

SITE NAME		PROFILE NO	SLOPE AND ASPECT	LAND USE	Av Rainfall	803 mm	PARENT MATERIAL					
Huntsman s Quarry 97		Pit 1 (ASP 44)	1 E	Peas harvested	ATO	1258 day °C	Greater Oolitic Limestone					
JOB NO		DATE	GRID REFERENCE	DESCRIBED BY	FC Days	180	PSD SAMPLES TAKEN					
53/97		12/8/97	SP 1190 2590	SH/PB	Climatic Grade	2	TS 0 20cm HZCL (S 17 Z 50 C 33)					
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	HZCL	7 5YR43	18% > 2cm (S) 16% < 2cm (S+D) 34% HR	0	0	MFSAB	Fr	G	G	MF VF	Y	Clear smooth
2	50	C	7 5YR44	70% > 2cm (S) 3% < 2cm (S+D) 73% HR	0	0	Too stony	(Fm)	(M)	G	CF	Y	Clear wavy
3	90+	C	2 5Y64	60% > 2cm (S) 7% < 2cm (S+D) 67% HR	CDFO 10YR66	0	Too stony	(Fm)	(P)	(P)	FVF	Y	

Profile Gleyed From	50 cm	Available Water	Wheat	53 mm	Final ALC Grade	3b
Depth to Slowly Permeable Horizon			Potatoes	50 mm	Main Limiting Factor(s)	St Dr
Wetness Class	I	Moisture Deficit	Wheat	78 mm		
Wetness Grade	3a		Potatoes	61 mm		
		Moisture Balance	Wheat	25 mm	Remarks	H3 too stony to be SPL
			Potatoes	11 mm		
		Droughtiness Grade	3b	(Calculated to 100 cm)		

SITE NAME		PROFILE NO		SLOPE AND ASPECT		LAND USE		Av Rainfall 803 mm		PARENT MATERIAL			
Huntsman s Quarry 97		Pit 2 (ASP 29)		1 South		Cereal Stubble		ATO 1258 day C		Oolitic Limestone			
JOB NO		DATE		GRID REFERENCE		DESCRIBED BY		FC Days 180		PSD SAMPLES TAKEN			
53/97		12/8/97		SP 1160 2603		PB/SH		Climatic Grade 2		TS 0 20 cm MSZL (S 27 Z 57 C 16)			
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	19	MSZL	75YR33	18% > 2cm (S) 11% < 2cm (S+D) 29% Total (S)	0	0	MDMGR	FR	G	G	M Med CF + VF	Y	Abrupt smooth
2	40	MCL	10YR54	80% > 2cm (S) 7% < 2cm (S+D) 87% HR	0	0	Too stony to assess		M	G	C Med CF + VF	Y	Gradual smooth
3	80	CSL	25Y74	87% HR (VIS)	0	0	Too stony to assess		M	G	CF Med Fine + V Fine	Y	Gradual smooth
4	120+	Fissured rock horizontally bedded											

Profile Gleyed From	Available Water	Wheat	43 mm	Final ALC Grade	3b	
Depth to Slowly Permeable Horizon		Potatoes	40 mm			
Wetness Class	I	Moisture Deficit	Wheat	Main Limiting Factor(s)	Dr St	
Wetness Grade	2		Potatoes			61 mm
		Moisture Balance	Wheat	Remarks		
			Potatoes			21 mm
		Droughtiness Grade	3b			(Calculated to 100 cm)

SITE NAME		PROFILE NO	SLOPE AND ASPECT	LAND USE	Av Rainfall	803 mm	PARENT MATERIAL	
Huntsman s Quarry 97		Pit 3 ASP 16 26	1° South	OSR	ATO	1258 day C	Oolitic Limestone	
JOB NO		DATE	GRID REFERENCE	DESCRIBED BY	FC Days	180	PSD SAMPLES TAKEN	
53/97		14/8/97	SP 1129 2606	PB/SH	Climatic Grade	1	TS 0 20 cm HCL (S 25 Z 45 C 30)	
Exposure Grade				2				

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	HCL	75YR33	16% > 2cm (S) 21% < 2cm (S+D) 37% HR	0	0	MDCGR	Fr	G	G	MF + VF	Y	Clear smooth
2	40	HCL	75YR43	50% > 2 cm (S) 18% < 2cm (S+D) 68% HR	0	0	MD MGR FSAB	Fr	G	G	MVF	Y	Clear smooth
3	105	SCL	10YR64	70% > 2cm (S) 6% < 2cm (S+D) 76% HR	0	0	Too stony to determine	Fr	(M)	G	CVF	Y	Gradual smooth
4	Shattered Rock		25Y74								None seen		

Profile Gleyed From	Available Water	Wheat	58 mm	Final ALC Grade	3b
Depth to Slowly Permeable Horizon	Potatoes	51 mm			
Wetness Class	I	Moisture Deficit	Wheat	Main Limiting Factor(s)	Dr St
		Potatoes	61 mm		
Wetness Grade	3a	Moisture Balance	Wheat	Remarks	
		Potatoes	10 mm		
		Droughtiness Grade	3b	(Calculated to 105 cm)	

SITE NAME		PROFILE NO	SLOPE AND ASPECT		LAND USE		Av Rainfall 803		PARENT MATERIAL			
Huntsman s Quarry 97		Pit 4 (ASP 58)	1 South		OSR		ATO 1258 C		Oolitic Limestone			
JOB NO		DATE	GRID REFERENCE		DESCRIBED BY		FC Days 180		PSD SAMPLES TAKEN			
53/97		14/8/97	SP 1135 2570		SH/PB		Climatic Grade 2		TS 0 25 cm MZCL (S 16 Z 62 C 22)			
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	MZCL	7 5YR33	20% HR (VIS)	0	0	MMSAB	Fr*			CF MVF	Y	Clear smooth
2	50	HCL	7 5YR43	5% HR (VIS)	0	0	MCSAB	Fr*	M	G	CVF FF	Y	Clear smooth
3	80	HCL	7 5YR43	75% HR (VIS)	0	0	Too stony	Fm	(M)	G	CF VF	Y	Grad smooth
4	120	C	10YR54	70% HR (VIS)	0	0	Too stony	Fm	(M)	G	FF	Y	

Profile Gleyed From

Depth to Slowly Permeable Horizon

Wetness Class I

Wetness Grade 2

Available Water Wheat 94 mm

Potatoes 84 mm

Moisture Deficit Wheat 78 mm

Potatoes 61 mm

Moisture Balance Wheat +16 mm

Potatoes +23 mm

Droughtiness Grade 2 (Calculated to 120 cm)

Final ALC Grade 2

Main Limiting Factor(s) Wk Dr

Remarks Cleaned up pit
*H1 H2 Consistence friable when moist

SITE NAME Huntsman s Quarry 97		PROFILE NO Pit 5 (ASP 71)	SLOPE AND ASPECT 1 South		LAND USE Cereal		Av Rainfall 803 mm ATO 1258 day C		PARENT MATERIAL Oolitic limestone			
JOB NO 53/97		DATE 14/8/97	GRID REFERENCE SP 1155 2565		DESCRIBED BY SH/PB		FC Days 180 Climatic Grade 2 Exposure Grade 1		PSD SAMPLES TAKEN TS 0 25 cm HZCL (S 16 Z 52 C 32)			

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	HZCL	10YR33	3% >2cm (S) 9% < 2cm (S+D) 12% HR	0	0	MMSAB	Fr*			CF MVF	Y	Clear smooth
2	47	HZCL	7 5YR43	12% HR (VIS)	0	0	MCSAB	Fr*	M	G	CVF FF	Y	Clear smooth
3	100	HCL	10YR54	65% > 2cm (S) 11% < 2cm (S+D) 76% HR	0	0	Too stony	Fm	(M)	G	CF VF	Y	Grad smooth
4	120	CSL	2 5Y73	80% HR (VIS)	FFFO 7 5YR56	0	Too stony	Fr	(M)	G	None sen	Y	

Profile Gleyed From

Depth to Slowly Permeable Horizon

Wetness Class I

Wetness Grade 3a

Available Water Wheat 97 mm

Potatoes 87 mm

Moisture Deficit Wheat 78 mm

Potatoes 61 mm

Moisture Balance Wheat +19 mm

Potatoes +26 mm

Droughtiness Grade 2 (Calculated to 120 cm)

Final ALC Grade 3a

Main Limiting Factor(s) Wk

Remarks

SITE NAME Huntsman s Quarry 97		PROFILE NO Pit 6 (ASP 34)	SLOPE AND ASPECT Level	LAND USE CER	Av Rainfall 803 mm ATO 1258 day C	PARENT MATERIAL Oolitic Limestone
JOB NO 53/97		DATE 18/8/97	GRID REFERENCE SP 1248 2600	DESCRIBED BY SH/PB	FC Days 180 Climatic Grade 2 Exposure Grade 1	PSD SAMPLES TAKEN TS 0 20 cm C (S 23 Z 40 C 37)

Horizon No	Lowest Av Depth (cm)	Texture	Matrix (Ped Face) Colours	Stoniness Size Type and Field Method	Motting 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	HCL/C	75YR33	20% > 2cm (S) 10% < 2cm (S+D) 30% HR			MMGr	Fr		G	CF VF	Y	Ab smooth
2	46	HCL	10YR43	75% > 2cm (S) 13% < 2cm (S+D) Total 88% HR	0	0	Too stony	Fr	(M)	G	CF VF	Y	Clear smooth
3	80+	LCS	2 5Y64	88% HR As H2	FFFO* 10YR56	0	Too stony	Fr	(M)	G	FVF	Y	
Pit to 80cm													

Profile Gleyed From	Available Water	Wheat	45 mm	Final ALC Grade 3b Main Limiting Factor(s) Dr St
Depth to Slowly Permeable Horizon		Potatoes	43 mm	
Wetness Class I	Moisture Deficit	Wheat	78 mm	
Wetness Grade 3a/3b		Potatoes	61 mm	
	Moisture Balance	Wheat	33 mm	
		Potatoes	18 mm	
	Droughtiness Grade 3b		(Calculated to 100 cm)	Remarks * Mottles in H3 mainly at surface of stones with weathering clay film

SITE NAME		PROFILE NO	SLOPE AND ASPECT	LAND USE	Av Rainfall	803 mm	PARENT MATERIAL	
Huntsman s Quarry 97		Pit 7 ASP 53	4 N	Cer	ATO	1258 day C	Oolitic Limestone	
JOB NO		DATE	GRID REFERENCE	DESCRIBED BY	FC Days	180	PSD SAMPLES TAKEN	
53/97		18/8/97	SP 1312 2583	SH / PB	Climatic Grade	2	Topsoil 0 25 cm C (S 17 Z 42 C 41%)	
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	HZCL/C	10YR33	2% HR			MD M CSAB	Fr	0	G	CF + VF		Smooth sharp
2	41	HCL/C	10YR43/44	0			MDCSAB	Fr	0	G	CVF		Clear smooth
3	58	C	10YR46/56 10YR53	0	CDO 10YR58 from 50 cm		ST CSAB	Fm	0	P (low)	CVF		Clear wavy
4	75	C	10YR54	0	CDO 75YR56		ST CPR	Fm	0	P	FVF largely around		Sharp wavy

Profile Gleyed From 50
Depth to Slowly Permeable Horizon 58
Wetness Class III
Wetness Grade 3b

Available Water Wheat 104 mm
Potatoes 114 mm
Moisture Deficit Wheat 78 mm
Potatoes 61 mm
Moisture Balance Wheat +26 mm
Potatoes +53 mm
Droughtiness Grade 2 (Calculated to 75 cm)

Final ALC Grade 3b
Main Limiting Factor(s) We

Remarks 75+ cm solid rock impenetrable with pick or spade

SITE NAME Huntsman s Quarry 97		PROFILE NO Pit 8 (ASP 104)	SLOPE AND ASPECT 2 SW	LAND USE CER	Av Rainfall 803 mm ATO 1258 day C FC Days 180 Climatic Grade 2 Exposure Grade 1	PARENT MATERIAL Oolitic Limestone
JOB NO 53/97		DATE 21/8/97	GRID REFERENCE SP 1319 2522	DESCRIBED BY PB/SH		PSD SAMPLES TAKEN Topsoil 0 25 cm SCL (S 60 Z 20 C 20)

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	29	SCL	10YR33	0	0	0	MD CSAB	VF		G	MF + VF		Gradual smooth
2	40 50	FSZL	75YR33	0	0	0	MD CSAB	VF	(M)	G	CVF		Abrupt irregular
3	55	MCL	10YR34	45% > 2cm 19% < 2cm 64% Total HR	FDFO at base of H3	0	Too stony	Fr	(M)	G	FVF		Clear smooth
4	70	MCL	25Y63	85% HR (VIS)	0	0	Too stony	Too stony	(M)	P	None seen		Clear smooth
5	80+	FSL	25Y54/64	65% HR (VIS)	0	0	Too stony	Fr	(M)	G	None seen		Gradual smooth

Profile Gleyed From

Depth to Slowly Permeable Horizon

Wetness Class I

Wetness Grade 2

Available Water Wheat 96 mm

Potatoes 97 mm

Moisture Deficit Wheat 78 mm

Potatoes 61 mm

Moisture Balance Wheat 18 mm

Potatoes 36 mm

Droughtiness Grade 2 (Calculated to 100 cm)

Final ALC Grade 2

Main Limiting Factor(s) Dr Wk

Remarks

SITE NAME		PROFILE NO		SLOPE AND ASPECT		LAND USE		Av Rainfall		PARENT MATERIAL	
Huntsman s Quarry 97		Pit 9 (Nr ASP 83)		1 N		PGR		803 mm		Quarry spoil	
JOB NO		DATE		GRID REFERENCE		DESCRIBED BY		ATO		PSD SAMPLES TAKEN	
53/97		21/8/97		SP 1330 2550		SH/PB		1258 day C			
								FC Days			
								180			
								Climatic Grade			
								2			
								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	5	MCL	10YR21	10% HR (VIS)	0	0		Fr		G	AVF	Y	Clear smooth
2	17	MCL	10YR21	75% > 2cm (S) 13% < 2cm (VIS) 88% HR	0	0	Too stony	Fr	(M)	G	MVF	Y	Grad smooth
3	34	MCL	10YR32	85% HR (VIS)	0	0	Too stony	Fr	(M)	G	FVF	Y	
4	55+	MCL	10YR33	65% HR (VIS)	0	0	Too stony	Fr	(M)	G	FVF	Y	

Profile Gleyed From	Available Water	Wheat	29 mm	Final ALC Grade	5
Depth to Slowly Permeable Horizon		Potatoes	30 mm	Main Limiting Factor(s)	Topsoil Stoniness
Wetness Class	Moisture Deficit	Wheat	78 mm		
Wetness Grade		Potatoes	61 mm		
	Moisture Balance	Wheat	49 mm	Remarks	Grade 5 due to microrelief and topsoil stones
		Potatoes	31 mm		
	Droughtiness Grade	3b	(Calculated to 55 cm)		

SITE NAME		PROFILE NO		SLOPE AND ASPECT		LAND USE		Av Rainfall 803 mm		PARENT MATERIAL		
Huntsman s Quarry 97		Pit 10 ASP 74		2 N		Rough Grazing		ATO 1258 day C		Oolitic Limestone		
JOB NO		DATE		GRID REFERENCE		DESCRIBED BY		FC Days 180		PSD SAMPLES TAKEN		
53/97		21/8/97		SP 130 2560		SH/PB		Climatic Grade 2		Topsoil (0 25 cm) C (S 32 Z 29 C 39)		
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	16	HCL	10YR32	0	0	0	MDMGR	Fr		G	MF VF		Abrupt smooth
2	37	C	10YR32	60% > 2 cm HR 11% < 2cm HR 71% Total HR	0	0	Too stony	Fr	(M)	G	CF VF		Gradual smooth
3	80+	SCL* ¹	25Y54/64	50% > 2cm (S)	FDO 10YR5/6	0	Too stony	Fr/Fm	(M)	G	FF VF		
4		C* ²	25Y54/64	18% < 2cm (S+D) 68% Total HR	CDO 10YR56* ³	0	Too stony	Fm	(M)				

Profile Gleyed From

Depth to Slowly Permeable Horizon

Wetness Class I

Wetness Grade 3a

Available Water Wheat 65 mm

Potatoes 58 mm

Moisture Deficit Wheat 78 mm

Potatoes +61 mm

Moisture Balance Wheat 13 mm

Potatoes 3 mm

Droughtiness Grade 3a (Calculated to 100 cm)

Final ALC Grade 4

Main Limiting Factor(s) Soil Depth

Remarks Soil depth is limiting to cultivation equipment rather than crop rooting
*¹ Fine material coating stones
*² With localised lenses of clay in parts
*³ Mottled in the lenses of clay v localised

SITE NAME		PROFILE NO	SLOPE AND ASPECT	LAND USE	Av Rainfall	803 mm	PARENT MATERIAL	
Huntsman s Quarry 97		Pit 11 (ASP 63)	2 N	PLO	ATO	1258 day C	Oolitic Limestone	
JOB NO		DATE	GRID REFERENCE	DESCRIBED BY	FC Days	180	PSD SAMPLES TAKEN	
53/97		21/8/97	SP 1312 2574	SH/PB	Climatic Grade	2	TS 0 25 cm SCL (S 52 Z 21 C 27)	
					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	29	SCL	10YR33	0	0	0	MDCSAB	Fr		G	MF VF		Smooth abrupt
2	53	MCL	10YR44	0	0	0	MDCSAB	Fr	(M)	G	CF VF		Abrupt wavy
3	80+	FSL around stones Matrix between stones HCL	10YR56 75YR34 /44	40% > 2cm (S) 13% < 2cm (S+D) 53% HR	0	0	Too stony to assess	Fr	(M)	G	FF VF		

Profile Gleyed From

Depth to Slowly Permeable Horizon

Wetness Class I

Wetness Grade 2

Available Water Wheat 109 mm

Potatoes 101 mm

Moisture Deficit Wheat 78 mm

Potatoes 61 mm

Moisture Balance Wheat +31 mm

Potatoes +40 mm

Droughtness Grade 1 (Calculated to 100 cm)

Final ALC Grade 2

Main Limiting Factor(s) Wk

Remarks

SITE NAME Huntsman s Quarry 97		PROFILE NO Pit 12 (ASP 66)		SLOPE AND ASPECT 1° N		LAND USE PGR		Av Rainfall 803 mm ATO 1258 day C		PARENT MATERIAL Oolitic Limestone			
JOB NO 53/97		DATE 22/8/97		GRID REFERENCE SP 1338 2570		DESCRIBED BY PB		FC Days 180 Climatic Grade 2 Exposure Grade 1		PSD SAMPLES TAKEN H1/H2 0 25 cm MCL (S 25 Z 56 C 19)			

Horizon No	Lowest Av Depth (cm)	Texture	Matrix (Ped Face) Colours	Stoniness Size Type and Field Method	Motting 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	14	MCL	10YR42	12% > 2cm (S) 16% < 2cm (S+D) 28% HR	0	0	MMGr	Fm		G	AVF	Y	Clear smooth
2	28	HCL	7 5YR43	20% > 2cm (S) 22% < 2cm (S+D) 42% HR	0	0	MFSAB	Fr	G	G	MVF	Y	Clear smooth
3	55	CSL	2 5Y64	45% > 2cm (S) 24% < 2cm (S+D) 69% HR	0	0	Too stony		(M)	G	CVF	Y	Grad smooth
4	80+	CSL	2 5Y74	65% > 2cm (S) 20% < 2cm (S+D) 85% HR	0	0	Too stony		(M)	G	None seen	Y	

Profile Gleyed From	Available Water	Wheat	56 mm	Final ALC Grade	3b
Depth to Slowly Permeable Horizon		Potatoes	56 mm		
Wetness Class	1	Moisture Deficit	Wheat	78 mm	Main Limiting Factor(s)
Wetness Grade	2		Potatoes	61 mm	
		Moisture Balance	Wheat	22 mm	Remarks
			Potatoes	5 mm	
		Droughtiness Grade	3b	(Calculated to 80 cm)	