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North Dorset District Wide Local Plan

AGRICULTURAL LAND CLASSIFICATION
REPORT OF SURVEY

Resource Planning Team
Taunton Statutory Unit

April 1994

ADAS

NORTH DORSET DISTRICT-WIDE LOCAL PLAN

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Report of Survey

CONTENTS

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1. SUMMARY

Land at Blandford Forum and at Shaftesbury was graded using the Agricultural Land Classification (ALC) system in April 1994. The survey was carried out on behalf of MAFF as part of its statutory role in the preparation of the North Dorset District-wide Local Plan.

Information on climate, soils, geology and previous ALC surveys is referred to in the course of this report. The fieldwork was carried out by ADAS at a scale of 1:10,000, providing information correct at this scale but could be misleading if enlarged. The distribution of ALC grades identified in the survey area at each of the 3 sites is detailed below and illustrated on the accompanying maps.

Distribution of ALC grades: Dorchester Hill, Blandford Forum

Grade	Area (ha)	% of Survey Area	% of Agricultural Land	
2	5.8	23.9	23.9	
3a	18.5	76.1	76.1	
TOTAL	24.3	100	100	(24.3 ha)

All of the land surveyed at Dorchester Hill is best and most versatile, and almost a quarter of the site being land of very good quality.

Distribution of ALC grades: Kite's Farm, Blandford Forum

Grade	Area (ha)	% of Survey Area	% of Agricultural Land	
3a	24.5	82.5	86.4	
3b	2.4	8.0	8.4	
4	1.5	5.0	5.3	
Urban	0.2	0.6	0	
Non-agricultural	1.2	3.9	0	
TOTAL	29.8	100	100	(28.4 ha)

Over 80% of the agricultural land surveyed is Grade 3a at Kite's Farm. Small areas of steep land are shown as Grades 3b and 4.

Distribution of ALC grades: Shaftesbury

Grade	Area (ha)	% of Survey Area	% of Agricultural Land	
2	83.0	72.2	79.1	
3a	6.5	5.7	6.2	
3b	1.1	0.9	1.0	
4	14.4	13.7	12.5	
Urban	9.2	8.0	0	
Non-agricultural	0.7	0.6	0	
TOTAL	114.9	100	100	(105.0ha)

The majority of the land at Shaftesbury is Grade 2 and in total 85% of the agricultural land is shown to be best and most versatile. These soils comprise well drained deep sandy loam profiles. An area of 14.4ha in the centre of the site comprises poorly drained clayey soils which are mapped as Grade 4.

2. INTRODUCTION

Land at Shaftesbury and Blandford Forum was surveyed on behalf of MAFF as part of its statutory role in the consultation with the North Dorset District Council regarding the District-wide Local Plan. The survey was carried out in April 1994 by ADAS (Resource Planning Team, Taunton Statutory Unit), using the Agricultural Land Classification (ALC) system and conducted at a scale of 1:10,000 (approximately one sample point for every hectare of agricultural land. The 157 borings were supplemented by 7 soil inspection pits used to assess subsoil conditions The information is correct at the scale shown but any enlargement could be misleading.

A description of the published soils, geology and ALC information is included in a section for each site as well as a description of any previous ALC survey information.

The current survey supersedes any previous work and was undertaken to provide a more detailed representation of the agricultural land quality using the Revised Guidelines and Criteria (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.

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 lower grades despite other favourable conditions.

Climatic data for each site were interpolated from the published Agricultural Climate Dataset (Meteorological Office, 1989). The parameters used for assessing 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 that there is no overall climatic limitation at Dorchester Hill and Kite's Farm. However, at Shaftesbury there is an overall climatic limitation of Grade 2.

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 Sections 4.4, 5.4 and 6.4. Local climatic factors such as exposure were assessed in the survey area as having no effect on the grading. A description of the Soil Wetness Classes used is included in Appendix 3.

	Dorchester Hill	Kite's Farm	Shaftesbury	Shaftesbury
Grid Reference	ST 882 054	ST 884 080	ST 874 236	ST 870 247
Altitude (m)	50	75	220	245
Accumulated Temperature (day °)	1515	1485	1314	1285
Average Annual Rainfall (mm)	909	931	957	987
Overall Climatic Grade	1	1	2	2
Field Capacity (days)	191	194	197	201
Moisture deficit: Wheat (mm)	102	98	81	76
Potatoes (mm)	94	89	65	58

4. DORCHESTER HILL, BLANDFORD FORUM

4.1 The area surveyed at Dorchester Hill is covered by sheet 178 (MAFF, 1974) of the national 1" to the mile provisional ALC map series which shows the whole site to be Grade 3. The current survey provides the only detailed ALC data of the area. A total of 23 auger borings and 2 soil inspection pits were examined.

4.2 Relief and Landcover

The site rises gently from 40 m AOD in the north to 85 m AOD alongside the A354 to the south of Blandford St Mary. At the time of the survey the landcover comprised permanent pasture, winter wheat and an area under set-aside management.

4.3 Geology and Soils

The published 1:50,000 drift series geology map, sheet 313 (Geological Survey of England and Wales, 1978), shows that the whole of the site is underlain by Upper Chalk.

The Soil Survey of England and Wales mapped the soils in 1983 at a reconnaissance scale of 1:250,000. This map shows that the majority of the site consists of soils from the Andover 1 Association, which are described as shallow well drained calcareous silty soils over chalk on slopes and crests. There are deep calcareous and non-calcareous fine silty soils in valley bottoms and striped soil patterns locally.

There is also an area of soils from the Coombe 1 Association close to the northern edge of the site. These are described as being well drained calcareous fine silty soils, deep in valley bottoms and shallow on valley sides in places. There is a slight risk of water erosion.

The soils found during the survey were very similar to the described Associations. On the low lying slopes soils comprise heavy clay loam topsoils over very slightly stony (3% chalk) silty clay loam subsoils over chalk. Profiles up slope and on the brow of the hill, comprise shallow heavy clay loams over chalk at approximately 30 cms depth.

4.4 Agricultural Land Classification

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

Table 2 Distribution of ALC grades: Dorchester Hill, Blandford Forum

Grade	Area (ha)	% of Survey Area	% of Agricultural Land	
2	5.8	23.9	23.9	
3a	18.5	76.1	76.1	
TOTAL	24.3	100	100	(24.3 ha)

Grade 2

A small area in the north-east corner of the site was mapped as Grade 2. These profiles experience a minor workability limitation to their agricultural use imposed by medium clay loam topsoils. The profiles are well drained and assessed as Wetness Class I.

Subgrade 3a

Three-quarters of the site was mapped as Subgrade 3a. The shallow chalk soils experience a moderate drought limitation due to the reduced amount of water available for crop growth. Much of this mapping unit also experience a moderate workability limitation imposed by the heavy clay loam topsoils.

5. KITE'S FARM, BLANDFORD FORUM

5.1 30 ha of land were surveyed at Kite's Farm to the north of Blandford Forum, in between the A350 ring road and The Milldown area. The site was mapped in the provisional 1" to the mile national ALC map series, sheet 178 (MAFF, 1974), as being mainly Grade 3. The steeper land along the southern edge is shown as Grade 4, while there is a small area of Grade 2 land in the north-east corner.

Previous detailed survey was carried out in 1988 at a scale of 1:10,000 under the Original Guidelines for the Blandford Town plan. The information gained from it is inadequate to make an accurate assessment under the Revised Guidelines. This recent survey now supersedes all the previous ALC surveys having been carried out at a more detailed level and using the Revised Guidelines and Criteria. A total of 27 auger boring points and one soil inspection pit were examined.

5.2 Relief and Landcover

Much of the site is a gently undulating area of between 65m and 85m AOD However a small area of land falls steeply to 55m AOD on the western and southern edges of the site. At the time of survey all but one winter wheat field was under pasture.

5.3 Geology and Soils

The published 1:50,000 drift series geology map, sheet 313 (Geological Survey of England and Wales, 1977), shows that the whole site is underlain by Upper Chalk.

The Soil Survey of England and Wales mapped the soils in 1983 at a reconnaissance scale of 1:250,000. This map shows most of the site to be Andover 1 Association which is described as shallow well drained calcareous silty soils over chalk on slopes and crests, but being deep calcareous and non-calcareous fine silty soils in valley bottoms.

There is a small area of Coombe 1 Association in the north-west corner of the site which is described as are well drained calcareous fine silty soils, deep in the valley bottoms and shallow over chalk on the valley sides.

Along the eastern edge is a narrow band of soils from the Carstens Association which are described as well drained fine silty over clayey, clayey and fine silty soils which are often very flinty. The soils found in the survey were very similar to those of the Andover 1 Association and they tended to be shallower in the north than on the lower land in the south.

5.4 Agricultural Land Classification

The distribution of ALC grades identified in the survey area is detailed in Table 3 and illustrated on the accompanying ALC map. The information is correct at the scale shown but any enlargement could be misleading.

Table 3 Distribution of ALC grades: Kite's Farm, Blandford Forum

Grade	Area (ha)	% of Survey Area	% of Agricultural Land	
3a	24.5	82.5	86.4	
3b	2.4	8.0	8.4	
4	1.5	5.0	5.3	
Urban	0.2	0.6	0	
Non-agricultural	1.2	3.9	0	
TOTAL	29.8	100	100	(28.4 ha)

Subgrade 3a

The majority of the site, was mapped as Subgrade 3a. There are two types of profile in this Subgrade: those downgraded on workability and those on droughtiness.

The area of droughtiness occurs on the slightly higher ground along the northern edge of the site where Upper Chalk bedrock was found within 40 cm of the surface, thus limiting the amount of available water for crop growth. This was confirmed by examining a soil inspection pit.

In the southern two-thirds of the site the deeper clayey profiles experience a moderate workability limitation imposed by heavy clay loam and heavy silty clay loam topsoils. These textures were confirmed with PSD analysis.

Subgrade 3b

Two small areas are mapped as Subgrade 3b. Land with a gradients of 8-11° imposes a limitation on the safe use of certain agricultural machinery The low lying valley feature in the south of the site experiences a drainage limitation and was found to be Wetness Class II with a heavy clay topsoil.

Grade 4

A small area of land in the north-west corner was found to have gradients exceeding 11°. This limits the safe operation of some agricultural machinery.

Other Land

A total of 1.4 ha of land on the eastern edge of the site was mapped as derelict land or in predominantly urban use.

6. SHAFTESBURY

6.1 115 ha of land along the eastern edge of Shaftesbury was surveyed in April 1994. The published provisional 1" to the mile national ALC map series, sheet 166 (MAFF, 1972), shows the site to be half Grade 3 and half Grade 2 with the boundary running to the north of Mampitts Lane. The Grade 2 land is in the southern half.

Part of the site was included in a previous ALC survey carried out in 1987 at a scale of 1:10,560 under the Original Guidelines. This information is not adequate to make an accurate assessment of the land quality under the Revised Guidelines. This recent survey now supersedes previous work having being undertaken at a more detailed level and using the Revised Guidelines and Criteria for Assessing the Quality of Agricultural Land (MAFF, 1988).

During the survey 107 borings and 4 soil inspection pits were examined.

6.2 Relief and Landcover

The site occupies a long gentle slope rising from 185 m AOD in the south, near Boynmead Farm, to 245 m AOD in the north, above Little Down. There is a small area near Round Hill where the gradient is between 7° and 10°.

At the time of survey the whole area was under either permanent pasture or grass leys.

6.3 Geology and Soils

The published 1:50,000 drift edition geology map, sheet 313 (Geological Survey of England and Wales, 1977), shows the area to be underlain by Upper Greensand with a small area of Upper Chalk around the western end of Mampitts Lane.

The Soil Survey of England and Wales mapped the soils in 1983 at a reconnaissance scale of 1:250,000. This map shows the main soil type to be Charity 1 Association which are described as being well drained fine silty and

fine silty over clayey soils, which are very flinty in places and are sometimes shallow over flint gravel.

Bearsted 2 Association soils are mapped in the northern end of the site, around Higher Winscombe Farm and in the southern end of the site. These are described as being deep well drained coarse loamy soils mainly on steep scarps which can be very stony. There are permeable peaty topped and non-peaty soils affected by groundwater on some footslopes.

The recent survey found two soil types. The first covering most of the area comprises deep medium sandy loam and sandy silt loam profiles with variable amounts of stone. In the north of the site subsoils are very stony with 46% small sandstone in the upper subsoils increasing to 60% below approximately 50 cm depth. Similar profiles with slightly less stony subsoils occur in the south of the site. The second soil type occupies the central part of the site and comprises heavy clay loam and occasional medium clay loam topsoils over very slightly stony clay. Occasionally a very stony clay horizon occurs at depth.

6.4 Agricultural Land Classification

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

Table 4 Distribution of ALC grades: Shaftesbury

Grade	Area (ha)	% of Survey Area	% of Agricultural Land	
2	83.0	72.2	79.1	
3a	6.5	5.7	6.2	
3b	1.1	0.9	1.0	
4	14.4	13.7	12.5	
Urban	9.2	8.0	0	
Non-agricultural	0.7	0.6	0	
TOTAL	114.9	100	100	(105.0ha)

Grade 2

The majority of the site is Grade 2 land which has only minor limitations to its agricultural use. The light topsoil textures and deep well drained profiles allow good workability of the land throughout a large part of the year. However the relatively cool and moist climate imposes a slight climatic limitation over the whole site. An occasional 3a profile is included in this mapping unit where less well drained clayey profiles exist.

Subgrade 3a

Two small areas of 3a land occur in the centre of the site. Profiles in the northern block are similar to the Grade 2 but heavy silty clay loam topsoils impose a moderate workability limitation. South of Mampitts lane 3a land comprises slowly permeable clay below 40 cm limiting the workability of the soil.

Subgrade 3b

A small area of land near Round Hill was found to have gradients of between 7° and 10° and was downgraded to Subgrade 3b because of the limitation on the type of agricultural machinery that can be used safely.

Grade 4

The area to the north of Mampitts Lane has been mapped as Grade 4 due to poor drainage. The clayey profiles are gleyed and slowly permeable from immediately below the topsoil placing these soils in Wetness Class IV. The grade was confirmed with a soil inspection pit. Occasional profiles within the mapping unit were found to be Subgrade 3b due to lighter topsoil textures.

Other Land

Just over 10 ha of the site was mapped as land that was predominantly in urban use. This includes a creamery, roads and an industrial area in the southern part of the site.

APPENDIX 1

REFERENCES

GEOLOGICAL SURVEY OF ENGLAND AND WALES, 1978, Drift edition, sheet 313, Shaftesbury, 1:50,000 scale

MAFF (1972) Agricultural Land Classification Map, sheet 166, Provisional 1:63,360 scale

MAFF (1974) Agricultural Land Classification Map, sheet 178, Provisional 1:63,360 scale

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

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

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

APPENDIX 2

DESCRIPTION OF ALC GRADES AND SUBGRADES

Grade 1 - excellent quality agricultural land

Land with no or very minor limitations to agricultural use. A very wide range of agricultural and horticultural crops can be grown and commonly include top fruit, soft fruit, salad crops and winter harvested vegetables. Yields are high and less variable than on land of lower quality.

Grade 2 - very good quality agricultural land

Land with minor limitations which affect crop yield, cultivations or harvesting. A wide range of agricultural and horticultural crops can usually be grown but on some land in the grade there may be reduced flexibility due to difficulties with the production of the more demanding crops such as winter harvested vegetables and arable root crops. The level of yield is generally high but may be lower or more variable than Grade 1.

Grade 3 - good to moderate quality agricultural land

Land with moderate limitations which affect the choice of crops, timing and type of cultivation, harvesting or the level of yield. Where more demanding crops are grown yields are generally lower or more variable than on land in Grades 1 and 2.

Subgrade 3a - good quality agricultural land

Land capable of consistently producing moderate to high yields of a narrow range of arable crops, especially cereals, or moderate yields of a wide range of crops including cereals, grass, oilseed rape, potatoes, sugar beet and the less demanding horticultural crops.

Subgrade 3b - moderate quality agricultural land

Land capable of producing moderate yields of a narrow range of crops, principally cereals and grass, or lower yields of a wider range of crops or high yields of grass which can be grazed or harvested over most of the year.

Grade 4 - poor quality agricultural land

Land with severe limitations which significantly restrict the range of crops and/or level of yields. It is mainly suited to grass with occasional arable crops (eg cereals and forage crops) the yields of which are variable. In most climates, yields of grass may be moderate to high but there may be difficulties in utilisation. The grade also includes very droughty arable land.

Grade 5 - very poor quality agricultural land

Land with very severe limitations which restrict use to permanent pasture or rough grazing, except for occasional pioneer forage crops.

Descriptions of other land categories used on ALC maps

Urban

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

Non-agricultural

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

Agricultural buildings

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

Open water

Includes lakes, ponds and rivers as map scale permits.

Land not surveyed

Agricultural land which has not been surveyed.

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

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

APPENDIX 3

DEFINITION OF SOIL WETNESS CLASSES

Wetness Class I

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

Wetness Class II

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

Wetness Class III

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

Wetness Class IV

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

Wetness Class V

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

Wetness Class VI

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

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

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

SITE NAME	PROFILE NO.	SLOPE AND ASPECT	LAND USE	Av Rainfall: 957 mm ATO: 1314 day °C FC Days: 197 Climatic Grade: 2 Exposure Grade:	PARENT MATERIAL
Shaftesbury	Pit 2	0°	Permanent Pasture		Greensand
JOB NO.	DATE	GRID REFERENCE	DESCRIBED BY		SOIL SAMPLE REFERENCES
24/94	20/4/94	ST 873 234 (ASP 54)	N A Done		RPT/NAD/133

Horizon No.	Lowest Av. Depth (cm)	Matrix (Ped Face) Colours	Texture	Stoniness: Size, Type, and Field Method	Mottling Abundance, Contrast, Size and Colour	Structure: Ped Development Size and Shape	Pores (Fissures)	Structural Condition	Consistence	Roots: Abundance and Size	Calcium Carbonate Content	Mangan Concs	Horizon Boundary: Distinctness and form
1	35	2.5Y42	HCL	None	CDOM 75YR46	-	-	-	-	Many fine + v fine	None	None	Gradual/ smooth
2	60	05Y62	C	None	MDOM 10YR56	Massive structure tending to WD Adherent CSAB	<0.5%	Poor	Firm	Common fine	None	Common	Clear/wavy
3	120	05Y61	C	40% MSST (Vis estimate)	MDOM 25Y68	Determined by stones (WDP)	<0.5% pores well fissured	-	Friable	Common fine	Calc	None	-

Profile Gleyed From: 0 cm

Depth to Slowly Permeable Horizon: 35 cm

Wetness Class: IV

Wetness Grade: 4

VP336-11

Available Water Wheat: 123 mm

Potatoes: 106 mm

Moisture Deficit Wheat: 81 mm

Potatoes: 65 mm

Moisture Balance Wheat: 42 mm

Potatoes: 41 mm

Droughtiness Grade: 1 (Calculated to 120 cm)

Final ALC Grade: 4

Main Limiting Factor(s): Wetness

Remarks:

Pit dug to 80 cm.

SITE NAME	PROFILE NO.	SLOPE AND ASPECT	LAND USE		PARENT MATERIAL
Shaftesbury	Pit 1	2° South	Ley	Av Rainfall: 957 mm ATO: 1314 day °C FC Days: 197 Climatic Grade: 2 Exposure Grade:	Upper Greensand
JOB NO.	DATE	GRID REFERENCE	DESCRIBED BY		SOIL SAMPLE REFERENCES
22/94	13/4/94	ST 873 240 (ASP 29)	N A Done		RPT/HLJ/28

Horizon No.	Lowest Av. Depth (cm)	Matrix (Ped Face) Colours	Texture	Stoniness: Size, Type, and Field Method	Mottling Abundance, Contrast, Size and Colour	Structure: Ped Development Size and Shape	Pores (Fissures)	Structural Condition	Consistence	Roots: Abundance and Size	Calcium Carbonate Content	Mangan Concs	Horizon Boundary: Distinctness and form
1	25	10YR33	MSL	6% MSST (Visual est)	None	-	-	-	-	Many fine + v fine	None	None	Clear/ smooth
2	50	10YR54	MSL	25% >2cm 21% <2cm 46% MSST Wet sieved	None	WDMSAB	V porous	Good	Friable	Common	None	None	Gradual/ smooth
3	120	2.5Y54	MSL	60% MSST (Est)	None	WDMSAB	V porous	Good	Friable	Common	None	None	-

Profile Gleyed From: N/A

Depth to Slowly Permeable Horizon: N/A

Wetness Class: I

Wetness Grade: 1

VP336-11

Available Water Wheat: 112 mm

Potatoes: 84 mm

Moisture Deficit Wheat: 81 mm

Potatoes: 65 mm

Moisture Balance Wheat: +31 mm

Potatoes: +19 mm

Droughtiness Grade: 1 (Calculated to 120 cm)

Final ALC Grade: 2

Main Limiting Factor(s): Climate

Remarks:

Moist at 60 cm.
Pit dug to 90 cm.

SITE NAME	PROFILE NO.	SLOPE AND ASPECT	LAND USE		PARENT MATERIAL
Shaftesbury	Pit 4	0°	Grass Ley	Av Rainfall: 957 mm ATO: 1314 day °C FC Days: 197 Climatic Grade: 2 Exposure Grade:	Greensand
JOB NO.	DATE	GRID REFERENCE	DESCRIBED BY		SOIL SAMPLE REFERENCES
24/94	20/4/94	ST 875 223 (ASP 109)	N A Done		RPT/NAD/135

Horizon No.	Lowest Av. Depth (cm)	Matrix (Ped Face) Colours	Texture	Stoniness: Size,Type, and Field Method	Mottling Abundance, Contrast, Size and Colour	Structure: Ped Development Size and Shape	Pores (Fissures)	Structural Condition	Consistence	Roots: Abundance and Size	Calcium Carbonate Content	Mangan Concs	Horizon Boundary: Distinctness and form
1	35	Top 10 cm 10YR42 10YR44	MSL	2% MSST Total	None	-	-	-	-	Many fine	None	None	Gradual/ smooth
2	55	10YR54	SCL	25% MSST (Vis estimate)	None	MDCSAB	>0.5%	Moderate	Friable	Few fine	None	None	Clear/ smooth
3	120	10YR56	MSL	30% MSST (Mostly >6cm) (Visual)	None	MDCSAB	>0.5%	Moderate	Friable	Few fine	None	None	-

Profile Gleyed From: N/A

Depth to Slowly Permeable Horizon: N/A

Wetness Class: I

Wetness Grade: 1

VP336-11

Available Water	Wheat:	134 mm
	Potatoes:	100 mm
Moisture Deficit	Wheat:	81 mm
	Potatoes:	65 mm
Moisture Balance	Wheat:	53 mm
	Potatoes:	35 mm
Droughtiness Grade:		1 (Calculated to 120 cm)

Final ALC Grade: 2

Main Limiting Factor(s): Climate

Remarks:

SITE NAME	PROFILE NO.	SLOPE AND ASPECT	LAND USE	Av Rainfall: 957 mm	PARENT MATERIAL
Shaftesbury	Pit 3	0°	Ley	ATO: 1314 day °C	Upper Greensand
JOB NO.	DATE	GRID REFERENCE	DESCRIBED BY	FC Days: 197	SOIL SAMPLE REFERENCES
24/94	19/4/94	ST 875 229 (ASP 80)	G M Shaw	Climatic Grade: 2	RPT/GMS/389-391
				Exposure Grade:	

Horizon No.	Lowest Av. Depth (cm)	Matrix (Ped Face) Colours	Texture	Stoniness: Size, Type, and Field Method	Mottling Abundance, Contrast, Size and Colour	Structure: Ped Development Size and Shape	Pores (Fissures)	Structural Condition	Consistence	Roots: Abundance and Size	Calcium Carbonate Content	Mangan Concs	Horizon Boundary: Distinctness and form
1	29	10YR52	MSZL	1% HR >2cm visual	Rusty roots Few ochreous	-	Good	-	Friable	MF + VF	None	None	Clear smooth
2	55	10YR42	HCL	1% HR visual	Common feint ochreous	MCSAB	Good	Moderate	Friable	MVF	None	None	Clear smooth
3	85	10YR53	MCL	0% visual	cdom	MCSAB	Good	Moderate	Friable	CVF	None	Few	Clear smooth
4	100+	2.5Y62	C	0% visual	mdogm	MCSAB	Good	Moderate	Firm	FVF	None	Common	-

Profile Gleyed From: 29 cm

Depth to Slowly Permeable Horizon: No SPL

Wetness Class: II

Wetness Grade: 2

VP336-11

Available Water Wheat: 151 mm

Potatoes: 120 mm

Moisture Deficit Wheat: 81 mm

Potatoes: 65 mm

Moisture Balance Wheat: 70 mm

Potatoes: 55 mm

Droughtiness Grade: 1 (Calculated to 120 cm)

Final ALC Grade: 2

Main Limiting Factor(s): Climate and wetness

Remarks: