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WEST WILTSHIRE LOCAL PLAN
WARMINSTER
AGRICULTURAL LAND CLASSIFICATION

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WEST WILTSHIRE LOCAL PLAN - WARMINSTER
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WEST WILTSHIRE LOCAL PLAN - WARMINSTER

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 West Wiltshire Local Plan.

New field work, covering approximately 781.3 ha was completed in November and December 1995 at semi-detailed density for mapping at a scale of 1:25,000. The attached composite map includes the results of other recent surveys for various parts within the area and the table below includes all areas shown on the composite map.

The main previous survey was completed in 1991 and mapped at a scale of 1:13,500. This has since been supplemented by further surveys for various small objector sites in 1993 and the combined area was published at a scale of 1:10 000. This was used in turn as the basis for the publication of survey results for several parts of the area in 1994.

Distribution of ALC grades: Warminster

Grade	Area (ha)	% of Survey Area	% of Agricultural Land (620.0 ha)
1	44.6	5.2	7.2
2	57.0	6.6	9.2
3a	206.6	24.0	33.3
3b	205.4	23.8	33.1
4	106.4	12.3	17.2
Other land	242.2	28.1	
TOTAL	862.2		

49% of the agricultural land was found to be best and most versatile with minor and moderate limitations due to workability, wetness and droughtiness. More serious moderate and severe limitations were found to be mainly due to wetness, but with small local areas of gradient causing downgrading to Subgrade 3b and Grade 4.

The remaining sections of this report refer only to the current survey. 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 map and is summarised above. This information may also be shown at 1:10 000 scale but any further enlargement would be misleading.

Parts of the area were also surveyed in 1980 at a scale of 1:25 000 and this information was also used in the publication of Agricultural Land Classification map for Warminster Bypass in 1983. Since this information was based on the previous ALC classification system it has not been included in the present map but due account of the grades represented has been taken into consideration during the current survey. The current survey uses the Revised Guidelines and Criteria for Grading the Quality of Agricultural Land, published by MAFF in 1988.

1. INTRODUCTION

An Agricultural Land Classification (ALC) Survey was carried out at Warminster in November and December 1995 at Warminster on behalf of MAFF as part of its statutory role in the preparation of the West Wiltshire Local Plan. The new fieldwork covering 781.3 ha of land was conducted by ADAS at semi-detailed intensity with approximately one boring per 2 hectares of agricultural land for mapping at a scale of 1:25 000. A total of 311 auger borings were examined and 18 soil profile pits used to assess subsoil conditions.

The published provisional one inch to the mile ALC map of this area (MAFF 1972) shows the grades of the site at a reconnaissance scale as mainly Grade 2 with Grades 3 and 4 on wetter land in the river valleys.

Parts of the area are also surveyed in 1980 at a scale of 1:25 000 and parts of this information were subsequently used in the preparation of an agricultural land classification map for Warminster Bypass in 1983. The recent survey supersedes these previous surveys as it uses the Revised Guidelines and Criteria for Grading the Quality of Agricultural Land published by MAFF in 1988.

64 ha of land on the western edge of the town had been previously surveyed in 1991 at a scale of 1:13 500. This was supplemented in 1993 by a further 6 sites totalling 20 ha with mapping at a scale of 1:10 000. Parts of these surveys were subsequently republished without further survey for various sites in 1994. These surveys have been incorporated into the composite map attached to this report although the detailed sections of this report are concerned only with the new survey. Details of the previous surveys may be obtained by reference to the relevant reports.

The current guidelines for Agricultural Land Classification 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 and 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: Warminster

Grid Reference	ST 915 429	ST 862 440	ST 869 470
Altitude (m)	99	150	130
Accumulated Temperature (day °)	1442	1385	1406
Average Annual Rainfall (mm)	831	890	846
Overall Climatic Grade	1	1	1
Field Capacity Days	185	196	188
Moisture deficit (mm):			
Wheat	96	87	93
Potatoes	86	74	81

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. RELIEF AND LANDCOVER

Altitude ranges from 100 to 150 metres AOD. Slopes are mainly gentle to moderate with only very small areas which have strong or moderately steep slopes. These are found mainly in the central sector of the survey area.

Landcover at the time of survey was mainly grass and cereals.

4. GEOLOGY AND SOILS

The geology of the site is shown on the published 1:63,360 scale solid and drift geology map for Frome, Sheet 281, Institute of Geological Sciences 1965.

This shows mainly lower chalk to the north-west, north-east and east with Upper Greensand and chert beds in the centre and to the south. It also shows extensive deposits of alluvium along the river valleys, with small areas of head. The current survey found the areas shown as Lower Chalk to be mainly chalk head within auger depth, although this also contains a considerable but variable proportion of soft chalk stones. Only at one pit was native chalk rock found. The survey also found the Upper Greensand and chert beds to be indistinguishable, with at least one considerable area of chert beds found to be virtually stone free Greensand. The alluvium deposits were found to range from virtually stone free clay to areas of considerable chert stone concentration.

The soils were mapped by the Soil Survey of England and Wales in 1983 at a reconnaissance scale of 1:250,000. This shows mainly Blewbury Association to the north-west, Coombe I Association to the east, Bromsgrove Association to the south and Frome Association in the river valleys.

Blewbury Association soils are described as well drained calcareous clayey and fine silty over clayey soils over argillaceous chalk. Some fine silty over clayey soils with slowly permeable sub-soils and slight seasonal water-logging.

Coombe I Association soils are described as well drained calcareous fine silty soils, deep in the valley bottoms, shallow to chalk on valley sides in places.

Bromsgrove Association soils are described as well drained reddish coarse loamy soils mainly over soft sandstone, but deep in places. With associated fine loamy soils with slowly permeable sub-soils and slight seasonal water-logging. They are developed on Permo-Triassic and Carboniferous sandstone and siltstone.

Frome Association soils are described as shallow calcareous and non-calcareous loamy soils over flint gravel affected by ground water. Small areas of peat.

Other minor associations found in the area include the Upton I, Icknield and Ardington Associations.

This distribution is largely borne out by the current survey. However the area shown as Bromsgrove Association was found to be variable and although Carboniferous Sandstone was evident in some parts of the area, other large parts of the area were clearly developed on Cretaceous deposits of Greensand and chert with no evidence of sandstone as described for the Bromsgrove Association.

5. AGRICULTURAL LAND CLASSIFICATION

This section describes only the grades found during the current survey and the distribution of ALC grades is shown in Table 2. Details of grades found in previous surveys which have been *incorporated into the accompanying ALC map maybe obtained by reference to the relevant report*. This information could be misleading if shown at a larger scale.

Table 2: Distribution of ALC grades: Warminster

Grade	Area (ha)	% of Survey Area	% of Agricultural Land (547.9 ha)
1	19.8	2.5	4.5
2	48.5	6.2	8.8
3a	193.8	24.8	35.4
3b	193.0	24.7	35.2
4	92.8	11.9	16.9
Other land	233.4	29.9	
TOTAL	781.3		

Grade 1

Small areas of Grade 1 were found near Warminster Common, illustrated by pit 17, and 2 other small areas which are found at the foot of steeper slopes just above the wet ground of the river valley. These are illustrated by pit 16 which also substantiates a previous survey for a small objector site at this location, part of Job number 64.93.

Grade 2

Although considerable areas of Grade 2 were expected, as indicated by the Provisional ALC map, this was found not to be the case and only small areas of Grade 2 remain. These are scattered and variable, with minor limitations due to workability and droughtiness. These are illustrated by pits 14 and 15, both of which are found on sites fitting the description for Bromsgrove Association soils.

Subgrade 3a

Considerable areas of Subgrade 3a are found on the Lower Chalk head deposits, where soils are limited mainly by workability. These top soils are extremely sticky and stiff, so that hand texturing including examination at the various pit sites led to assessment of top soil texture as clay. Laboratory particle size distribution analysis confirms top soil texture as clay for only some of the sites, for the rest indicating mainly heavy clay loam, tending to heavy silty clay loam. This implies a moderate limitation due to workability where Wetness Class I, as is generally the case on the chalk head.

A significant area around Eastleigh Farm was found to be limited mainly by droughtiness. Pit 12 at ASP312 is typical of the light loamy sand soils developed on virtually stone free Greensand at the west side of this area. Pit 13 at ASP260 is typical of the more stony soils at the east end of this area. However, such soils are variable in texture and stone content through the profile and this large area contains several borings which were found to be Grade 2.

Subgrade 3b

Much of the area shown as Subgrade 3b has a more serious moderate limitation due to workability where clay topsoil textures were found on Lower Chalk head. These soils are Wetness Class I. These are illustrated by pits 2, 7 and 10.

Other considerable areas of Subgrade 3b are found in the flood plan around Norton Bavant where medium sandy loam or more commonly medium clay loam topsoil textures are found in

Wetness Class IV profiles. There is a variable stone content in the subsoil of this area so that the slowly permeable layer is not always continuous. These soils are illustrated by pits 4 and 5.

Small areas of Subgrade 3b limited mainly by gradient are found in the area to the south of Warminster town.

Grade 4

Several large areas of Grade 4 were found in the flood plain, limited mainly by a severe wetness limitation. These are illustrated by pits 6 and 11.

A smaller area of Grade 4 with a severe wetness limitation is also found at Norridge Hill in the west of the survey area, where clay top soil was found over clayey Wetness Class IV profiles.

Other Land

Urban land, woodland and other non agricultural land comprise other land shown on the accompanying ALC map. This includes a considerable area of what appears to be waste land around Gas House Farm between the Bath Road and the railway. There is also a considerable area devoted to local nature reserves in the centre of the survey area around Small brook Road.

Resource Planning Team
Taunton Statutory Unit
22 December 1995

APPENDIX 1

REFERENCES

ADAS Resource Planning Group, ADAS Bristol. Reports of Survey for the following:-

- 1980 Warminster ALC. Scale 1:25 000. Reference 45.
- 1983 Warminster By-Pass. Scale 1:25 000. Reference 46.
- 1991 West Wiltshire Local Plan : Warminster. Scale 1:13 000. Reference 91.10.
- 1993 West Wiltshire Local Plan : Warminster Objector Sites. Scale 1:10 000. Reference 64.93.
- 1994 West Wiltshire Local Plan : Warminster. Scale 1:10 000.

- Land Northwest of Victoria Road. Reference 103.94
- Land South of Victoria Road. Reference 104.94
- Land at Bugley Barton Farm. Reference 105.94
- Land at Bugley Barton Farm II. Reference 107.94

INSTITUTE OF GEOLOGICAL SCIENCES (1965) Solid and Drift Edition, Sheet 281, Frome, 1:63 360

MAFF (1972) Agricultural Land Classification Map, Sheet 166, 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) *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 Warminster		PROFILE NO. Pit 1 (ASP 239)	SLOPE AND ASPECT 2° South	LAND USE Cereal	Av Rainfall: 831 mm ATO: 1442 day °C	PARENT MATERIAL Lower Chalk Head
JOB NO. 69/95		DATE 29/11/95	GRID REFERENCE ST 903 439	DESCRIBED BY PB/HLJ	FC Days: 185 Climatic Grade: 1 Exposure Grade: 1	SOIL SAMPLE REFERENCES PB 310

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	23	HZCL	10YR42	5% HR TOTAL (VIS)	None	None	-	-	-	-	CF + VF	Yes	Abrupt Smooth
2	32	C	10YR53	10% HR TOTAL (VIS)	None	None	WCSAB (breaking to FSAB)	Friable	Moderate	Good	FVF	Yes	Clear Smooth
3	50	HCL	10YR72	2% CH > 2cm (S) 27% CH < 2cm (S+D) 29% CH TOTAL	FDFO	None	WCSAB (breaking to fine)	Friable	Moderate	Good	FVF	Yes	Gradual Smooth
4	85 +	HCL	10YR72	25% CH TOTAL (VIS)	None	None	WCSAB (breaking to fine)	Friable	Moderate	Good	FVF	Yes	-

Profile Gleyed From: Not gleyed

Depth to Slowly Permeable Horizon: No SPL

Wetness Class: I

Wetness Grade: 3a

Available Water Wheat: 145 mm

Potatoes: 109 mm

Moisture Deficit Wheat: 93 mm

Potatoes: 81 mm

Moisture Balance Wheat: + 52 mm

Potatoes: + 28 mm

Droughtiness Grade: 1 (Calculated to 120 cm)

Final ALC Grade: 3a

Main Limiting Factor(s): Workability

Remarks:

SITE NAME Warminster		PROFILE NO. Pit 2 (ASP 148)	SLOPE AND ASPECT 2° North	LAND USE FLX	Av Rainfall: 831 mm ATO: 1440 day °C FC Days: 185 Climatic Grade: 1 Exposure Grade: 1	PARENT MATERIAL Lower Chalk Head
JOB NO. 69/95		DATE 29/11/95	GRID REFERENCE ST 899 445	DESCRIBED BY PB/HLJ		SOIL SAMPLE REFERENCES PB 311

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	25	C	10YR32	1% HR TOTAL (VIS)	None	None	-	-	-	-	CF + VF	Yes	Clear Smooth
2	40	C	2.5Y52	5% HR TOTAL (VIS)	None	None	MM, CAB	Friable	Good	Good	CF + VF	Yes	Clear Smooth
3	64	C	10YR54	1% HR TOTAL (VIS)	None	None	WCSAB	Friable	Moderate	Good	FVF	Yes	Gradual Smooth
4	90 +	HCL	10YR72	2% CH > 2cm (S) 26% CH < 2cm (S+D) 28% CH TOTAL	FDFO (10YR68)	None	MMSAB	Friable	Good	Good	FVF	Yes	-

Profile Gleyed From: Not gleyed

Depth to Slowly Permeable Horizon: No SPL

Wetness Class: I

Wetness Grade: 3b

Available Water Wheat: 169 mm

Potatoes: 121 mm

Moisture Deficit Wheat: 93 mm

Potatoes: 81 mm

Moisture Balance Wheat: + 76 mm

Potatoes: + 40 mm

Droughtiness Grade: 1 (Calculated to 120 cm)

Final ALC Grade: 3b

Main Limiting Factor(s): Workability

Remarks:

SITE NAME Warminster		PROFILE NO. Pit 3 (ASP 179)	SLOPE AND ASPECT 0°	LAND USE Ley	Av Rainfall: 831 mm ATO: 1440 day °C	PARENT MATERIAL Upper Greensand
JOB NO. 69/95		DATE 29/11/95	GRID REFERENCE ST 894 442	DESCRIBED BY PB/HLJ	FC Days: 185 Climatic Grade: 1 Exposure Grade: 1	SOIL SAMPLE REFERENCES PB 312

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	30	SCL	10YR31	< 1% HR TOTAL (VIS)	None	None	-	-	-	Good	CF + VF	-	Gradual Smooth
2	70	SCL	10YR32	None	None	None	MCSAB (few AB peds)	Friable	Moderate	Good	CF + VF	-	Diffuse Smooth
3	100 +	MSL	5Y53, 43	None	None	None	WCAB	Friable	Moderate	Good	FF + VF	-	-

Profile Gleyed From: Not gleyed

Depth to Slowly Permeable Horizon: No SPL

Wetness Class: I

Wetness Grade: 2

Available Water Wheat: 155 mm

Potatoes: 110 mm

Moisture Deficit Wheat: 93 mm

Potatoes: 81 mm

Moisture Balance Wheat: + 62 mm

Potatoes: + 29 mm

Droughtiness Grade: 1 (Calculated to 120 cm)

Final ALC Grade: 2

Main Limiting Factor(s): Workability

Remarks:

SITE NAME Warminster		PROFILE NO. Pit 4 (ASP 321)	SLOPE AND ASPECT 0°	LAND USE PGR	Av Rainfall: 831 mm ATO: 1440 day °C FC Days: 185 Climatic Grade: 1 Exposure Grade: 1	PARENT MATERIAL Alluvium
JOB NO. 69/95		DATE 29/11/95	GRID REFERENCE ST 897 435	DESCRIBED BY PB/HLJ		SOIL SAMPLE REFERENCES PB 313

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	20	MSL	10YR43	7% > 2cm 18% < 2cm 25% HR (S+D)	FDFOM (75YR58)	0	-	-	-	Good	MF, VF	-	Clear Smooth
2	32	SCL	10YR53	30% (VIS)	MDMOM (10YR58)	0	WCSAB	Friable	Moderate	Good	MVF	-	Clear Smooth
3	58	SC	10YR53	7% > 2cm 25% < 2cm 32% HR (S+D)	MDMOM (10YR58)	0	Wad CSAB	Friable	Moderate	Poor	CVF	-	Gradual Smooth
4	110 +	SC	10YR63	30% > 2cm 30% < 2cm 60% HR (S+D)	MDFOM	0	Wad CSAB	Friable	Moderate	Poor	CVF	-	

Profile Gleyed From: 20 cm

Depth to Slowly Permeable Horizon: 32 cm to 110 cm

Wetness Class: IV

Wetness Grade: 3b

Available Water Wheat: 90 mm

Potatoes: 74 mm

Moisture Deficit Wheat: 93 mm

Potatoes: 81 mm

Moisture Balance Wheat: -3 mm

Potatoes: -7 mm

Droughtiness Grade: 3a (Calculated to 120 cm)

Final ALC Grade: 3b

Main Limiting Factor(s): Wetness

Remarks: Pit dug to 80 cm, probed to 110 cm.
Water table at 60 cm.

SITE NAME Warminster		PROFILE NO. Pit 5 (ASP 344)	SLOPE AND ASPECT 0°	LAND USE PGR	Av Rainfall: 831 mm ATO: 1440 day °C	PARENT MATERIAL Alluvium	
JOB NO. 69/95		DATE 29/11/95	GRID REFERENCE ST 899 433	DESCRIBED BY PB/HLJ	FC Days: 185 Climatic Grade: 1 Exposure Grade: 1	SOIL SAMPLE REFERENCES PB 314	

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	15	MCL	10YR42	1% HR (VB)	FRRROM	0	-	-	-	-	MF, VF	-	Clear Smooth
2	25	C	10YR52	1% HR (VB)	MDFOM (75YR58)	0	MCPv	Friable	Moderate	Poor	CVF	-	Clear Smooth
3	35	C	10YR52	30% HR (VIS)	MDFOM (75YR58)	0	MCPv *	Friable	Moderate	Poor	CVF	-	Abrupt Smooth
4	80 +	C	10YR61	25% HR (VIS)	CDFOM (10YR58)	0	Wad -	Friable	Poor	Poor	FVF	-	

Profile Gleyed From: 15 cm

Depth to Slowly Permeable Horizon: 15 cm

Wetness Class: IV

Wetness Grade: 3b

Available Water Wheat: 107 mm

Potatoes: 89 mm

Moisture Deficit Wheat: 93 mm

Potatoes: 81 mm

Moisture Balance Wheat: + 14 mm

Potatoes: + 8 mm

Droughtiness Grade: 2 (Calculated to 120 cm)

Final ALC Grade: 3b

Main Limiting Factor(s): Wetness

Remarks: H3 stones make structure difficult to assess, therefore assume as H2.

TS to 25 cm : PSD shows MCL.

SITE NAME Warminster		PROFILE NO. Pit 6 (ASP 385)	SLOPE AND ASPECT 0°	LAND USE RGR	Av Rainfall: 831 mm ATO: 1440 day °C	PARENT MATERIAL Alluvium
JOB NO. 69/95		DATE 29/11/95	GRID REFERENCE ST 908 429	DESCRIBED BY PB/HLJ	FC Days: 185 Climatic Grade: 1 Exposure Grade: 1	SOIL SAMPLE REFERENCES PB 315

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	18	Pty C	10YR42	0	0	0	-	-	-	Good	MC + F	-	Clear Smooth
2	32	C	10YR32	0	CD FOM (75YR58)	0	WCSAB	Friable	Moderate	Poor	CF, VF	-	Clear Smooth
3	70 +	C	10YR51	0	MDMOM (75YR58)	0	MCPv	Friable	Poor	Poor	FF, VF	-	

Profile Gleyed From: 18 cm
 Depth to Slowly Permeable Horizon: 18 cm
 Wetness Class: IV
 Wetness Grade: 4

Available Water Wheat: 145 mm
 Potatoes: 122 mm
 Moisture Deficit Wheat: 93 mm
 Potatoes: 81 mm
 Moisture Balance Wheat: + 52 mm
 Potatoes: + 41 mm
 Droughtiness Grade: 1 (Calculated to 120 cm)

Final ALC Grade: 4
 Main Limiting Factor(s): Wetness

Remarks: Water running in at 25 - 30 cm.

SITE NAME Warminster		PROFILE NO. Pit 7 (ASP 82)	SLOPE AND ASPECT 1° West	LAND USE Cer	Av Rainfall: 846 mm ATO: 1406 day °C FC Days: 188 Climatic Grade: 1 Exposure Grade: 1	PARENT MATERIAL Lower Chalk
JOB NO. 69/95		DATE 30/11/95	GRID REFERENCE ST 858 456	DESCRIBED BY PB/HLJ		SOIL SAMPLE REFERENCES PB 316

Horizon No.	Lowest Av. Depth (cm)	Texture	Matrix (Ped Face) Colours	Stoniness: Size, Type, and Field Method	Mottling Abundance, Contrast, Size and Colour	Mangan Concs	Structure: Ped Development Size and Shape	Consistence	Structural Condition	Pores (Fissures)	Roots: Abundance and Size	Calcium Carbonate Content	Horizon Boundary: Distinctness and form
1	35	ZC	10YR52	5% CH (VIA)	0	0	-	-	-	Good	CF, VF	Yes	Clear Smooth
2	58	HCL	10YR72	90% CH (VIS)	FDFOM (75YR58)	0	Too stony	-	Moderate	Fissured*	FF, VF	Yes	Gradual Smooth
3	75	C	10YR73	50% CH (VIS)	CDMOM (75YR58)	0	Det by stone	Friable	Moderate	Fissured	FVF	Yes	Clear Smooth
4	80 +	HCL	10YR72	90% CH (VIS)	FDFOM (75YR58)	0	Too stony	-	-	Fissured	-	Yes	

Profile Gleyed From: 58 - 75 cm

Depth to Slowly Permeable Horizon: -

Wetness Class: 1

Wetness Grade: 3b

Available Water Wheat: 126 mm

Potatoes: 98 mm

Moisture Deficit Wheat: 93 mm

Potatoes: 81 mm

Moisture Balance Wheat: + 33 mm

Potatoes: + 17 mm

Droughtiness Grade: 1 (Calculated to 120 cm)

Final ALC Grade: 3b

Main Limiting Factor(s): Workability

Remarks: H3 represents bands and pockets of weathered material within native chalk.

* Chalk fragments stained by soil.

Free water held above H2 : runs into pit.

SITE NAME Warminster		PROFILE NO. Pit 8 (ASP 14)	SLOPE AND ASPECT 0°	LAND USE PGR	Av Rainfall: 846 mm ATO: 1406 day °C	PARENT MATERIAL Lower Chalk Head
JOB NO. 69/95		DATE 30/11/95	GRID REFERENCE ST 863 467	DESCRIBED BY PB/HLJ	FC Days: 188 Climatic Grade: 1 Exposure Grade: 1	SOIL SAMPLE REFERENCES PB 317

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	8	MZCL	10YR43	2% HR TOTAL (VIS)	CDFO (75YR58)	None	-	-	-	Good	MF, VF	Yes	Clear Smooth
2	25	C	10YR53	5% HR TOTAL (VIS)	CDFO (75YR58)	None	MCPr	Friable	Moderate	Poor (variable)	MVF	Yes	Clear Smooth
3	43 (average)	C	10YR52	< 1% HR TOTAL (VIS)	MFFO (75YR58)	None	MCPr	Friable	Moderate	Poor	CVF	Yes	-
4	85 +	C	10YR71, 52	50% CH TOTAL (VIS)	FDFO (10YR68) Common in patches	None	Wk (determined by stones)	-	Moderate	Well fissured	FVF	Yes	-

Profile Gleyed From: 8 cm

Depth to Slowly Permeable Horizon: 25 - 43 cm

Wetness Class: II

Wetness Grade: 3a

Available Water Wheat: 130 mm

Potatoes: 104 mm

Moisture Deficit Wheat: 93 mm

Potatoes: 81 mm

Moisture Balance Wheat: + 37 mm

Potatoes: + 23 mm

Droughtiness Grade: 1 (Calculated to 120 cm)

Final ALC Grade: 3a

Main Limiting Factor(s): Wetness

Remarks: H3 depth varies from 39 - 47 cm. Profile is just WC II because H4 starts above 50 cm therefore not 15 cm SPL below 35 cm. Borderline WC IV.

SITE NAME Warminster		PROFILE NO. Pit 9 (ASP 49)	SLOPE AND ASPECT 3° South	LAND USE PLW	Av Rainfall: 846 mm ATO: 1406 day °C	PARENT MATERIAL Lower Chalk Head
JOB NO. 69/95		DATE 1/12/95	GRID REFERENCE ST 865 462	DESCRIBED BY PB/HLJ	FC Days: 188 Climatic Grade: 1 Exposure Grade: 1	SOIL SAMPLE REFERENCES PB 318

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	C	10YR43	2% HR TOTAL (VIS)	None	None	-	-	-	Good	CM + F	Yes	Clear Smooth
2	28	C	10YR53	10% CH TOTAL (VIS)	None	None	MMSAB (breaking to fine)	Friable	Good	Good	CF + VF	Yes	Clear Smooth
3	50	C	10YR62	20% CH > 2cm 20% CH < 2cm 40% CH TOTAL (VIS)	FDFO (10YR68)	None	WMSAB	Friable	Good	Good	CF + VF	Yes	Gradual Smooth
4	85 +	C	25Y72	5% CH > 2cm 15% CH < 2cm 20% CH TOTAL (VIS)	FDFO (10YR68)	None	WCSAB	Friable	Moderate	Poor pores *	FF + VF		-

Profile Gleyed From: Not gleyed

Depth to Slowly Permeable Horizon: No SPL

Wetness Class: I

Wetness Grade: 3b

Available Water Wheat: 139 mm

Potatoes: 114 mm

Moisture Deficit Wheat: 93 mm

Potatoes: 81 mm

Moisture Balance Wheat: + 46 mm

Potatoes: + 33 mm

Droughtiness Grade: 1 (Calculated to 120 cm)

Final ALC Grade: 3b

Main Limiting Factor(s): Workability

Remarks: * Few pores but stones and fissures lead to permeable horizon.

SITE NAME Warminster		PROFILE NO. Pit 10 (ASP 27)	SLOPE AND ASPECT 2° West	LAND USE Ley	Av Rainfall: 846 mm ATO: 1406 day °C FC Days: 188 Climatic Grade: 1 Exposure Grade: 1	PARENT MATERIAL Lower Chalk Head
JOB NO. 69/95		DATE 1/12/95	GRID REFERENCE ST 871 465	DESCRIBED BY PB/HLJ		SOIL SAMPLE REFERENCES PB 319

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	23	C	10YR42	2% HR (VB)	0	0	-	-	-	Good	MF, VF		Gradual Smooth
2	35	C	10YR53	2% HR (VIS)	0	0	MCSAB Breaking to MFSAB	Friable	Moderate	Good	CF, VF	Yes	Clear Smooth
3	56	C	25Y63	10% CH (VIS)	0	0	MFSAB	Friable	Good	Poor (few) *	FVF	Yes	Clear Smooth
4	80 +	C	25Y72	40% CH (VIS)	FDFOM (10YR56)	0	WMSAB	Friable	Good	Poor *	FVF	Yes	

Profile Gleyed From: -

Depth to Slowly Permeable Horizon: -

Wetness Class: 1

Wetness Grade: 3b

Available Water Wheat: 170 mm

Potatoes: 122 mm

Moisture Deficit Wheat: 93 mm

Potatoes: 81 mm

Moisture Balance Wheat: + 78 mm

Potatoes: + 41 mm

Droughtiness Grade: 1 (Calculated to 120 cm)

Final ALC Grade: 3b

Main Limiting Factor(s): Workability

Remarks: * H3 and H4 well fissured.

SITE NAME Warminster		PROFILE NO. Pit 11 (ASP 25)	SLOPE AND ASPECT 0°	LAND USE Permanent Grass	Av Rainfall: 846 mm ATO: 1406 day °C	PARENT MATERIAL Alluvium
JOB NO. 69/95		DATE 1/12/95	GRID REFERENCE ST 868 466	DESCRIBED BY PB/HLJ	FC Days: 188 Climatic Grade: 1 Exposure Grade: 1	SOIL SAMPLE REFERENCES PB 310

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	9	C	10YR42	< 1% HR TOTAL (VIS)	None	None	-	-	-	Good	MF + VF	-	Clear Smooth
2	23	C	10YR41	None (VIS)	CDFO (7.5YR58)	None	MCAB breaking to fine	Friable	Moderate	Poor	CVF	-	Clear Smooth
3	45	C	10YR62	None (VIS)	CDFO (10YR68)	None	WMAB *	Friable	Moderate	Poor	CVF	-	Clear Smooth
4	85	C	10YR52	5% HR TOTAL (VIS)	MFFO (10YR66)	None	WMAB	Friable	Moderate	Poor	FVF	-	-
5	120	C	25Y72	10% CH TOTAL (VIS)	CDFO (10YR56)	None	-	-	Moderate	-	FVF	-	-

Profile Gleyed From: 9 cm

Depth to Slowly Permeable Horizon: 9 cm

Wetness Class: IV

Wetness Grade: 4

Available Water Wheat: 135 mm

Potatoes: 111 mm

Moisture Deficit Wheat: 93 mm

Potatoes: 81 mm

Moisture Balance Wheat: + 42 mm

Potatoes: + 30 mm

Droughtiness Grade: 1 (Calculated to 120 cm)

Final ALC Grade: 4

Main Limiting Factor(s): Wetness

Remarks: Pit dug to 65 cm. Augured to 120 cm.. Boundary change to chalk influenced clay at 80 - 90 cm.

* Borderline moderately developed.

SITE NAME Warminster		PROFILE NO. Pit 12 (ASP 312)	SLOPE AND ASPECT 1° South	LAND USE FLW	Av Rainfall: 890 mm ATO: 1385 day °C	PARENT MATERIAL Greensand
JOB NO. 69/95		DATE 8/12/95	GRID REFERENCE ST 883 435	DESCRIBED BY PB/HLJ	FC Days: 196 Climatic Grade: 1 Exposure Grade: 1	SOIL SAMPLE REFERENCES PB 327

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	LMS	10YR42	1% VIS	0	0	-	-	-	Good	CF, VF	0	Abrupt Smooth
2	57	LMS	10YR54	1% VIS	0	0	WCAB	Friable	Good	Good	FF, VF	0	Clear Smooth
3	110 +	LMS	05Y52	0	0	0	WCAB	V Friable	Moderate	Good	FF, VF	0	

Profile Gleyed From: -

Depth to Slowly Permeable Horizon: -

Wetness Class: 1

Wetness Grade: 2

Available Water Wheat: 91 mm

Potatoes: 72 mm

Moisture Deficit Wheat: 93 mm

Potatoes: 81 mm

Moisture Balance Wheat: -2 mm

Potatoes: -9 mm

Droughtiness Grade: 3a (Calculated to 120 cm)

Final ALC Grade: 3a

Main Limiting Factor(s): Drought

Remarks:

SITE NAME Warminster		PROFILE NO. Pit 13 (ASP 260)	SLOPE AND ASPECT 1° South	LAND USE FLW	Av Rainfall: 890 mm ATO: 1385 day °C FC Days: 196 Climatic Grade: 1 Exposure Grade: 1	PARENT MATERIAL Chert Beds
JOB NO. 69/95		DATE 8/12/95	GRID REFERENCE ST 889 438	DESCRIBED BY PB/HLJ		SOIL SAMPLE REFERENCES PB 326

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	25	MSL	10YR32	4% > 2cm 11% < 2cm 15% HR (S+D)	0	0	-	-	-	Good	CF, VF	0	Clear Smooth
2	44	MCL	10YR32	15% HR (S+D) 18% > 2cm 31% HR (S+D)	0	0	WCSAB	Friable	Moderate	Good	CF, VF	0	Clear Smooth
3	75	HCL	10YR43	35% > 2cm 30% < 2cm 65% HR (S+D)	0	0	Too stony	Friable	Moderate	Good	FF, VF	0	Gradual Smooth
4	105 +	C	10YR54	30% > 2cm 25% < 2cm 55% HR (S+D)	0	0	Too stony	-	Moderate	Good	FVF	0	

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

Available Water Wheat: 89 mm
Potatoes: 74 mm
Moisture Deficit Wheat: 93 mm
Potatoes: 81 mm
Moisture Balance Wheat: - 4 mm
Potatoes: - 7 mm
Droughtiness Grade: 3a (Calculated to 120 cm)

Final ALC Grade: 3a
Main Limiting Factor(s): Drought

Remarks: Pit dug to 85 cm, picked to 105 cm.

SITE NAME		PROFILE NO.	SLOPE AND ASPECT	LAND USE	Av Rainfall: 890 mm	PARENT MATERIAL	
Warminster		Pit 14 (ASP 338)	3° North	Cereal	ATO: 1385 day °C	Chert Beds	
JOB NO.		DATE	GRID REFERENCE	DESCRIBED BY	FC Days: 196	SOIL SAMPLE REFERENCES	
69/95		8/12/95	ST 891 433	PB/HLJ	Climatic Grade: 1	PB 328	
					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	25	FSZL	10YR54	4% HR > 2cm (S) 9% HR < 2cm (S+D) 13% HR TOTAL	None	None	-	-	-	Good	MM + F	-	Abrupt Smooth
2	60	SCL	10YR56	15% HR > 2cm (S) 25% HR < 2cm (S+D) 40% HR TOTAL	None	None	WMSAB	Friable	Good	Good	MF + VF	-	Gradual Smooth
3	80	SCL	10YR66	32% HR > 2cm (S) 28% HR < 2cm (S+D) 60% HR TOTAL	None	None	-	-	Moderate	Good	CVF	-	Gradual Smooth
4	110 +	(S) C	10YR66	60% HR TOTAL (VIS)	None	None	-	-	Moderate	Poor	FVF	-	-

Profile Gleyed From: Not gleyed

Depth to Slowly Permeable Horizon: No SPL

Wetness Class: I

Wetness Grade: 1

Available Water Wheat: 119 mm

Potatoes: 102 mm

Moisture Deficit Wheat: 93 mm

Potatoes: 81 mm

Moisture Balance Wheat: + 26 mm

Potatoes: + 21mm

Droughtiness Grade: 2 (Calculated to 120 cm)

Final ALC Grade: 2

Main Limiting Factor(s): Drought

Remarks:

SITE NAME Warminster		PROFILE NO. Pit 15 (ASP 247)	SLOPE AND ASPECT 3° East	LAND USE Cer	Av Rainfall: 890 mm ATO: 1385 day °C	PARENT MATERIAL Chert Beds
JOB NO. 69/95		DATE 8/12/95	GRID REFERENCE ST 871 437	DESCRIBED BY PB/HLJ	FC Days: 196 Climatic Grade: 1 Exposure Grade: 1	SOIL SAMPLE REFERENCES PB 324

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	FSL	10YR42	8% > 2cm 16% < 2cm 24% HR (S+D)	None	None	-	-	-	Good	MF + VF	-	Clear Smooth
2	53	MSL	10YR54	20% > 2cm 11% < 2cm 31% HR (S+D)	0	0	WCSAB	Friable	Good	Good	CF + VF	-	Gradual Smooth
3	90	MSL	25Y54	35% > 2cm 12% < 2cm 47% HR (S+D)	0	0	WCSAB	Friable	Good	Good	FVF	-	Clear Wavy
4	110 +	SCL	5Y52	0 (VIS)	* 0	0	WCAB	Friable	(Good)	Poor	FVF	-	-

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

Available Water Wheat: 136 mm
Potatoes: 85 mm
Moisture Deficit Wheat: 93 mm
Potatoes: 81 mm
Moisture Balance Wheat: + 43 mm
Potatoes: + 4 mm
Droughtiness Grade: 2 (Calculated to 120 cm)

Final ALC Grade: 2
Main Limiting Factor(s): Drought

Remarks: Pit dug to 85 cm. Picked and augured to 110 cm.
*Few ochreous rotten stones, no mottles.

SITE NAME Warminster		PROFILE NO. Pit 16 (ASP 192)	SLOPE AND ASPECT 1° North East	LAND USE PGR	Av Rainfall: 890 mm ATO: 1385 day °C FC Days: 196 Climatic Grade: 1 Exposure Grade: 1	PARENT MATERIAL Upper Greensand
JOB NO. 69/95		DATE 8/12/95	GRID REFERENCE ST 872 441	DESCRIBED BY PB/HLJ		SOIL SAMPLE REFERENCES PB 323

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	20	FSL	10YR42	3% HR > 2cm 9% HR < 2cm 12% HR TOTAL	None	None	-	-	-	Good	MF + VF	-	Abrupt Smooth
2	40	MSL	10YR44	15% > 2cm 19% < 2cm 34% HR (S+D)	None	None	WMSAB	Friable	Good	Good	CF + VF	-	Clear Smooth
3	60	MSL	10YR46	3% > 2cm 27% < 2cm 30% HR (S+D)	None	None	WCSAB	Friable	Good	Good	FVF	-	Gradual Wavy
4	95	FSL	2.5Y54/56	22% < 2cm 27% HR (S+D)	None	None	WCAB	Friable	Good	Poor	None	-	Clear Smooth
5	110 +	FSL	2.5Y63/56	None	None	None	-	-	Moderate	-	None	-	-

Profile Gleyed From: Not gleyed

Depth to Slowly Permeable Horizon: No SPL

Wetness Class: 1

Wetness Grade: 1

Available Water Wheat: 153 mm

Potatoes: 96 mm

Moisture Deficit Wheat: 93 mm

Potatoes: 81 mm

Moisture Balance Wheat: + 60 mm

Potatoes: + 15 mm

Droughtiness Grade: 1 (Calculated to 120 cm)

Final ALC Grade: 1

Main Limiting Factor(s):

Remarks: Augured to 160 cm.

SITE NAME Warminster		PROFILE NO. Pit 17 (ASP 190)	SLOPE AND ASPECT 3° North	LAND USE PGR	Av Rainfall: 890 mm ATO: 1385 day °C FC Days: 196 Climatic Grade: 1 Exposure Grade: 1	PARENT MATERIAL Chert Beds
JOB NO. 69/95		DATE 12/12/95	GRID REFERENCE ST 865 441	DESCRIBED BY PB/HLJ		SOIL SAMPLE REFERENCES PB 322

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	34	FSL	10YR32	1% > 2cm 9% < 2cm 10% HR (S+D)	0	0	-	-	-	Good	MF, VF	-	Abrupt Smooth
2	75	MSL	10YR66	3% > 2cm 9% < 2cm 11% HR (S+D)	0	0	WMSAB	Friable	Good	Good	CF, VF	-	Gradual Smooth
3	110 +	MSL	25Y53 10YR54	19% > 2cm 13% < 2cm 32% HR (S+D)	0	0	Wad CSAB	Friable	Good	Good	FVF		

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

Available Water Wheat: 149 mm
Potatoes: 110 mm
Moisture Deficit Wheat: 93 mm
Potatoes: 81 mm
Moisture Balance Wheat: + 56 mm
Potatoes: + 29 mm
Droughtiness Grade: 1 (Calculated to 120 cm)

Final ALC Grade: 1
Main Limiting Factor(s):

Remarks: H2 considerable topsoil mixing
H3 variable texture.

SITE NAME Warminster		PROFILE NO. Pit 18 (ASP 369)	SLOPE AND ASPECT 1° South West	LAND USE Permanent Grass	Av Rainfall: 831 mm ATO: 1442 day °C FC Days: 185 Climatic Grade: 1 Exposure Grade: 1	PARENT MATERIAL Lower Chalk Head
JOB NO. 69/95		DATE 12/12/95	GRID REFERENCE ST 913 432	DESCRIBED BY PB/HLJ		SOIL SAMPLE REFERENCES PB 329, 69 329

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	21	HCl	10YR53	1% HR TOTAL (VIS)	None	None	-	-	-	Good	MF + VF	-	Abrupt Smooth
2	35	C	10YR63	1% HR TOTAL (VIS)	None	None	MCSAB	Friable	Moderate	Good	CF + VF	-	Clear Smooth
3	55	C	10YR73	10% CH TOTAL (VIS)	None	None	WCSAB	Friable	Moderate	Good	CF + VF	Yes	Gradual Smooth
4	80 +	HCL	10YR72	30% CH TOTAL (VIS)	None	None	WCSAB	Friable	Moderate	Good	FVF	Yes	-

Profile Gleyed From: Not gleyed

Depth to Slowly Permeable Horizon: No SPL

Wetness Class: I

Wetness Grade: 3a

Available Water Wheat: 146 mm

Potatoes: 112 mm

Moisture Deficit Wheat: 93 mm

Potatoes: 81 mm

Moisture Balance Wheat: + 53 mm

Potatoes: + 31 mm

Droughtiness Grade: 1 (Calculated to 120 cm)

Final ALC Grade: 3a

Main Limiting Factor(s): Workability

Remarks: