Resource Laboratories

ABN: 25 131 532 020
Sydney: 12/1 Boden Road Seven Hills NSW 2147 | PO Box 45 Pendle Hill NSW 2145
Ph: (02) 9674 7711 | **Fax**: (02) 9674 7755 | **Email**: info@resourcelab.com.au

Mr Rick Jarrett
Baker's Landscape Supplies Pty Ltd
71-81 Cranebrook Road
Cranebrook NSW 2749

Dear Mr Jarrett,

Please find attached Material Quality Summary Report for Crushed Sandstone SP1 sampled 4th September 2014 in accordance with AS 1141.3.1 Clause 9.3.

The material was tested for the property requirements listed in Section 5.1.2 of Penrith City Council Engineering Construction Specification for Civil Works:

Sandstone used as sub-base material:

Property	**Requirement**	**Test Method**
Plasticity index	12% maximum	AS1289.3.3.1 (2009)
Linear shrinkage	5% maximum	AS1289.3.4.1 (2008)
CBR	30 minimum	AS1289.6.1.1 (1998)

At the time of sampling the material was observed to consist of Crushed Sandstone, free from clay lumps, shale and other deleterious material, excessively friable materials and flat or elongated pieces.

All test results comply with Penrith City Council requirements listed above.

Should you have any queries regarding results please do not hesitate to contact the undersigned.

Yours Sincerely,

Chris Greely B.Sc (Hons) GradCertLGM
Managing Director
Resource Laboratories

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Material Quality Summary Report

Customer: Bakers Landscape Supplies
Project: Material Testing
Location: 71-81 Cranebrook Road, Cranebrook NSW 2749

Job number: 13-0013
Report number: 6

Sampling method: AS 1141.3.1 clause 9.3

Laboratory sample number		4926	4927	4928	4929	4930	Nominated Particle Size Distribution	Penrith City Council ENGINEERING CONSTRUCTION SPECIFICATION FOR CIVIL WORKS November 2013 Sandstone Sub-Base Course
Customer sample number		SP1-1	SP1-2	SP1-3	SP1-4	SP1-5		
Date sampled		04/09/14	04/09/14	04/09/14	04/09/14	04/09/14		
Material description		Crushed Sandstone, pale brown	Crushed Sandstone, pale brown	Crushed Sandstone, pale brown	Crushed Sandstone, pale brown	Crushed Sandstone, pale brown		
Particle size distribution % Passing AS Sieve	**Test method** AS 1289.3.6.1							
100mm								
75mm			100	100	100	100	100	
53mm		100	94	95	95	94	95	
37.5mm		98	87	90	93	92	91	
26.5mm		92	84	86	88	85	86	
19.0mm		86	80	82	83	80	81	
9.5mm		77	69	73	73	72	72	
4.75mm		70	63	67	66	66	66	
2.36mm		65	59	63	63	62	62	
1.18mm		61	56	59	59	59	59	
425µm		45	42	45	43	42	43	
75µm		14	13	14	13	13	13	
Liquid limit (%)	AS 1289.3.1.1	20	21	21	21	20		
Plastic limit (%)	AS 1289.3.2.1	15	13	14	13	13		
Plasticity index (%)	AS 1289.3.3.1	5	8	7	8	7		Max. 12
Linear shrinkage (%)	AS 1289.3.4.1	1.5	3.5	2.0	1.5	2.0		Max. 5
CBR value (%)	AS 1289.6.1.1	40	60	40	45	35		Min. 30

Notes: CBR compactive effort: Standard, Period of soaking: 4 days, Mass of surcharge applied: 4.5kg Specified LDR & LMR 100%.
LDR: 100%, 100%, 100%, 100%, 100% respectively. LMR: 98%, 100%, 98%, 101%, 100% respectively.

Approved Signatory: C. Greely **Date:** 18/09/2014

NATA ACCREDITED FOR TECHNICAL COMPETENCE

Accredited for compliance with ISO/IEC 17025.

NATA Accredited Laboratory Number: **17062**

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Material Quality Summary Report

Customer: Bakers Landscape Supplies
Project: Material Testing
Location: 71-81 Cranebrook Road, Cranebrook NSW 2749

Job number: 13-0013
Report number: 6

Sampling method: AS 1141.3.1 clause 9.3

Laboratory sample number		4931	4932	4933	4934	4935	Nominated Particle Size Distribution	Penrith City Council ENGINEERING CONSTRUCTION SPECIFICATION FOR CIVIL WORKS November 2013 Sandstone Sub-Base Course
Customer sample number		SP1-6	SP1-7	SP1-8	SP1-9	SP1-10		
Date sampled		04/09/14	04/09/14	04/09/14	04/09/14	04/09/14		
Material description		Crushed Sandstone, pale brown	Crushed Sandstone, pale brown	Crushed Sandstone, pale brown	Crushed Sandstone, pale brown	Crushed Sandstone, pale brown		
Particle size distribution % Passing AS Sieve	**Test method** AS 1289.3.6.1							
100mm				100				
75mm		100	100	94	100	100	100	
53mm		97	96	92	93	95	95	
37.5mm		94	91	89	84	91	91	
26.5mm		89	85	85	81	88	86	
19.0mm		85	77	80	77	84	81	
9.5mm		76	67	72	70	75	72	
4.75mm		70	61	66	64	69	66	
2.36mm		66	58	62	60	64	62	
1.18mm		62	55	58	56	60	59	
425µm		46	41	43	42	45	43	
75µm		14	12	13	13	14	13	
Liquid limit (%)	AS 1289.3.1.1	20	21	21	21	20		
Plastic limit (%)	AS 1289.3.2.1	14	13	13	13	13		
Plasticity index (%)	AS 1289.3.3.1	6	8	8	8	7		Max. 12
Linear shrinkage (%)	AS 1289.3.4.1	1.5	2.0	3.0	0.5	2.0		Max. 5
CBR value (%)	AS 1289.6.1.1	45	45	35	50	60		Min. 30

Notes: CBR compactive effort: Standard, Period of soaking: 4 days, Mass of surcharge applied: 4.5kg Specified LDR & LMR 100%.
LDR: 100%, 100%, 100%, 100%, 100% respectively. LMR: 98%, 100%, 101%, 100%, 98% respectively.

Approved Signatory: C. Greely **Date:** 18/09/2014

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Location: 71-81 Cranebrook Road, Cranebrook NSW 2749

Job number: 13-0013
Report number: 6

Sampling method: AS 1141.3.1 clause 9.3

Laboratory sample number		4936	4937				Nominated Particle Size Distribution	Penrith City Council ENGINEERING CONSTRUCTION SPECIFICATION FOR CIVIL WORKS November 2013 Sandstone Sub-Base Course
Customer sample number		SP1-11	SP1-12					
Date sampled		04/09/14	04/09/14					
Material description		Crushed Sandstone, pale brown	Crushed Sandstone, pale brown					
Particle size distribution	**Test method**							
% Passing AS Sieve	AS 1289.3.6.1							
100mm								
75mm		100	100				100	
53mm		91	98				95	
37.5mm		87	96				91	
26.5mm		80	90				86	
19.0mm		74	86				81	
9.5mm		66	77				72	
4.75mm		61	71				66	
2.36mm		57	67				62	
1.18mm		54	63				59	
425µm		40	45				43	
75µm		12	14				13	
Liquid limit (%)	AS 1289.3.1.1	20	21					
Plastic limit (%)	AS 1289.3.2.1	14	13					
Plasticity index (%)	AS 1289.3.3.1	6	8					Max. 12
Linear shrinkage (%)	AS 1289.3.4.1	2.0	2.0					Max. 5
CBR value (%)	AS 1289.6.1.1	60	60					Min. 30

Notes: CBR compactive effort: Standard, Period of soaking: 4 days, Mass of surcharge applied: 4.5kg Specified LDR & LMR 100%.
LDR: 100%, 100% respectively. LMR:100%, 100%, respectively.

Approved Signatory: C. Greely **Date:** 18/09/2014

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