade 3a

The centre and south-east of the site have been mapped as Subgrade 3a. The soils vary between well drained and imperfectly drained (Wetness Classes I to III) and consist of medium clay loam topsoils overlying sandy clay loam or clay subsoils (in the centre and east) or loamy medium sand or medium sandy loam subsoils (in the west). Slowly permeable layers are absent in the east but occur below 50 cm depth in the centre and west. The topsoils and subsoils are stoneless to very slightly stony, containing up to 5% hard stones. The ALC grade

of the land is limited by slight soil wetness and by a pattern limitation which prevents areas of better quality (Grade 2) land being mapped separately.

Subgrade 3b

The remainder of the site falls in Subgrade 3b. Stoneless medium clay loam topsoils overlie gleyed and slowly permeable clay subsoils at between 25 cm and 30 cm depth. Soil wetness is a significant problem and it is this factor which limits the land to Subgrade 3b.

File Ref: RPT 20,127

LAND AT WELLANDS FARM, WHITBURN

Climate

The key climatic variables for this site are given in Table 8.

Table 8: Climatic and altitude data
Land at Wellands Farm, Whitburn

Factor	Units	Values
Grid reference	N/A	NZ 404626
Altitude	m, AOD	37
Accumulated Temperature	day°C (Jan-June)	1317
Average Annual Rainfall	mm	619
Field Capacity Days	days	146
Moisture Deficit, Wheat	mm	100
Moisture Deficit, Potatoes	mm	89

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

Site Factors

This site is level and as such gradient does not limit ALC grade at any point. Equally, neither microrelief nor flood risk limit ALC grade at any point.

Geology and Soils

Upper Magnesian Limestone is overlain by till on this site (BGS, Sheet 21, Sunderland). The soils on the site have been mapped as Nercwys association by the Soil Survey of England and Wales (Soils of Northern England).

Agricultural Land Classification

The details of the classification of the site are shown on the attached ALC map and the area statistics of each grade are given in Table 1.

Subgrade 3a

All of the site falls in Subgrade 3a. Medium clay loam topsoils overlie permeable medium clay loam or sandy clay loam upper subsoils and gleyed and slowly permeable heavy clay loam or clay lower subsoils, which begin at around 50 cm depth. Both topsoils and subsoils are stoneless to very slightly stony, containing up to 5% hard stones, but soil wetness is the factor which restricts the land to Subgrade 3a.

File Ref: RPT 20,126

SOURCES OF REFERENCE

British Geological Survey (1978) *Sheet No. 21, Sunderland (Solid and Drift), 1:50,000 scale.*
BGS: London.

Ministry of Agriculture, Fisheries and Food (1988) *Agricultural Land Classification of England and Wales: Revised guidelines and criteria for grading the quality of agricultural land.* MAFF: London.

Met. Office (1989) *Climatological Data for Agricultural Land Classification.*
Met. Office: Bracknell.

Soil Survey of England and Wales (1983) *Sheet 1, Soils of Northern England, 1:250,000 scale.*
SSEW: Harpenden.

Soil Survey of England and Wales (1984) *Soils and their Use in Northern England*
SSEW: Harpenden

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.

APPENDIX II

SOIL WETNESS CLASSIFICATION

Definitions of Soil Wetness Classes

Soil wetness is classified according to the depth and duration of waterlogging in the soil profile. Six soil wetness classes are identified and are defined in the table below.

Wetness Class	Duration of waterlogging ¹
I	The soil profile is not wet within 70 cm depth for more than 30 days in most years. ²
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 only wet within 40 cm depth for 30 days in most years.
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 present within 80 cm depth, it is wet within 70 cm for more than 180 days, but only wet within 40 cm depth for between 31-90 days in most years.
IV	The soil profile is wet within 70 cm depth for more than 180 days but not wet within 40 cm depth for more than 210 days in most years or, if there is no slowly permeable layer present within 80 cm depth, it is wet within 40 cm depth for 91-210 days in most years.
V	The soil profile is wet within 40 cm depth for 211-335 days in most years.
VI	The soil profile is wet within 40 cm depth for more than 335 days in most years.

Assessment of Wetness Class

Soils have been allocated to wetness classes by the interpretation of soil profile characteristics and climatic factors using the methodology described in *Agricultural Land Classification of England and Wales: Revised guidelines and criteria for grading the quality of agricultural land* (MAFF, 1988).

¹ The number of days is not necessarily a continuous period.

² 'In most years' is defined as more than 10 out of 20 years.