

SITE NAME Penhill, Barnstaple		PROFILE NO. Pit 1	SLOPE AND ASPECT 1° South West	LAND USE PGR	Av Rainfall: 925 mm ATO: 1568 day °C FC Days: 195 Climatic Grade: 1 Exposure Grade: -	PARENT MATERIAL Boulder Clay
JOB NO. 96/94		DATE 2/2/95	GRID REFERENCE SS 518 331	DESCRIBED BY HLJ/PRW		SOIL SAMPLE REFERENCES PB 240

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	MCL	10YR43	<1% HR Total (Vis)	None	None	-	-	-	Good	MF, VF	None	Abrupt smooth
2	48	HCL	10YR54	3% HR Total (Vis)	None	None	MCSAB	Friable	M	Good	CF, VF	None	Clear smooth
3	100+	C	10YR66	5% HR Total (Vis)	None	None	MMSAB	Friable	G	Good	FVF	None	-

Profile Gleyed From: Not gleyed

Depth to Slowly Permeable Horizon: No SPL

Wetness Class: 1

Wetness Grade: 2

NL3361

Available Water Wheat: 185 mm

Potatoes: 125 mm

Moisture Deficit Wheat: 98 mm

Potatoes: 90 mm

Moisture Balance Wheat: 87 mm

Potatoes: 35 mm

Droughtiness Grade: 1 (Calculated to 120 cm)

Final ALC Grade: 2

Main Limiting Factor(s): Workability

Remarks:

Augered to 120 cm.

SITE NAME Penhill, Barnstaple		PROFILE NO. Pit 2 (ASP 13)	SLOPE AND ASPECT 2° North East	LAND USE PGR	Av Rainfall: 903 mm ATO: 1585 day °C FC Days: 192 Climatic Grade: 1 Exposure Grade: -	PARENT MATERIAL Pilton Shales
JOB NO. 96/94		DATE 2/2/95	GRID REFERENCE SS 523 333	DESCRIBED BY PRW/HLJ		SOIL SAMPLE REFERENCES PB 241

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	33	MCL	10YR43	<1% ZR Total (Vis)	None	None	-	-	-	Good	MF, VF	-	Abrupt smooth
2	60+	C	2.5Y53	60% HR Total (Vis)	CDFO (2.5YR58)	None	Too stony	-	M (assumed)	Good	FVF	-	-

Profile Gleyed From: 33cm Depth to Slowly Permeable Horizon: No SPL Wetness Class: II Wetness Grade: 3a NL3361	Available Water Wheat: 84 mm Potatoes: 89 mm Moisture Deficit Wheat: 98 mm Potatoes: 90 mm Moisture Balance Wheat: -14 mm Potatoes: -1 mm Droughtiness Grade: 3a (Calculated to 60 cm)	Final ALC Grade: 3a Main Limiting Factor(s): Wetness Remarks: Shale has weathered to clay which is causing some drainage problems. Mottles not just colour variation.
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SITE NAME Penhill, Barnstaple		PROFILE NO. Pit 3	SLOPE AND ASPECT 4° South	LAND USE PGR	Av Rainfall: 925 mm ATO: 1568 day °C	PARENT MATERIAL Boulder Clay
JOB NO. 96/97		DATE 2/2/95	GRID REFERENCE SS 524 326	DESCRIBED BY PRW/HLJ	FC Days: 195 Climatic Grade: 1 Exposure Grade: -	SOIL SAMPLE REFERENCES PB 242

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	41	SCL	10YR44	<1% HR Total (Vis)	None	None	-	-	-	Good	MF, VF	-	Clear smooth
2	60	MCL	10YR36	10% HR Total (Vis)	None	None	WMSAB	Friable	Good	Good	FVF	-	Clear smooth
3	100+	HCL	10YR56	10% HR Total (Vis)	None	None	WMSAB	Friable	Good	Good	FVF	-	-

Profile Gleyed From: Not gleyed

Depth to Slowly Permeable Horizon: No SPL

Wetness Class: I

Wetness Grade: 2

NL3361

Available Water Wheat: 179 mm

Potatoes: 128 mm

Moisture Deficit Wheat: 98 mm

Potatoes: 90 mm

Moisture Balance Wheat: 81 mm

Potatoes: 38 mm

Droughtiness Grade: I (Calculated to 120 cm)

Final ALC Grade: 2

Main Limiting Factor(s): Workability

Remarks:

TS PSD borderline MSL/SCL

SITE NAME		PROFILE NO.	SLOPE AND ASPECT	LAND USE	Av Rainfall: 903 mm	PARENT MATERIAL	
Penhill, Barnstaple		Pit 4 (ASP 29)	1° North	Ploughed	ATO: 1585 day °C	Pilton Shales	
JOB NO.		DATE	GRID REFERENCE	DESCRIBED BY	FC Days: 192	SOIL SAMPLE REFERENCES	
96/94		2/2/94	SS 528 331	HLJ/PRW	Climatic Grade: 1	PB 243	
					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	30	MCL	10YR42	2% HR Total (Vis)	None	None	-	-	-	Good	MF, CM +C	-	Abrupt smooth
2	45	C	2.5Y53	2% HR Total (Vis)	CDMO (10YR56)	Many (coarse modules)	WCSAB	Firm	P	Poor	FF	-	Clear smooth
3	70+	C	10YR61	2% HR Total (Vis)	MDCO (10YR66)	Few	WVCSAB	Firm	P	Poor	FF (ex-ped)	-	-

Profile Gleyed From: 30cm

Depth to Slowly Permeable Horizon: 30cm

Wetness Class: IV

Wetness Grade: 3b

NL3361

Available Water Wheat: 92 mm

Potatoes: 104 mm

Moisture Deficit Wheat: 98 mm

Potatoes: 90 mm

Moisture Balance Wheat: -6 mm

Potatoes: 14 mm

Droughtiness Grade: 3a (Calculated to 70 cm)

Final ALC Grade: 3b

Main Limiting Factor(s): Wetness

Remarks:

TS PSD borderline MCL/HCL.

SITE NAME Penhill, Barnstaple		PROFILE NO. Pit 5	SLOPE AND ASPECT 2° North	LAND USE Cereal	Av Rainfall: 974 mm ATO: 1528 day °C FC Days: 202 Climatic Grade: 1 Exposure Grade: -	PARENT MATERIAL Pilton Shales
JOB NO. 96/97		DATE 2/2/95	GRID REFERENCE SS 538 328	DESCRIBED BY HLJ		SOIL SAMPLE REFERENCES PB 244

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	HCL	10YR42	1% HR Total (vis)	None	None	-	-	-	Good	CF, VF	-	Abrupt smooth
2	42	C	10YR46	10% ZR Total (Vis)	None	Few	WCSAB (some WMSAB)	Friable	M	Good	FVF	-	Abrupt smooth
3	60+	C	10YR46	60% ZR Total (Vis)	None	None	Too stony	-	M (assumed)	Good	FVF	-	-

Profile Gleyed From: Not gleyed

Depth to Slowly Permeable Horizon: No SPL

Wetness Class: I

Wetness Grade: 3a

NL3361

Available Water Wheat: 98 mm
Potatoes: 102 mm

Moisture Deficit Wheat: 98 mm
Potatoes: 90 mm

Moisture Balance Wheat: 0 mm
Potatoes: 12 mm

Droughtiness Grade: 3a (Calculated to 80 cm)

Final ALC Grade: 3a

Main Limiting Factor(s): Workability

Remarks:
TS PSD borderline MCL/HCL

SITE NAME		PROFILE NO.	SLOPE AND ASPECT		LAND USE		Av Rainfall: 934 mm		PARENT MATERIAL			
Upcott, Barnstaple		Pit 6 (ASP 86)	2° N		PGR		ATO: 1546 day °C		Boulder Clay			
JOB NO.		DATE	GRID REFERENCE		DESCRIBED BY		FC Days: 195		SOIL SAMPLE REFERENCES			
96/94		2/2/95	SS 541 312		PB/NAD		Climatic Grade: 1		PB 245			
							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	MCL	25Y52	2% HR (Vis)	CDFOM 5YR58	0	-	-	-	G	MF, VF	-	Clear smooth
2	38	C	25Y53	2% HR (Vis)	CFFOM 10YR58	0	WCPr breaking to WMSAB	Fr	M	G	MF, VF	-	Clear smooth
3	62	C	25Y64	5% HR (Vis)	MDMOM	C at 60 cm	WAdh (CSAB)	Fm	P	P	FF	-	Gradual wavy
4	120 (pit 90 cm)	C	25Y62	5% HR (Vis) 5% ZR (Vis)	MDCOM	M	WAdh (CSAB)	Fm	P	P	0	-	

Profile Gleyed From: 0cm

Depth to Slowly Permeable Horizon: 38cm

Wetness Class: IV

Wetness Grade: 3b

NL3361

Available Water Wheat: 123 mm

Potatoes: 103 mm

Moisture Deficit Wheat: 98 mm

Potatoes: 90 mm

Moisture Balance Wheat: +25 mm

Potatoes: +13 mm

Droughtiness Grade: 2 (Calculated to 120 cm)

Final ALC Grade: 3b

Main Limiting Factor(s): We

Remarks: