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Taunton Deane Local Plan
Objector Sites
Agricultural Land Classification

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TAUNTON DEANE LOCAL PLAN

OBJECTOR SITES

AGRICULTURAL LAND CLASSIFICATION

CONTENTS

TAUNTON DEANE LOCAL PLAN
OBJECTOR SITES

AGRICULTURAL LAND CLASSIFICATION SURVEY

SUMMARY

The survey was carried out by ADAS on behalf of MAFF as part of its statutory role in the preparation of the Taunton Deane Local Plan The fieldwork covered sites at Bishop s Hull Bishop s Lydeard Bradford on Tone Hatch Beauchamp Langford Budville North Curry and Stoke St Gregory and was completed in March 1995 at a scale of 1 10 000 Data on climate soils geology and from previous Agricultural Land Classification (ALC) Surveys was used and is presented in the report The distribution of grades is shown on the accompanying ALC maps and summarised below Information is correct at this scale but could be misleading if enlarged

Distribution of ALC grades Long Run Farm Bishop s Hull

Grade	Area (ha)	% of Survey Area	% of Agricultural Land (6 3 ha)
3a	5 0	79 4	100 0
Urban	0 2	3 2	0 0
Agricultural Buildings	1 1	17 4	0 0
TOTAL	6 3	100 0	100 0

All of the agricultural land at Long Run Farm has been mapped as Subgrade 3a which is best and most versatile The profiles have medium clay loam topsoils over slowly permeable clay subsoils They were assessed as Wetness Class III and have a moderate wetness limitation

Distribution of ALC grades Land West of Bishop s Hull Road

Grade	Area (ha)	% of Survey Area	% of Agricultural Land (7 9 ha)
2	7 6	96 2	100 0
Urban	0 3	3 8	0 0
TOTAL	7 9	100 0	100 0

All of the site at Bishop s Hull Road Bishop s Hull has been mapped as Grade 2 which is best and most versatile The profiles have medium clay loam topsoils over heavy clay loam subsoils and in places clay lower subsoils Most of the site was assessed as Wetness Class II with a minor wetness limitation although there are small areas of the site which have better drainage and some with worse drainage

Distribution of ALC grades Lydeard House Bishop s Lydeard

Grade	Area (ha)	% of Survey Area	% of Agricultural Land (4 0 ha)
1	2 1	52 5	55 3
3b	1 2	30 0	31 6
4	0 5	12 5	13 1
Urban	0 2	5 0	0 0
TOTAL	4 0	100 0	100 0

Over half of the land surveyed at Bishop s Lydeard has been mapped as Grade 1 These profiles are deep well drained sandy loams and were assessed as Wetness Class I The rest of the site has been mapped as Subgrade 3b and Grade 4 due to gradient and micro-relief limitations on the safe use of some agricultural machinery The profiles in this area would actually be Grade 2 due to a minor workability limitation if it were not for their relief Due to the high local rainfall there is no drought limitation

Distribution of ALC grades Heatherton Park Bradford-on Tone

Grade	Area (ha)	% of Survey Area	% of Agricultural Land (7 0 ha)
2	4 7	67 1	71 2
3a	1 0	14 3	15 2
3b	0 9	12 9	13 6
Urban	0 4	5 7	0 0
TOTAL	7 0	100 0	100 0

70% of the agricultural land surveyed at Bradford on Tone has been mapped as Grade 2 due to a minor wetness limitation The profiles had gleying above 40 cm but no slowly permeable layer and were assessed as Wetness Class II The fields adjacent to Jeane s Farmhouse are mapped as Subgrade 3a due to the moderate wetness limitation implosed by slowly permeable layers occurring below 60 cm They were assessed as Wetness Class III Two small areas of land were mapped as Subgrade 3b where slowly permeable layers occur below 40 cm These profiles have a moderate wetness limitation and were assessed as Wetness Class IV Over 86% of the agricultural land is best and most versatile

Distribution of ALC grades Home Orchard Hatch Beauchamp

Grade	Area (ha)	% of Survey Area	% of Agricultural Land (2 0 ha)
4	2 0	100 0	100 0
TOTAL	2 0	100 0	100 0

All of the land surveyed at Hatch Beauchamp has been mapped as Grade 4 due to a severe wetness limitation Slowly permeable layers and gleying occur below 24 cm so the profiles were assessed as Wetness Class IV None of the site is best and most versatile

Distribution of ALC grades Land West of Langford Budville

Grade	Area (ha)	% of Survey Area	% of Agricultural Land (1 3 ha)
1	1 3	95 0	100 0
Non agricultural	<0 1	5 0	0 0
TOTAL	1 3	100 0	100 0

All of the site at Langford Budville has been mapped as Grade 1 with no limitation to its agricultural use The profiles are well drained medium sandy loams over medium clay loams and were assessed as Wetness Class I Due to the high local rainfall there is no dourght limitation

Distribution of ALC grades The Manor House North Curry

Grade	Area (ha)	% of Survey Area	% of Agricultural Land (11 1 ha)
3a	2 6	23 4	27 1
3b	5 7	51 4	59 4
4	1 3	11 7	13 5
Urban	1 5	13 5	0 0
TOTAL	11 1	100 0	100 0

Of the agricultural land surveyed at North Curry only 27% was found to be best and most versatile This was an area of Subgrade 3a land in the middle of the site with moderate wetness limitations The profiles have heavy clay loam topsoils with slowly peremable layers below 65 cm and were assessed as Wetness Class II The land in the southern part of the site also has a moderate wetness limitation but was assessed as Wetness Class III and mapped as Subgrade 3b because the slowly permeable layers are found higher up the profiles The land to the north of The Manor House has gradient limitations on the safe use of agricultural machines and has been mapped as Subgrade 3b and Grade 4

Willment s Farm Stoke St Gregory

Grade	Area (ha)	% of Survey Area	% of Agricultural Land (1 9 ha)
2	0 4	21 1	21 1
3a	0 5	26 3	26 3
3b	1 0	52 6	52 6
TOTAL	1 9	100 0	100 0

47% of the agricultural land surveyed at Willment s Farm is best and most versatile being mapped as Grade 2 and Subgrade 3a The Grade 2 land has a minor workability limitation and was assessed as Wetness Class I The Subgrade 3a land was assessed as Wetness Class II due to the presence of a slowly permeable layer starting below 65 cm The rest of the site is mapped as Subgrade 3b It had the slowly permeable layer starting higher up the profile so it was assessed as Wetness Class III

1 INTRODUCTION

Agricultural Land Classification (ALC) Surveys were carried out in March 1995 at eight sites in the Taunton area on behalf of MAFF as part of its statutory role in the preparation of the Taunton Deane Local Plan The sites were at Bishop s Hull Bishop s Lydeard Bradford on-Tone Hatch Beauchamp Langford Budville North Curry and Stoke St Gregory The fieldwork covering 41 5 ha of land was conducted by ADAS at a scale of 1 10 000 with approximately one boring per hectare of agricultural land A total of 44 auger borings were examined and eight soil profile pits used to assess subsoil conditions

These recent surveys supersede any previous surveys having been carried out at a more detailed level and 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 120 cm of the soil profile A description of the grades used in the ALC system can be found in Appendix 2

2 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 from the published agricultural climate dataset (Meteorological Office 1989) The parameters used for assessing overall climate are accumulated temperature a measure of the relative warmth of a locality and average annual rainfall a measure of overall wetness The results shown in Table 1 indicate there is no overall climatic limitation

Table 1

Climatic Interpolations	**Long Run Farm Bishop s Hull**	
Grid Reference		ST 213 250
Altitude (m)		17
Accumulated Temperature (day)		1560
Average Annual Rainfall (mm)		776
Overall Climatic Grade		1
Field Capacity Days		168
Moisture deficit (mm)	Wheat	109
	Potatoes	103

Climatic Interpolations	**Land West of Bishop s Hull Road**	
Grid Reference		ST 202 244
Altitude (m)		34
Accumulated Temperatu e (day)		1540
Average Annual Rainfall (mm)		789
Overall Climatic Grade		1
Field Capacity Days		170
Moisture deficit (mm)	Wheat	107
	Potatoes	99

Lydeard House Bishop s Lydeard

Grid Reference		ST 169 301
Altitude (m)		65
Accumulated Temperature (day)		1503
Average Annual Rainfall (mm)		833
Overall Climatic Grade		1
Field Capacity Days		179
Moisture deficit (mm)	Wheat	98
	Potatoes	89

Heatherton Park Bradford-on Tone

Grid Reference		ST 172 224
Altitude (m)		47
Accumulated Temperature (day)		1527
Average Annual Rainfall (mm)		844
Overall Climatic Grade		1
Field Capacity Days		179
Moisture deficit (mm)	Wheat	101
	Potatoes	93

Home Orchard Hatch Beauchamp

Grid Reference		ST 303 203
Altitude (m)		53
Accumulated Temperature (day)		1519
Average Annual Rainfall (mm)		861
Overall Climatic Grade		1
Field Capacity Days		180
Moisture deficit (mm)	Wheat	100
	Potatoes	92

Land West of Langford Budville

Grid Reference		ST 110 228
Altitude (m)		110
Accumulated Temperature (day)		1457
Average Annual Rainfall (mm)		905
Overall Climatic Grade		1
Field Capacity Days		190
Moisture deficit (mm)	Wheat	89
	Potatoes	77

The Manor House North Curry

Grid Reference		ST 322 256
Altitude (m)		17
Accumulated Temperature (day)		1557
Average Annual Rainfall (mm)		740
Overall Climatic Grade		1
Field Capacity Days		160
Moisture deficit (mm)	Wheat	112
	Potatoes	107

Willment s Farm Stoke St Gregory

Grid Reference		ST 348 270
Altitude (m)		13
Accumulated Temperature (day)		1560
Average Annual Rainfall (mm)		739
Overall Climatic Grade		1
Field Capacity Days		159
Moisture deficit (mm)	Wheat	112
	Potatoes	107

Climatic data on Field Capacity Days (FCD) and Moisture Deficits for wheat and potatoes are also shown These data are used in assessing the soil wetness and droughtiness limitations referred to in later sections

3 LONG RUN FARM BISHOP S HULL

3 1 An area of 6 3 ha at Long Run Farm Bishop s Hull was surveyed in March 1995 A total of five auger borings were examined and one soil profile pit was used to assess subsoil conditions The published provisional one inch to the mile ALC map of the area (MAFF 1974) shows the grade of the site at a reconnaissance scale to be all Grade 3

3 2 Relief and Landcover

The site occupies land on the flood plan of the River Tone to the north of Bishop s Hull The area is virtually flat with an altitude of 18 m above ordnance datum (AOD) At the time of survey all of the fields were under permanent pasture or silage grass

3 3 Geology and Soils

The geology of the site is shown on the published 1 50 000 scale Solid and Drift geology map Sheet 295 (British Geological Survey 1984) This shows all of the site to be underlain by river deposits with an area of alluvium along the northern edge of the site

The soils were mapped by the Soil Survey of England and Wales in 1983 at a reconnaissance scale of 1 250 000 Most of the site is shown to consist of soils from the Compton Association although there is an area of soils from the Worcester Association along the southern edge of the site The Compton Association is described as being stoneless mostly reddish clayey soils affected by groundwater Soils from the Worcester Association are described as slowly permeable calcareous and non calcareous reddish clayey soils over mudstone They may be *shallow on slopes and are associated with similar non calcareous fine loamy over clayey soils*

The soils found during the current survey were clay loams over clayey subsoils with evidence of poor drainage similar to those of the Compton Association At depth the profiles went into the river gravel deposits

3 4 Agricultural Land Classification

The distribution of ALC grades is shown in Table 2 and on the accompanying ALC map This information could be misleading if shown at a larger scale

Table 2 Distribution of ALC grades Long Run Farm Bishop s Hull

Grade	Area (ha)	% of Survey Area	% of Agricultural Land (6 3 ha)
3a	5 0	79 4	100 0
Urban	0 2	3 2	0 0
Agricultural Buildings	1 1	17 4	0 0
TOTAL	6 3	100 0	100 0

SUBGRADE 3a

All of the agricultural land in the site is mapped as Subgrade 3a with a moderate wetness limitation The profiles have medium clay loam topsoils over clay subsoils Occasionally there is a heavy clay loam upper subsoil They were assessed as Wetness Class III (see Appendix 3) due to the presence of slowly permeable layers starting below 50 cm in the red clay and in places gleying starting below 25 cm The profiles go into deposits of river gravels at depth with up to 38% hard rocks by volume but this does not lead to an overall drought limitation

OTHER LAND

The farmstead and buildings at Long Run Farm are shown as agricultural buildings The farm track is shown as urban

4 LAND WEST OF BISHOP S HULL ROAD BISHOP S HULL

4 1 An area of 7 9 ha to the west of Bishop s Hull Road Bishop s Hull was surveyed in March 1995 A total of eight auger borings were examined and one soil profile pit was used to assess subsoil conditions The published provisional one inch to the mile ALC map of the area (MAFF 1974) shows the grade of the site at a reconnaissance scale to be Grade 3

The area was also surveyed in 1987 at a scale of 1 10 000 This showed the site to have a south east to north west divide with Grade 2 land to the north of it and Grade 3 land to the south of it

4 2 Relief and Landcover

The site occupies land along the western side of Bishop s Hull with gently sloping gradients which are less than 7° At the time of survey all the fields were under permanent pasture The field in the northern part of the site contained an old orchard

4 3 Geology and Soils

The geology of the site is shown on the published 1 50 000 Solid and Drift geology map Sheet 295 (British Geological Survey 1984) This shows the whole site to be underlain by Mercia Mudstone (Keuper Marl)

The soils were mapped by the Soil Survey of England and Wales in 1983 at a reconnaissance scale of 1 250 000 This showed the whole site to consist of soils from the Worcester Association which are described as being slowly permeable calcareous and non calcareous reddish clayey soils over mudstone They may be shallow on slopes and are associated with non calcareous fine loamy over clayey soils

The soils found during the recent survey had medium clay loam topsoils over reddish heavy clay loam and clay subsoils They were relatively stone free and had evidence of wetness at depth

4 4 Agricultural Land Classification

The distribution of ALC grades is shown in Table 3 and on the accompanying ALC map This information could be misleading if shown at a larger scale

Table 3 Distribution of ALC grades Land West of Bishop s Hull Road

Grade	Area (ha)	% of Survey Area	% of Agricultural Land (7 9 ha)
2	7 6	96 2	100 0
Urban	0 3	3 8	0 0
TOTAL	7 9	100 0	100 0

GRADE 2

All of the agricultural land surveyed has been mapped as Grade 2 Most of the profiles suffer from a minor wetness limitation due to the presence of reddish slowly permeable layers in the subsoils These start below 70 cm The depth to the slowly permeable clay does vary within the borings so a couple of isolated borings were assessed as Wetness Class III Subgrade 3a and one profile was Grade 1 These have all been included in the one mapping unit Most of the profiles are relatively stone free and do not suffer from any drought limitations There is a small area which is well drained and has a minor drought limitation due to a stone content of up to *15% hard rock by volume in its subsoil*

OTHER LAND

A small residential area in the north east corner of the site is mapped as urban

5 LYDEARD HOUSE BISHOP S LYDEARD

5 1 An area of 4 0 ha at Lydeard House Bishop s Lydeard was surveyed in March 1995 A total of four auger borings were examined and one soil profile pit was used to assess subsoil conditions The published provision one inch to the mile ALC map (MAFF 1974) shows the grade of the site at a reconnaissance scale to be all Grade 1

5 2 Relief and Landcover

The relief of the site can be split into three areas The southern half is relatively flat but has a sharp break of slope running across the middle of it The north west corner slopes quite steeply into a small wooded valley with a westerly aspect and gradients of up to 12° The north east corner is overall relatively flat but it has a distinct micro relief of hollows and mounds At the time of the survey the whole site was under permanent pasture

5 3 Geology and Soils

The geology of the site is shown on the published 1 50 000 Solid and Drift geology map Sheet 295 (British Geological Survey 1984) This shows that the whole site is underlain by Otter Sandstone

The soils were mapped by the Soil Survey of England and Wales in 1983 at a reconnaissance scale of 1 250 000 This shows the whole site to consist of soils from the Bromsgrove Association They are described as being well drained reddish coarse loamy soils mainly over soft limestone although they can be deeper in places They are associated with fine loamy soils which have slowly permeable subsoils and suffer from slight seasonal waterlogging

The soils found during the current survey had medium clay loam and fine sandy loam topsoils over fine sandy loam and in one case loamy medium sand subsoils The soils were relatively stone free except for those in the north east corner and those on the south eastern boundary of the site where there were up to 30% hard rocks by volume in the subsoil All of the profiles are well drained

5 4 **Agricultural Land Classification**

The distribution of ALC grades is shown in Table 4 and on the accompanying ALC map This information could be misleading is shown at a larger scale

Table 4 Distribution of ALC grades Lydeard House, Bishop s Lydeard

Grade	Area (ha)	% of Survey Area	% of Agricultural Land (4 0 ha)
1	2 1	52 5	55 3
3b	1 2	30 0	31 6
4	0 5	12 5	13 1
Urban	0 2	5 0	0 0
TOTAL	4 0	100 0	100 0

GRADE 1

Over 50% of the site was mapped as Grade 1 having no limitation to its agricultural use These profiles had fine sandy loam topsoils over fine sandy loam and a small area of loamy medium sand subsoils They have relatively low stone contents throughout the profile although the subsoils occasionally have up to 30% hard rocks by volume Due to the high local rainfall there is no drought limitation With the profiles being deep and well drained they were assessed as Wetness Class I There is a sharp break of slope about 50 70 cm high which itself would be downgraded but does not necessitate the downgrading of the whole mapping unit

SUBGRADE 3b

The Subgrade 3b mapp ng unit can be split into two areas The area of Subgrade 3b land near the western boundary has been downgraded because of the moderate limitation imposed by its gradient of 10° on the safe use of some agricultural machinery The north east corner also has a moderate limitation on the safe use of some agricultural machinery but this is due to the micro relief of the area This includes a series of ridges mounds and hollows It should be noted that the actual profiles in these mapping units only have a minor workability limitation and would be mapped as Grade 2 if it was not for their relief

GRADE 4

The small area of Grade 4 land has been downgraded because of the severe limitation imposed by its gradient of 12° to 13° on the safe use of some agricultural machinery

OTHER LAND

A small area of residential gardens has been mapped as urban land

6 HEATHERTON PARK BRADFORD-ON TONE

6 1 An area of 7 0 ha near Heatherton Park Bradford on tone was surveyed in March 1995 A total of 8 auger borings were examined and one soil pit was used to assess subsoil conditions The published provisional one inch to the mile ALC map (MAFF 1971) shows the grade of the site at a reconnaissance scale to be mainly Grade 2 There is a small area of Grade 3 land mapped in the north west corner of the block adjacent to Heatherton Park Farm

6 2 Relief and Landcover

The site occupies two areas of land on the southern edge of Bradford on-Tone The first includes the two fields adjacent to Jeane s Farm House while the second area is the large field adjacent to Heatherton Park Farm Both areas are relatively flat with the Jeane s Farm area being about 45 m AOD and the Heatherton Park area being about 50 m AOD At the time of survey the fields at Jeane s Farm were under permanent pasture and the field at Heatherton Park Farm was under cereal cultivation

6 3 Geology and Soils

The geology of the site is shown on the published 1 50 000 Drift geology map Sheet 311 (Institute of Geological Sciences 1976) This shows that both areas are underlain by Upper Marl (Keuper Marl)

The soils were mapped by the Soil Survey of England and Wales in 1983 at a reconnaissance scale of 1 250 000 The whole site is shown to consist of soils from the Whimple 1 Association These soils are described as being reddish fine loamy over clayey soils with slowly permeable subsoils and slight seasonal waterlogging They are associated with similar well drained soils which may be over gravel

The soils found during the recent survey were found to be fairly similar The profiles have medium sandy loam topsoils over heavy clay loam sandy clay loam and clay subsoils There is evidence of wetness in most of the subsoil horizons All but one of the profiles were relatively stone free to depth

6 4 Agricultural Land Classification

The distribution of ALC grades is shown in Table 5 and on the accompanying ALC map This information could be misleading is shown at a larger scale

Table 5 Distribution of ALC grades Heatherton Park Bradford-on Tone

Grade	Area (ha)	% of Survey Area	% of Agricultural Land (7 0 ha)
2	4 7	67 1	71 2
3a	1 0	14 3	15 2
3b	0 9	12 9	13 6
Urban	0 4	5 7	0 0
TOTAL	7 0	100 0	100 0

GRADE 2

Over two thirds of the agricultural land surveyed was mapped as Grade 2 due to a minor wetness limitation This land covers all but two peripheral areas of the field adjacent to Heatherton Park Farm The profiles have medium sandy loam topsoils over heavy clay loam upper subsoils and sandy clay loam lower subsoils Gleying was found in the upper and lower subsoils starting below 30 cm but no slowly permeable layer was found These profiles were assessed as Wetness Class II They are relatively stone free and have no drought limitation One profile was greely drained and was assessed as Wetness Class I It has been mapped as a Grade 1 profile in a Grade 2 mapping unit at this level of survey

SUBGRADE 3a

The fields adjacent to Jeane s Farm have been mapped as Subgrade 3a due to a moderate wetness limitation The profiles consisted of relatively stone free medium sandy loam topsoils over heavy clay loam subsoils There was evidence of wetness in all the upper subsoils some

of which were gleyed within 40 cm The lower subsoils were also gleyed and slowly permeable layers were found to begin at 60 cm These profiles were assessed as Wetness Class III

SUBGRADE 3b

Two small areas on the eastern and western edge of the field adjacent to Heatherton Park Farm have been mapped a Subgrade 3b These profiles have medium sandy loam topsoils over heavy clay loam upper subsoils and reddish clay lower subsoils The profiles were assessed as Wetness Class IV due to the presence of slowly permeable layers starting below 40 cm and above 60 cm in the reddish clay lower subsoils The upper subsoils were gleyed from 25 cm

OTHER LAND

Residential areas including Jeane s Farm House have been mapped as urban

7 HOME ORCHARD HATCH BEAUCHAMP

7 1 An area of 2 0 ha at Home Orchard Hatch Beauchamp was surveyed in March 1995 A total of three auger borings were inspected and one soil profile pit was used to assess subsoil conditions The published provisional one inch to the mile ALC map of the area (MAFF 1974) shows the grade of the site at a reconnaissance scale to be all Grade 3

7 2 Relief and Landcover

The site occupies two gently sloping fields on the southern edge of Hatch Beauchamp The land has a high point of 55 m AOD on its northern boundary and a low point of 50 m AOD on its southern boundary At the time of the survey the western field was under permanent pasture and the eastern field was an orchard being used for grazing

7 3 Geology and Soils

The geology of the site is shown on the published 1 50 000 Drift geology map Sheet 311 (Institute of Geological Sciences 1976) This shows the whole site to be underlined by lower lias with an area of valley gravel and rainwash to the north of the site

The soils were mapped by the Soil Survey of England and Wales in 1983 at a reconnaissance scale of 1 250 000 This shows the whole site as consisting of soils from the Evesham 1 Association They are described as being slowly permeable calcareous clayey soils with shallow well drained brashy calcareous soils over limestone Landslips and associated irregular terrain may occur locally

The soils found during the recent survey were similar except they were non calcareous The profiles had clay topsoils over poorly drained clay subsoils with evidence of wetness and gleying throughout the profiles

7 4 Agricultural Land Classification

The distribution of ALC grades is shown in Table 6 and on the accompanying ALC map This information could be misleading if shown at a larger scale

Table 6 Distribution of ALC grades Home Orchard Hatch Beauchamp

Grade	Area (ha)	% of Survey Area	% of Agricultural Land (2 0 ha)
4	2 0	100 0	100 0
TOTAL	2 0	100 0	100 0

GRADE 4

The whole of the site has been mapped as Grade 4 due to a severe wetness limitation The profiles contain clay topsoils over clay subsoils The horizons are pale and evidence of wetness is present throughout the profile The upper and lower subsoils have up to 15% hard rock by volume in places but their porosity is still low There are slowly permeable layers and gleying below 24 cm so the profiles were assessed as Wetness Class IV

8 LAND WEST OF LANGFORD BUDVILLE

8 1 An area of 1 3 ha to the west of Langford Budville was surveyed in April 1995 A total of two auger borings were examined and one soil profile pit was used to assess subsoil conditions The published provisional one inch to the mile ALC map of the area (MAFF 1971) shows the grade of the site at a reconnaissance scale to be all Grade 2 There is an area of Grade 3 to the north of it and the village of Langford Budville is shown as urban

8 2 Relief and Landcover

The site occupies a gently sloping field with an easterly aspect on the western edge of Langford Budville The field drops from 120 m AOD on its western edge to 110 m AOD on its eastern edge At the time of survey the field was under cereal cultivation

8 3 Geology and Soils

The geology of the site is shown on the published 1 50 000 scale drift geology map Sheet 311 (Institute of Geological Sciences 1976) This shows that the whole site is underlain by pebble beds and conglomerate

The soils were mapped by the Soil Survey of England and Wales in 1983 at a reconnaissance scale of 1 250 000 All of the site was mapped as consisting of soils from the Crediton Association These soils are described as being well drained gritty reddish loamy soils over breccia Locally they may be less stony

The soils in the recent survey were similar with medium sandy loam topsoils over medium sandy loam subsoils with the occasional medium clay loam lower subsoil The profiles were well drained with 10% hard rock by volume in the topsoil and 20% hard rock by volume in the subsoils

8 4 Agricultural Land Classification

The distribution of ALC grades is shown in Table 7 and on the accompanying ALC map This information could be misleading is shown at a larger scale

Table 7 **Distribution of ALC grades Land West of Langford Budville**

Grade	Area (ha)	% of Survey Area	% of Agricultural Land (1 3 ha)
1	1 3	95 0	100 0
Non agricultural	<0 1	5 0	0 0
TOTAL	1 3	100 0	100 0

GRADE 1

All of the agricultural land was mapped as Grade 1 with no limitation to its agricultural use The profiles consisted of deep well drained medium sandy loams that occasionally went into medium clay loam horizons at depth In places there was some evidence of wetness but not enough to downgrade the profiles and they were assessed as Wetness Class I The topsoil had 10% hard

rock by volume while the upper and lower subsoils had 20% and 19% hard rock by volume respectively Due to the relatively high local rainfall there is no drought limitation

OTHER LAND

The small area of land giving access to the field areas is mapped as non agricultural land

9 THE MANOR HOUSE NORTH CURRY

9 1 An area of 11 1 ha around The Manor House North Curry was surveyed in March 1995 A total of 10 auger borings were examined and one soil pit was used to assess subsoil conditions The published provisional one inch to the mile ALC map of the area (MAFF 1974) shows the grade of the site at a reconnaissance scale to be Grade 3 The residential area including The Manor House is shown as urban

9 2 Relief and Landcover

The site covers an area of flat land above the Somerset Levels and the slopes dropping down to the Levels These slopes have gradients varying from 3° to 16° with a north to north east aspect The altitude drops from 25 m AOD at the southern edge of the site to 10 m AOD at the edge of Hay Moor At the time of survey all the site was all under permanent pasture

9 3 Geology and Soils

The geology of the area is shown on the published 1 50 000 scale Solid and Drift geology map Sheet 295 (British Geological Survey 1984) This shows that the southern part of the site and Hay Moor are underlain by Mercia Mudstone (Keuper Marl) The slopes and land immediately to the south of them are underlain by North Curry sandstone

The soils were mapped by the Soil Survey of England and Wales in 1983 at the reconnaissance scale of 1 250 000 This shows that most of the site consists of soils from the Whimple 3 Association *They are described as being reddish fine loamy or fine silty over clayey soils with* slowly permeable subsoils and slight seasonal waterlogging There may be some similar clayey soils on brows and slowly permeable seasonally waterlogged fine loamy and fine silty over clayey soils on lower slopes The area immediately around the slopes in the northern part of the site is shown to consist of soils from the Worcester Association These are described as being slowly permeable calcareous and non calcareous reddish clayey soils over mudstone They are shallow on steeper slopes and are associated with similar non calcareous fine loamy over clayey soils

The soils found during the recent survey were similar to those from the Worcester Association They had heavy clay loam topsoils over heavy clay loam upper subsoils and reddish clay lower subsoils The subsoils showed evidence of wetness and were slowly permeable even though they had stone contents of up to 38% hard rock by volume

9 4 Agricultural Land Classification

The distribution of ALC grades is shown in Table 8 and on the accompanying ALC map This information could be misleading is shown at a larger scale

Table 8 Distribution of ALC grades The Manor House North Curry

Grade	Area (ha)	% of Survey Area	% of Agricultural Land (11 1 ha)
3a	2 6	23 4	27 1
3b	5 7	51 4	59 4
4	1 3	11 7	13 5
Urban	1 5	13 5	0 0
TOTAL	11 1	100 0	100 0

SUBGRADE 3a

An area covering over a quarter of the agricultural land surveyed in the middle of the site above the slope has been mapped as Subgrade 3a due to a moderate wetness limitation The profiles have heavy clay loam topsoils and upper subsoils over reddish clay lower subsoils There is evidence of wetness in the upper subsoil but gleying does not occur above 50 cm The lower subsoils are relatively stone free with poor porosity and a poor structural condition so they are slowly permeable layers starting below 65 cm These profiles were assessed as Wetness Class II Some small areas have better drainage and are Grade 2 but they have been included in this mapping unit at this level of survey

SUBGRADE 3b

This mapping unit can be split into three areas The land below The Manor House and to the west of the steep sloping ground consists of a series of terraces hollows and a pond These would limit the safe use of some agricultural machinery so the land has been mapped as Subgrade 3b Parts of the sloping land have gradients between 8° and 11° inclusive which will limit the safe use of some agricultural machinery This land has also been mapped as Subgrade 3b

The rest of the mapping unit to the south of The Manor House below the sloping land and a small area at the top of the slopes has a moderate wetness limitation The profiles below the slopes have heavy clay loam topsoils over reddish clay subsoils with slowly permeable layers starting below 30 cm They were therefore assessed as Wetness Class IV The rest of the Subgrade 3b profiles have slowly permeable layers starting below 50 cm and in some places gleying present below 50 cm These profiles were assessed as Wetness Class III Although the slowly permeable layers have stone contents of up to 38% hard rock by volume there is no evidence of water moving either through the peds or along the faces of the stones

GRADE 4

A small area of the sloping ground has gradients of between 12° and 18 inclusive which would severely restrict the safe use of some agricultural machinery

OTHER LAND

The Manor House and other houses built in its grounds are shown as urban

10 WILLMENT S FARM STOKE ST GREGORY

10 1 An area of 1 9 ha adjacent to Willment s Farm Stoke St Gregory was surveyed in March 1995 A total of three auger borings were examined and one soil profile pit used to assess subsoil conditions The published provisional one inch to the mile ALC map of the area (MAFF 1974) shows the grade of the site at a reconnaissance scale to be all Grade 3

10 2 Relief and Landcover

The site covers 2 fields on the southern edge of Stoke St Gregory They are both relatively flat at an altitude of 13 m AOD At the time of the survey both fields were under permanent pasture

10 3 Geology and Soils

The geology of the site is shown on the published 1 50 000 scale Solid and Drift geology map Sheet 295 (British Geological Survey 1984) this shows the whole site to be underlain by Mercia Mudstone (Keuper Marl)

The soils were mapped by the Soil Survey of England and Wales in 1983 at a reconnaissance scale of 1 250 000 This showed that the whole site consists of soils from the Worcester Association which are described as slowly permeable non calcareous and calcareous reddish clayey soils over mudstone They may be shallow on steeper slopes and are associated with similar non calcareous fine loamy over clayey soils

The soils found during the recent survey were similar to these They had heavy clay loam topsoils and upper subsoils over reddish clay subsoils There were few stones and only a little evidence of wetness in the profiles but the subsoils were slowly permeable In place tea green Keuper Marl was present

10 4 Agricultural Land Classification

The distribution of ALC grades is shown in Table 9 and on the accompanying ALC map This information could be misleading is shown at a larger scale

Table 9 Distribution of ALC grades Willment s Farm Stoke St Gregory

Grade	Area (ha)	% of Survey Area	% of Agricultural Land (1 9 ha)
2	0 4	21 1	21 1
3a	0 5	26 3	26 3
3b	1 0	52 6	52 6
TOTAL	1 9	100 0	100 0

GRADE 2

The small field covering 0 4 ha to the west of the site has been mapped as Grade 2 due to a minor workability limitation The profile had a heavy clay loam topsoil which went into a layer of very dry crumbly tea green Keuper Marl This was not a slowly permeable layer and there was no gleying so the profile was assessed as Wetness Class I There was 2% hard rock by volume in the subsoil which together with the low local rainfall also caused a minor drought limitation

SUBGRADE 3a

A small area of land adjacent to the church has been mapped as Subgrade 3a due to a moderate wetness limitation This profile had a heavy clay loam topsoil and upper subsoil over a reddish clay subsoil There was evidence of wetness in the subsoil and as it had low porosity and a poor structural condition it was a slowly permeable layer This started below 65 cm so the profile was assessed as Wetness Class II

APPENDIX 1

REFERENCES

BRITISH GEOLOGICAL SURVEY (1984) Solid and Drift Edition Sheet 295 Taunton (1 50 000)

INSTITUTE OF GEOLOGICAL SCIENCES (1976) Drift Edition Sheet 311 Wellington (1 50 000)

MAFF (1971) Agricultural Land Classification Map Sheet 164 Provisional 1 63 360 scale

MAFF (1974) Agricultural Land Classification Map Sheet 177 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) *Climatological Data for Agricultural Land Classification*

SOIL SURVEY OF ENGLAND AND WALES (1983) Sheet 5 Soils of South West England 1 250 000 scale

APPENDIX 2

DESCRIPTION OF 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)

SITE NAME	PROFILE NO	SLOPE AND ASPECT	LAND USE		PARENT MATERIAL
Willments Farm Stoke St Gregory	Pit 1	0	Permanent Grass	Av Rainfall 739 mm ATO 1560 day °C	Mercia Mudstone (Keuper Marl)
JOB NO	DATE	GRID REFERENCE	DESCRIBED BY	FC Days 159 Climatic Grade 1	SOIL SAMPLE REFERENCES
18/95	17/3/95	ST 3480 2705	HLJ	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	24	HCL	10YR43	1% HR total (Vis)	None	None				Good	CF+VF		Gradual Smooth
2	52	HCL	10YR52	2% HR Total (Vis)	None	None	WCSAB	Friable	Moderate	Good	FF+VF		Abrupt Wavy
3	105+	C	2 5YR46 (2 5YR54)	0% (Vis)	None	None	WM+CAB	Firm	Poor	Poor	FVF (along ped faces)		

Profile Gleyed From Not gleyed

Depth to Slowly Permeable Horizon 52 cm

Wetness Class III

Wetness Grade 3b

Available Water	Wheat	133 mm
	Potatoes	110 mm
Moisture Deficit	Wheat	112 mm
	Potatoes	107 mm
Moisture Balance	Wheat	21 mm
	Potatoes	3 mm
Droughtiness Grade		2 (Calculated to 120 cm)

Final ALC Grade 3b

Main Limiting Factor(s) Wetness

Remarks

Few spots of tea green marl (2 5Y72)