

SITE NAME	PROFILE NO	SLOPE AND ASPECT	LAND USE	Av Rainfall	970 mm	PARENT MATERIAL
Hill Head	Pit 8	3° W	Ploughed	ATO	1484 day °C	
JOB NO	DATE	GRID REFERENCE	DESCRIBED BY	FC Days	196	SOIL SAMPLE REFERENCES
124/94	10/1/95	ST060144	P Barnett/H Lloyd Jones	Climatic Grade	1	
				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	20	MSL	7 5YR43	8 / HR >2cm (S) 18 / HR <2cm (S+D) 26 / HR Total	None	None	WCSAB	Friable	G	G	CVF		Clear Smooth
2	85	LCS	2 5YR46	12 / HR >2cm (S) 34 / HR <2cm (S+D) 46 / HR Tot 1	None	None	WMSAB	V friable	M	G	None		Clear Wavy
3	115	SCL	2 5YR46	30% HR T t 1 (Vis)	FDFO 7 5YR68	Few	WMSAB	Friable	M	G	None		Clear Wavy
4	140	LFS	2 5YR46	<1 / HR Total (V)	None	None	Massive	Friable	M	G	None		

Profile Gleyed From N/A

Depth to Slowly Permeable Horizon N/A

Wetness Class I

Wetness Grade 1

Available Water Wheat 75 mm

Potatoes 45 mm

Moisture Deficit Wheat 93 mm

Potatoes 82 mm

Moisture Balance Wheat 18 mm

Potatoes 37 mm

Droughtiness Grade 3b (Calculated to 120 cm)

Final ALC Grade 3b

Main Limiting Factor(s) Droughtiness

Remarks

Horizon 3 is very variable with heavier areas which are firm and have low porosity

SITE NAME		PROFILE NO	SLOPE AND ASPECT		LAND USE		Av Rainfall 970 mm		PARENT MATERIAL			
Hill Head		Pit 9	4° N		BRA		ATO 1484 day °C		Pebble beds			
JOB NO		DATE	GRID REFERENCE		DESCRIBED BY		FC Days 196		SOIL SAMPLE REFERENCES			
124/94		27 1 95	ST064145 (ASP 27)		P Barnett		Climatic Grade 1					
							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	22	MSL	5YR44	2 / >2cm (S) 13 / <2cm (S+D) 15 HR	0	0	Adh (MSAB)	Friable	G	G	MF		Abrupt Smooth
2	90	LMS	25YR44	1 / >2cm (S) 18 / <2cm (S+D) 19 HR	0	0	WCAB	V friable	M	G	FVF		Abrupt Smooth
3	120 (pit 100)	LMS	25YR34	2 / >2cm (S) 9 / <2cm (S+D) 11 HR	0	0	M	V firm	P	P	0		

Profile Gleyed From

Depth to Slowly Permeable Horizon

Wetness Class 1

Wetness Grade 1

Available Water	Wheat	78 mm
	Potatoes	61 mm
Moisture Deficit	Wheat	93 mm
	Potatoes	82 mm
Moisture Balance	Wheat	15 mm
	Potatoes	21 mm
Droughtiness Grade		3a (Calculated to 120 cm)

Final ALC Grade 3a

Main Limiting Factor(s) Drought

Remarks

Free water held above H3

SITE NAME		PROFILE NO	SLOPE AND ASPECT		LAND USE		Av Rainfall 970 mm		PARENT MATERIAL			
Hill Head		Pit 7	3 W		Ley		ATO 1484 day °C		Lower Marls/Pebble beds			
JOB NO		DATE	GRID REFERENCE		DESCRIBED BY		FC Days 196		SOIL SAMPLE REFERENCES			
124/94		10 1 95	ST057143		P Barnett/H Lloyd Jones		Climatic Grade 1		PB 221			
							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	30	MSL	10YR44	1 / >2cm (V)	N	N	WMSAB	Friable		G	MF VF		Gradual Smooth
2	50	SCL	7 5YR54	5 / >2cm (V) 25% <2cm (S+D) 30 / HR	FFFOM 75YR58	N	WCSAB	Friable	M	G	CVF		Gradual Smooth
3	105	SC	05YR63	5 / >2cm (V) 25% <2cm (S+D) 30 / HR	CDMOM 75YR58	N	WCAB	Friable	M	G	FVF		

Profile Gleyed From 50 cm

Depth to Slowly Permeable Horizon N/A

Wetness Class I

Wetness Grade 1

Available Water Wheat 116 mm

Potatoes 88 mm

Moisture Deficit Wheat 93 mm

Potatoes 82 mm

Moisture Balance Wheat +23 mm

Potatoes +6 mm

Droughtiness Grade 2 (Calculated to 120 cm)

Final ALC Grade 2

Main Limiting Factor(s) Drought

Remarks

Augered to 120 cm

SITE NAME		PROFILE NO	SLOPE AND ASPECT	LAND USE	Av Rainfall	970 mm	PARENT MATERIAL	
Hill Head		Pit 6	0°	Ley	ATO	1484 day °C	Pebble beds	
JOB NO		DATE	GRID REFERENCE	DESCRIBED BY	FC Days	196	SOIL SAMPLE REFERENCES	
124/94		10/1/95	ST077142 (ASP 97)	P Barnett/H Lloyd Jones	Climatic Grade	1	PB 220	
					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	40	MSL	05YR43	1/ HR > cm (S) 2% HR < 2cm (S+D) 10% HR Total	None	None	WCSAB	Friable	G	G	CF VF		Gradual Smooth
2	65	SC	2 5YR46	2 HR Total (Vis)	None	None	MCSAB (few prismatic)	Firm	M	G	FF VF		Abrupt Smooth
3	80	LMS	2 5YR46	<1/4 HR Total (V)	None	None	WCSAB	V friable	M	G	None		Clear Smooth
4	100	MSL	2 5YR44	40% HR Total (V)	None	None	WCSAB	Friable	G	G	None		Clear Smooth
5	120	C	2 5YR44/ 2 5Y73	<1/4 HR Total (Vis)	None	None	MMAB	Firm	M	P	None		

Profile Gleyed From N/A
Depth to Slowly Permeable Horizon N/A
Wetness Class I
Wetness Grade 1

Available Water Wheat 130 mm
Potatoes 102 mm
Moisture Deficit Wheat 93 mm
Potatoes 82 mm
Moisture Balance Wheat +37 mm
Potatoes +20 mm
Droughtiness Grade 1 (Calculated to 120 cm)

Final ALC Grade 1

Main Limiting Factor(s)

Remarks

Colour variation within H5 but not caused by wetness

SITE NAME		PROFILE NO	SLOPE AND ASPECT	LAND USE	Av Rainfall	970 mm	PARENT MATERIAL	
Hill Head		Pit 5	4° W	Maize	ATO	1484 day °C	Pebble beds	
JOB NO		DATE	GRID REFERENCE	DESCRIBED BY	FC Days	196	SOIL SAMPLE REFERENCES	
124 94		10 1 95	ST068144	P Barnett/H Lloyd Jones	Climatic Grade	1	PB 219	
					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	28	MSL	5YR43	6 / > cm (S) 22% < 2cm (S+D) 78% HR	0	0	WCSAB	Friable	G	G	CF		Gradual Smooth
2	50	MSL	75YR54	10% > 2cm (S) 15% < 2cm (S+D) 5% HR	0	0	WCSAB	Friable	G	G	CF VF		Gradual Wavy
3	80	SCL	5YR54	2 / > cm (S) 32% < 2cm (S+D) 54% HR	0	0	Too stony	Fm	(M)	G	FF VF		Gradual Wavy
4	120 (pit)	LMS	5YR46	25 / > cm (S) 40% < 2cm (S+D) 65% HR	0	0	Too stony	Friable	(M)	G	FVF		

Profile Gleyed From Not gleyed

Depth to Slowly Permeable Horizon No SPL

Wetness Class I

Wetness Grade 1

Available Water Wheat 86 mm

Potatoes 79 mm

Moisture Deficit Wheat 93 mm

Potatoes 82 mm

Moisture Balance Wheat 7 mm

Potatoes 3 mm

Droughtiness Grade 3a (Calculated to 120 cm)

Final ALC Grade 3a

Main Limiting Factor(s) Drought

Remarks

SITE NAME	PROFILE NO	SLOPE AND ASPECT	LAND USE	Av Rainfall	970 mm	PARENT MATERIAL
Hill Head	Pit 4	2° S	PGR	ATO	1484 day °C	
JOB NO	DATE	GRID REFERENCE	DESCRIBED BY	FC Days	196	SOIL SAMPLE REFERENCES
124/94	7 1 95	ST071136	P Barnett/H Lloyd Jones	Climatic Grade	1	
				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	MSL	5YR42	2 / >2cm (S) 14 / <2cm (S+D) 16 / HR	0	0	WMSAB	Friable	G	G	MF VF		Gradual Smooth
2	50	MSL	5YR32	3 / >2cm (S) 18 / <2cm (S+D) 21 / HR	0	0	WC+MSAB	V friable	G	G	CVF		Abrupt Wavy
3	75	LMS	25YR46	1 / >2cm (S) 25 / <2cm (S+D) 26 / HR	0	0	WMSAB	Friable	G	G	FVF		Gradual Smooth
4	110	MS	25YR46	15 / >2 m (S) 27 / <2cm (S+D) 4 / HR	0	0			G	G	FVF		

Profile Gleyed From	Not gleyed	Available Water	Wheat	95 mm	Final ALC Grade	3a
Depth to Slowly Permeable Horizon	No SPL		Potatoes	85 mm	Main Limiting Factor(s)	Drought
Wetness Class	1	Moisture Deficit	Wheat	93 mm		
Wetness Grade	1		Potatoes	82 mm		
		Moisture Balance	Wheat	+2 mm	Remarks	
			Potatoes	+3 mm		
		Droughtiness Grade		3a (Calculated to 120 cm)	Horizon 2 shows topsoil mixing with subsoil and concentrations of organic matter	

SITE NAME		PROFILE NO	SLOPE AND ASPECT		LAND USE		Av Rainfall 970 mm		PARENT MATERIAL			
Hill Head		Pit 3	4° S		HRT		ATO 1484 day °C		Pebble beds			
JOB NO		DATE	GRID REFERENCE		DESCRIBED BY		FC Days 196		SOIL SAMPLE REFERENCES			
124/94		7 1 95	ST074137 (ASP 152)		P Barnett/H Lloyd Jones		Climatic Grade 1		PB 217			
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	34	MSL	5YR43	2% > 2cm (S) 11/6 < 2cm (S+D) 13/ HR	0	0	WCSAB	Friable	G	G	CF		Gradual Smooth
2	75	MSL	5YR44	3/ > 2cm (S) 23 < 2cm (S+D) 26/ HR	0	0	MCSAB	Friable	M	G	FF		Gradual Smooth
3	100 (pit)	SCL	5YR44	6% > 2cm (S) 6/ < 2cm (S+D) 26/ HR	0	0	WCSAB	Friable	G	G			

Profile Gleyed From Not gleyed

Depth to Slowly Permeable Horizon No SPL

Wetness Class 1

Wetness Grade 1

Available Water Wheat 133 mm

Potatoes 92 mm

Moisture Deficit Wheat 93 mm

Potatoes 82 mm

Moisture Balance Wheat +40 mm

Potatoes +10 mm

Droughtiness Grade 2 (Calculated to 120 cm)

Final ALC Grade 2

Main Limiting Factor(s) Drought

Remarks

SITE NAME		PROFILE NO	SLOPE AND ASPECT		LAND USE		Av Rainfall 970 mm		PARENT MATERIAL			
Hill Head		Pit 2	0°		PGR		ATO 1484 day °C		Pebble beds			
JOB NO		DATE	GRID REFERENCE		DESCRIBED BY		FC Days 196		SOIL SAMPLE REFERENCES			
124/94		5/1/95	ST078139 (ASP 136)		P Barnett/H Lloyd Jones		Climatic Grade 1		PB 215 216			
							Exposure Grade					

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	32	MSL	7 5YR34	5 / HR > cm (S) 30% HR > 2mm (S+D) 35 HR Tot l	None	None	WM+FSAB	Friable	G	Good	MF+VF		Smooth Abrupt
2	90+	MLS	2 5YR46	0% HR > 2cm (S) 43% HR > 2mm (S+D) 63 4 HR Total	None	None	Too stony	V friable	M (assumed)	Good	FF+VF		

Profile Gleyed From N/A

Depth to Slowly Permeable Horizon N/A

Wetness Class I

Wetness Grade 1

Available Water Wheat 59 mm

Potatoes 51 mm

Moisture Deficit Wheat 93 mm

Potatoes 82 mm

Moisture Balance Wheat 34 mm

Potatoes 31 mm

Droughtiness Grade 3b (Calculated to 120 cm)

Final ALC Grade 3b

Main Limiting Factor(s) Drought

Remarks

SITE NAME		PROFILE NO	SLOPE AND ASPECT		LAND USE		Av Rainfall		970 mm		PARENT MATERIAL	
Hill Head		Pit 1	2° S		PGR		ATO		1484 day °C		Pebble beds	
JOB NO		DATE	GRID REFERENCE		DESCRIBED BY		FC Days		196		SOIL SAMPLE REFERENCES	
124/94		5/1/95	ST077138 (ASP 145)		P Barnett/H Lloyd Jones		Climatic Grade		1		PB 213 214	
							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	26	MSL	7 5YR43	2/ HR >2cm (S) 3/ HR >2mm (S+D) 25 HR Total	None	None	MC+MSAB	Friable	M	G	MF + VF		Smooth Gradual
2	50	MSL	7 5YR44	2/ HR >2cm (S) 27% HR >2mm (S+D) 29% HR Total	None	None	WCSAB	Friable	G	G	CF + VF		Smooth Gradual
3	100	MSL	2 5YR46	2/ HR >2cm (S) 18/ HR >2mm (S+D) 0% HR T tal	None	None	MCSAB	Friable	M	G	CVF		Smooth Gradual
4	110+	MSL	2 5YR44	20/ HR T tal (Vis)	None	None		V friable	M (assumed)	G	FVF		

Profile Gleyed From N/A

Depth to Slowly Permeable Horizon N/A

Wetness Class I

Wetness Grade 1

Available Water Wheat 122 mm

Potatoes 88 mm

Moisture Deficit Wheat 93 mm

Potatoes 82 mm

Moisture Balance Wheat +29 mm

Potatoes +6 mm

Droughtiness Grade 2 (Calculated to 120 cm)

Final ALC Grade 2

Main Limiting Factor(s) Drought

Remarks

NB Close to Grade 1

SITE NAME		PROFILE NO	SLOPE AND ASPECT		LAND USE		Av Rainfall 970 mm		PARENT MATERIAL			
Hillhead		Pit 6	0°		Ley		ATO 1484 day °C		Pebble beds			
JOB NO		DATE	GRID REFERENCE		DESCRIBED BY		FC Days 196		SOIL SAMPLE REFERENCES			
124/94		10/1/95	ST077142 (ASP 97)		P Barnett/H Lloyd Jones		Climatic Grade 1		PB 220			
							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	40	MSL	05YR43	1 / HR >2cm (S) 2% HR <2 m (S D) 10% HR Total	None	None	WCSAB	Friable	G	G	CF VF		Gradual Smooth
2	65	SC	2 5YR46	2 / HR Total (Vis)	None	None	MCSAB (few prismatic)	Firm	M	G	FF VF		Abrupt Smooth
3	80	LMS	2 5YR46	<1 / HR Total (V)	None	None	WCSAB	V friable	M	G	None		Clear Smooth
4	100	MSL	2 5YR44	40% HR Total (Vis)	None	None	WCSAB	Friable	G	G	None		Clear Smooth
5	120	C	2 5YR44/ 2 5Y73	<1 / HR Total (Vis)	None	None	MMAB	Firm	M	P	None		

Profile Gleyed From N/A
Depth to Slowly Permeable Horizon N/A
Wetness Class I
Wetness Grade 1

Available Water Wheat 130 mm
Potatoes 102 mm
Moisture Deficit Wheat 93 mm
Potatoes 82 mm
Moisture Balance Wheat +37 mm
Potatoes +20 mm
Droughtiness Grade 1 (Calculated to 120 cm)

Final ALC Grade 1

Main Limiting Factor(s)

Remarks

Colour variation within H5 but not caused by wetness

SITE NAME		PROFILE NO	SLOPE AND ASPECT	LAND USE	Av Rainfall	970 mm	PARENT MATERIAL	
Hillhead		Pit 6	0°	Ley	ATO	1484 day °C	Pebble beds	
JOB NO		DATE	GRID REFERENCE	DESCRIBED BY	FC Days	196	SOIL SAMPLE REFERENCES	
124/94		10/1/95	ST077142 (ASP 97)	P Barnett/H Lloyd Jones	Climatic Grade	1	PB 220	
					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	40	MSL	05YR43	1 / HR > 7cm (S) 20% HR < 7cm (S D) 10% HR Tot l	None	None	WCSAB	Friable	G	G	CF VF		Gradual Smooth
2	60	SC	2 5YR46	HR Total (Vis)	None	None	MCSAB (few prismatic)	Firm	M	G	FF VF		Abrupt Smooth
3	80	LMS	2 5YR46	< 1 HR Tot l (V)	None	None	WCSAB	V friable	M	G	None		Clear Smooth
4	100	MSL	2 5YR44	40% HR Total (V s)	None	None	WCSAB	Friable	G	G	None		Clear Smooth
5	120	C	2 5YR44/ 2 5Y73	< 1 / HR T l l (V)	None	None	MMAB	Firm	M	P	None		

Profile Gleyed From N/A

Depth to Slowly Permeable Horizon N/A

Wetness Class I

Wetness Grade 1

Available Water Wheat 130 mm

Potatoes 102 mm

Moisture Deficit Wheat 93 mm

Potatoes 82 mm

Moisture Balance Wheat +37 mm

Potatoes +20 mm

Droughtiness Grade 1 (Calculated to 120 cm)

Final ALC Grade 1

Main Limiting Factor(s)

Remarks

Colour variation within H5 but not caused by wetness

SOIL PLASTICITY RECORDING SHEET

ANNEX 2

SITE DATA

<u>Grid Ref</u> ST 01 SE	<u>Site Name</u> Hill Head 124 94	<u>LPA</u> Devon CC
<u>AAR</u> 970	<u>ATO</u> 1484	<u>FCD</u> 196
	<u>MD (wheat)</u> 93	<u>MD (potatoes)</u> 82

SOIL PIT DATA

<u>PIT ONE</u> ST077138				<u>PIT TWO</u> ST078139			<u>PIT THREE</u> ST074137		
SOIL SERIES Crediton				SOIL SERIES Crediton			SOIL SERIES Crediton		
DEPTH	TEXTURE	PLASTIC Y/N	COMMENTS	TEXTURE	PLASTIC Y/N	COMMENTS	TEXTURE	PLASTIC Y/N	COMMENTS
10 cm	MSL	N		MSL	N	, No ball	MSL	N	Ball no worm
20 cm	"	Y	After rain	"	N	Ball no worm	'	N	"
30 cm		Y			N	No ball		N	
40 cm		Y	"	"	N		"	N	"
50 cm		Y	"	"	N		"	N	"
60 cm	"	Y	"	"	N	"	"	N	"

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