REPUBLIC OF VANUATU

MINISTRY OF INFRASTRUCTURE AND PUBLIC UTILITIES

PUBLIC WORKS DEPARTMENT.

MATERIALS LABORATORY PORT VILA

Moisture Content Report

Client :	**TONKIN + TAYLOR**	Report Number:	**CL/116 - 22**
Address :	**Port Vila, Port Vila**	Report Date :	**13/07/2018**
Project Name :	**Teouma Bridge**	Order Number :	
Project Number :	**CL/116**	Test Method :	**AS1289.2.1.1**
Location:	**Efate , Port Vila**	**Page 1 of 1**	

Sample Number :	S-1467	S-1469	S-1471	
Test Number :	Depth 10.95	Depth 15.45m	Depth 19.5m	
Sampling Method :				
Date Sampled :	26/06/2018	26/06/2018	26/06/2018	
Date Tested :	4/07/2018	4/07/2018	4/07/2018	
Material Type :				
Material Source :				
Lot Number :	BoreHole 2	BoreHole 2	BoreHole 2	
Sample Location :	Teouma Bridge BH2 Depth 10.95m	Teouma Bridge BH2 Depth 15.45m	Teouma Bridge BH2 Depth 19.5m	
Oven Temperature (°C) :				
Soil Description :				
Moisture Content (%) :	**62.5**	**85**	**74.5**	
Remarks :				

APPROVED SIGNATORY

02/08/2018

Document Code
RF120-6

REPUBLIC OF VANUATU

MINISTRY OF INFRASTRUCTURE AND PUBLIC UTILITIES

PUBLIC WORKS DEPARTMENT.

MATERIALS LABORATORY PORT VILA

Moisture Content Report

Client :	**TONKIN + TAYLOR**	Report Number:	**CL/116 - 27**
Address :	**Port Vila, Port Vila**	Report Date :	**18/07/2018**
Project Name :	**Teouma Bridge**	Order Number :	
Project Number :	**CL/116**	Test Method :	**AS1289.2.1.1**
Location:	**Efate , Port Vila**		**Page 1 of 1**

Sample Number :	S-1474	S-1478	S-1480	S-1481
Test Number :	Depth 19.95m	Depth 28.95m	Depth 30m	Depth 31.5m
Sampling Method :				
Date Sampled :	26/06/2018	26/06/2018	26/06/2018	26/06/2018
Date Tested :	16/07/2018	16/07/2018	16/07/2018	16/07/2018
Material Type :				
Material Source :				
Lot Number :	BoreHole 2	BoreHole 2	BoreHole 2	BoreHole 2
Sample Location :	Teouma Bridge BH2 Depth 19.95m	Teouma Bridge BH2 Depth 28.95m	Teouma Bridge BH2 Depth 30m	Teouma Bridge BH2 Depth 31.5m
Oven Temperature (°C) :				
Soil Description :				
Moisture Content (%) :	**82**	**64.5**	**66.5**	**68.5**
Remarks :				

APPROVED SIGNATORY

02/08/2018

Document Code
RF120-6

REPUBLIC OF VANUATU

MINISTRY OF INFRASTRUCTURE AND PUBLIC UTILITIES

PUBLIC WORKS DEPARTMENT.

MATERIALS LABORATORY PORT VILA

Particle Size Distribution Report

Client :	**TONKIN + TAYLOR**	Report Number:	**CL/116 - 23**
Address :	**Port Vila, Port Vila**	Report Date :	**13/07/2018**
Project Name :	**Teouma Bridge**	Order Number :	
Project Number :	**CL/116**	Test Method :	**AS1289.3.6.1**
Location:	**Efate , Port Vila**		**Page 1 of 1**

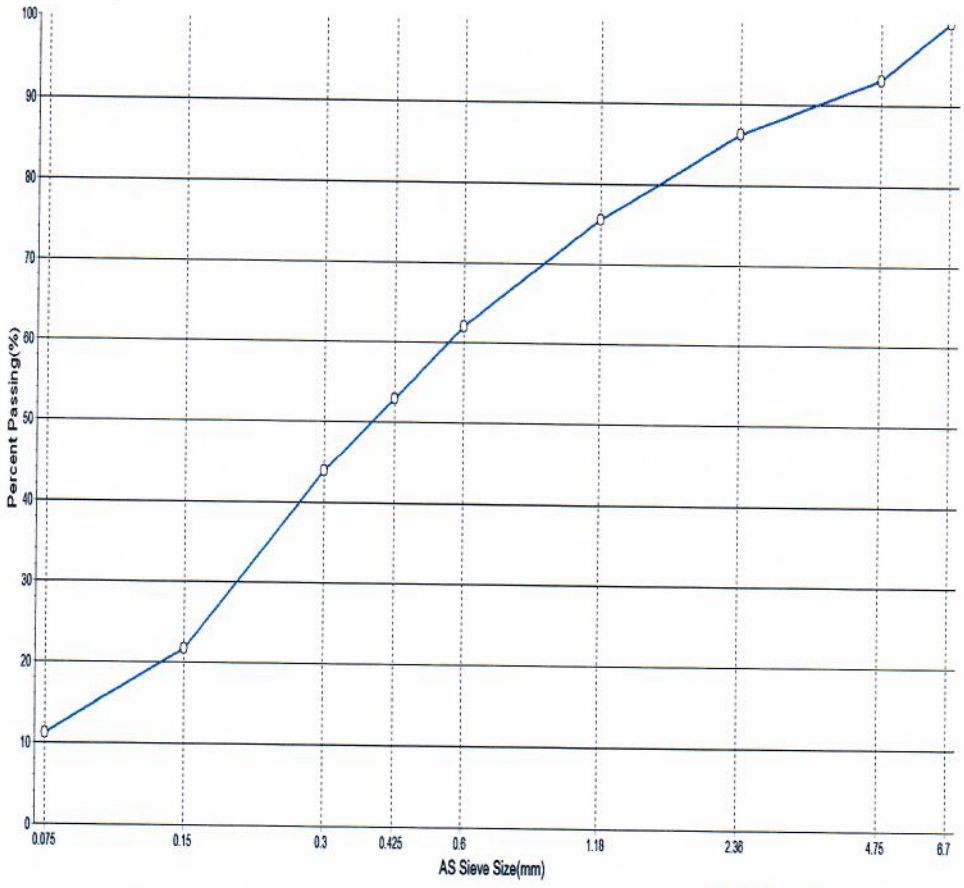
Sample Number :	S-1462
Sampling Method :	
Sampled By :	Client
Date Sampled :	26/06/2018
Date Tested :	3/07/2018
Material Type :	
Material Source :	
Remarks :	

SAMPLE LOCATION

Teouma Bridge
BH2
Depth 4.95m

Test Number :	**Depth 4.95m**
Lot Number :	**BoreHole 2**
Specification Number :	

AS Sieve Size(mm)	Percent Passing	Specification Limits
100		
75		
63		
53		
37.5		
26.5		
19.0		
16.0		
13.2		
9.5		
6.7	**100**	
4.75	**93**	
2.36	**86**	
1.18	**76**	
0.600	**62**	
0.425	**53**	
0.300	**44**	
0.150	**22**	
0.075	**11**	



APPROVED SIGNATORY

04/08/2018

Document Code
RF141-6

REPUBLIC OF VANUATU

MINISTRY OF INFRASTRUCTURE AND PUBLIC UTILITIES

PUBLIC WORKS DEPARTMENT.

MATERIALS LABORATORY PORT VILA

Particle Size Distribution Report

Client :	**TONKIN + TAYLOR**	Report Number:	**CL/116 - 24**
Address :	**Port Vila, Port Vila**	Report Date :	**13/07/2018**
Project Name :	**Teouma Bridge**	Order Number :	
Project Number :	**CL/116**	Test Method :	**AS1289.3.6.1**
Location:	**Efate , Port Vila**		**Page 1 of 1**

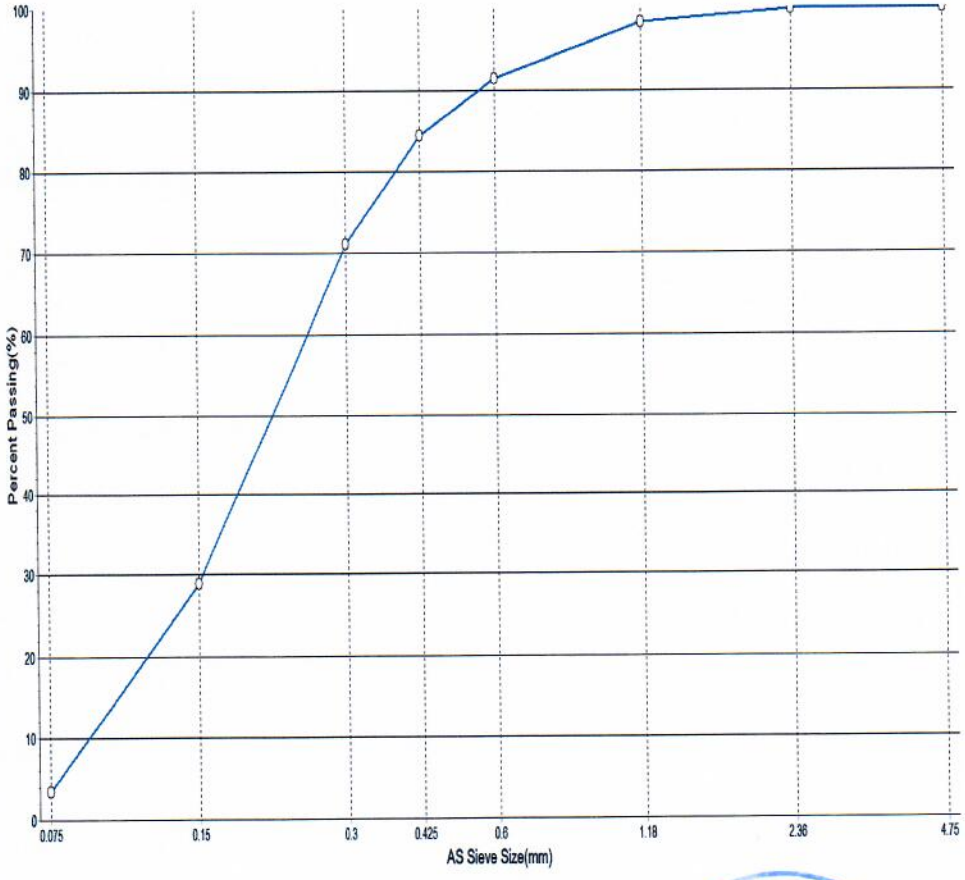
Sample Number :	S-1465
Sampling Method :	
Sampled By :	Client
Date Sampled :	26/06/2018
Date Tested :	3/07/2018
Material Type :	
Material Source :	
Remarks :	

SAMPLE LOCATION

Teouma Bridge
BH2
Depth 9.45m

Test Number :	**Depth 9.45m**
Lot Number :	**BoreHole 2**
Specification Number :	

AS Sieve Size(mm)	Percent Passing	Specification Limits
100		
75		
63		
53		
37.5		
26.5		
19.0		
16.0		
13.2		
9.5		
6.7		
4.75	**100**	
2.36	**100**	
1.18	**98**	
0.600	**91**	
0.425	**84**	
0.300	**71**	
0.150	**29**	
0.075	**3**	



APPROVED SIGNATORY

02/08/2018

Document Code
RF141-6

REPUBLIC OF VANUATU

MINISTRY OF INFRASTRUCTURE AND PUBLIC UTILITIES

PUBLIC WORKS DEPARTMENT.

MATERIALS LABORATORY PORT VILA

Particle Size Distribution Report

Client :	**TONKIN + TAYLOR**	Report Number:	**CL/116 - 25**
Address :	**Port Vila, Port Vila**	Report Date :	**13/07/2018**
Project Name :	**Teouma Bridge**	Order Number :	
Project Number :	**CL/116**	Test Method :	**AS1289.3.6.1**
Location:	**Efate , Port Vila**	**Page 1 of 1**	

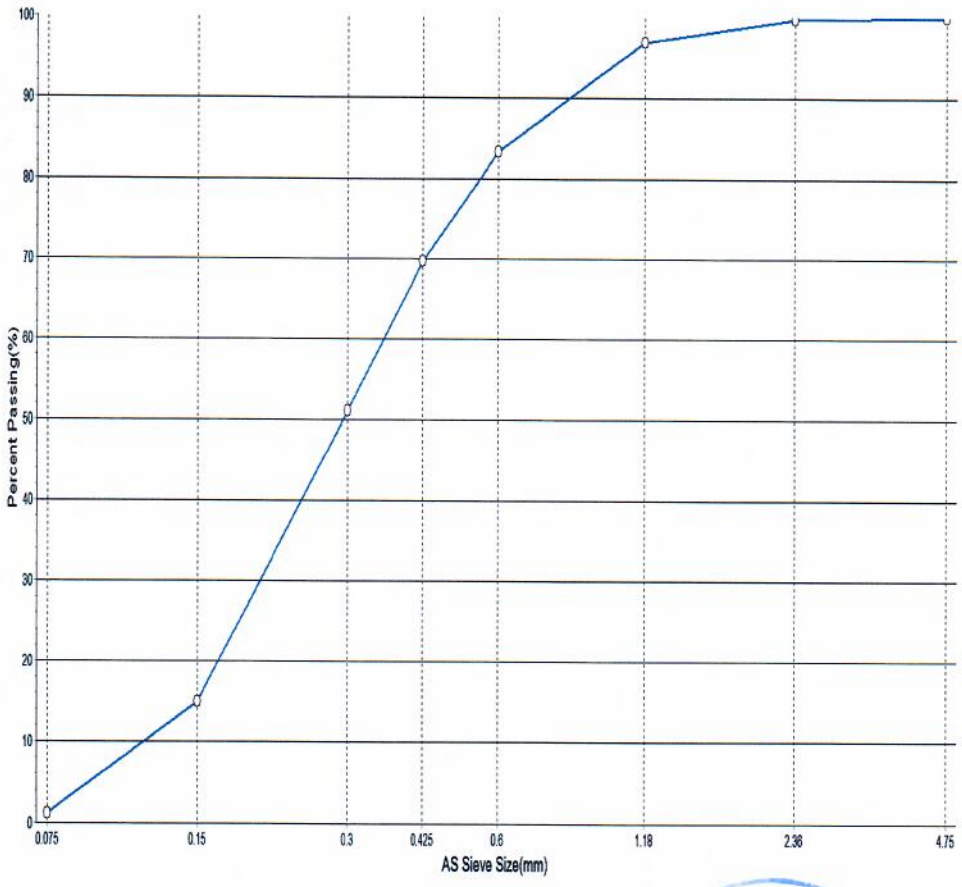
Sample Number :	S-1467
Sampling Method :	
Sampled By :	Client
Date Sampled :	26/06/2018
Date Tested :	3/07/2018
Material Type :	
Material Source :	
Remarks :	

SAMPLE LOCATION

Teouma Bridge
BH2
Depth 10.95m

Test Number :	**Depth 10.95**
Lot Number :	**BoreHole 2**
Specification Number :	

AS Sieve Size(mm)	Percent Passing	Specification Limits
100		
75		
63		
53		
37.5		
26.5		
19.0		
16.0		
13.2		
9.5		
6.7		
4.75	**100**	
2.36	**100**	
1.18	**97**	
0.600	**83**	
0.425	**70**	
0.300	**51**	
0.150	**15**	
0.075	**1**	



APPROVED SIGNATORY

02/08/2018

Document Code
RF141-6

REPUBLIC OF VANUATU

MINISTRY OF INFRASTRUCTURE AND PUBLIC UTILITIES

PUBLIC WORKS DEPARTMENT.

MATERIALS LABORATORY PORT VILA

Particle Size Distribution Report

Client :	**TONKIN + TAYLOR**	Report Number:	**CL/116 - 26**
Address :	**Port Vila, Port Vila**	Report Date :	**13/07/2018**
Project Name :	**Teouma Bridge**	Order Number :	
Project Number :	**CL/116**	Test Method :	**AS1289.3.6.1**
Location:	**Efate , Port Vila**		**Page 1 of 1**

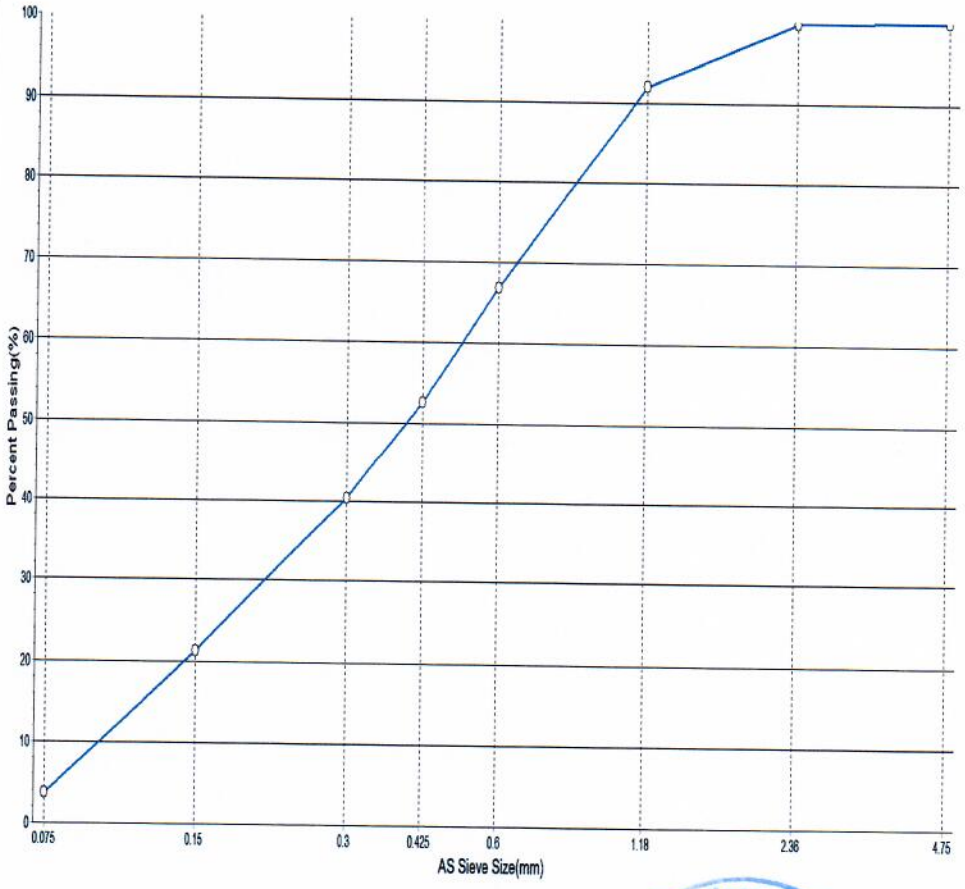
Sample Number :	S-1469
Sampling Method :	
Sampled By :	Client
Date Sampled :	26/06/2018
Date Tested :	3/07/2018
Material Type :	
Material Source :	
Remarks :	

SAMPLE LOCATION

Teouma Bridge
BH2
Depth 15.45m

Test Number :	**Depth 15.45m**
Lot Number :	**BoreHole 2**
Specification Number :	

AS Sieve Size(mm)	Percent Passing	Specification Limits
100		
75		
63		
53		
37.5		
26.5		
19.0		
16.0		
13.2		
9.5		
6.7		
4.75	**100**	
2.36	**100**	
1.18	**92**	
0.600	**67**	
0.425	**53**	
0.300	**40**	
0.150	**21**	
0.075	**4**	



APPROVED SIGNATORY

Republique Vanuatu Republic Government Public Works

02/08/2018

Document Code
RF141-6

REPUBLIC OF VANUATU

MINISTRY OF INFRASTRUCTURE AND PUBLIC UTILITIES

PUBLIC WORKS DEPARTMENT.

MATERIALS LABORATORY PORT VILA

Particle Size Distribution Report

Client :	TONKIN + TAYLOR	Report Number:	CL/116 - 36
Address :	Port Vila, Port Vila	Report Date :	19/07/2018
Project Name :	Teouma Bridge	Order Number :	
Project Number :	CL/116	Test Method :	AS1289.3.6.1
Location:	Efate , Port Vila		Page 1 of 1

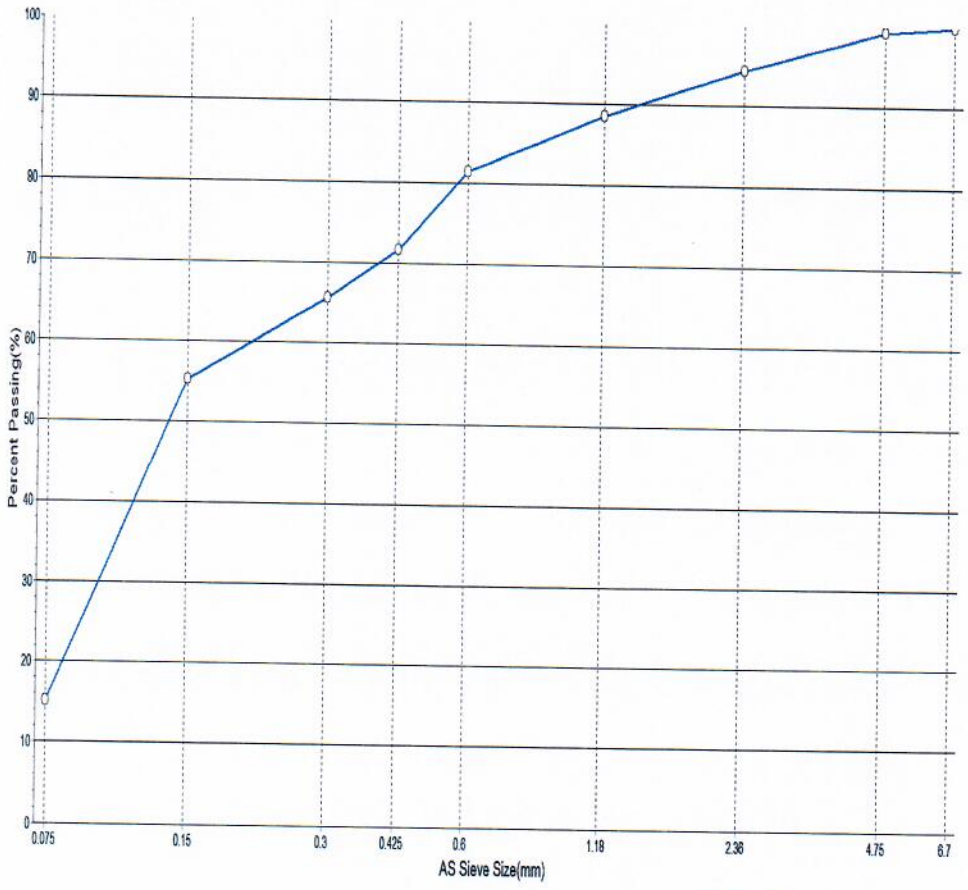
Sample Number :	S-1474
Sampling Method :	
Sampled By :	Client
Date Sampled :	26/06/2018
Date Tested :	17/07/2018
Material Type :	
Material Source :	
Remarks :	

SAMPLE LOCATION

Teouma Bridge
BH2
Depth 19.95m

Test Number :	**Depth 19.95m**
Lot Number :	**BoreHole 2**
Specification Number :	

AS Sieve Size(mm)	Percent Passing	Specification Limits
100		
75		
63		
53		
37.5		
26.5		
19.0		
16.0		
13.2		
9.5		
6.7	**100**	
4.75	**99**	
2.36	**94**	
1.18	**89**	
0.600	**81**	
0.425	**72**	
0.300	**66**	
0.150	**55**	
0.075	**15**	



APPROVED SIGNATORY

Document Code
RF141-6

REPUBLIC OF VANUATU

MINISTRY OF INFRASTRUCTURE AND PUBLIC UTILITIES

PUBLIC WORKS DEPARTMENT.

MATERIALS LABORATORY PORT VILA

Particle Size Distribution Report

Client :	TONKIN + TAYLOR	Report Number:	CL/116 - 37
Address :	Port Vila, Port Vila	Report Date :	19/07/2018
Project Name :	Teouma Bridge	Order Number :	
Project Number :	CL/116	Test Method :	AS1289.3.6.1
Location:	Efate , Port Vila	Page 1 of 1	

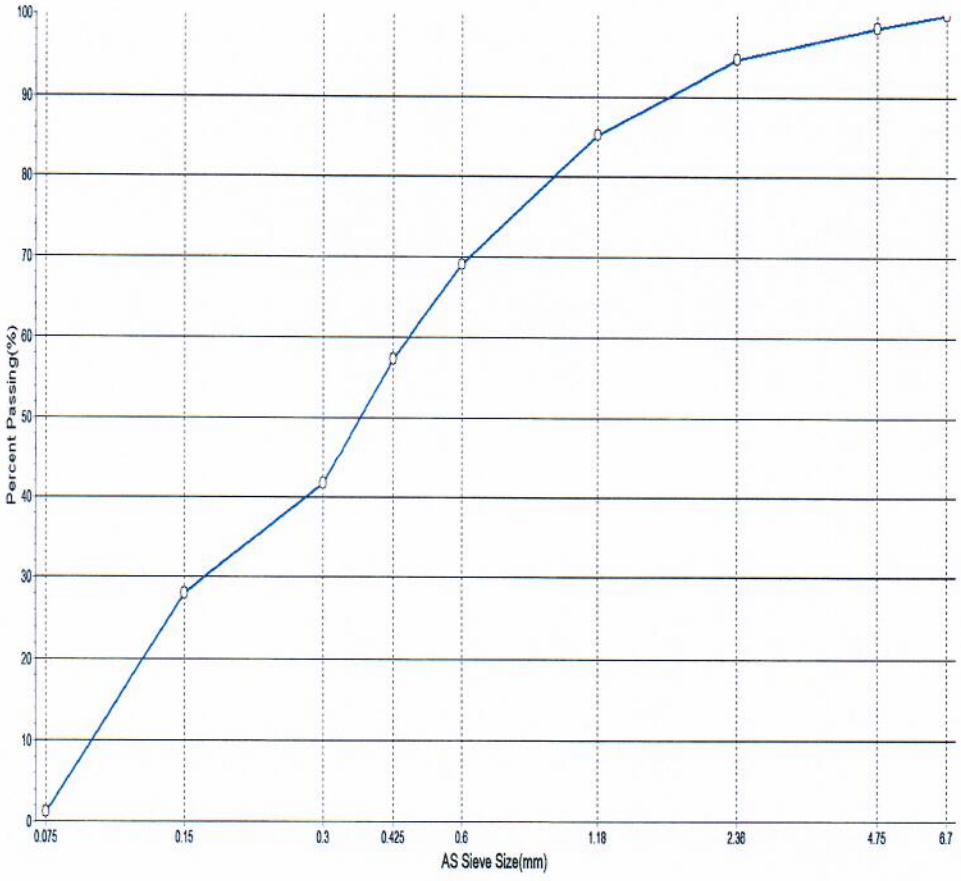
Sample Number :	S-1478
Sampling Method :	
Sampled By :	Client
Date Sampled :	26/06/2018
Date Tested :	17/07/2018
Material Type :	
Material Source :	
Remarks :	

SAMPLE LOCATION

Teouma Bridge
BH2
Depth 28.95m

Test Number :	Depth 28.95m
Lot Number :	BoreHole 2
Specification Number :	

AS Sieve Size(mm)	Percent Passing	Specification Limits
100		
75		
63		
53		
37.5		
26.5		
19.0		
16.0		
13.2		
9.5		
6.7	100	
4.75	98	
2.36	95	
1.18	85	
0.600	69	
0.425	57	
0.300	42	
0.150	28	
0.075	1	



APPROVED SIGNATORY

22/08/2018

Document Code
RF141-6

REPUBLIC OF VANUATU

MINISTRY OF INFRASTRUCTURE AND PUBLIC UTILITIES

PUBLIC WORKS DEPARTMENT.

MATERIALS LABORATORY PORT VILA

Particle Size Distribution Report

Client :	TONKIN + TAYLOR	Report Number:	CL/116 - 28
Address :	Port Vila, Port Vila	Report Date :	18/07/2018
Project Name :	Teouma Bridge	Order Number :	
Project Number :	CL/116	Test Method :	AS1289.3.6.1
Location:	Efate , Port Vila		Page 1 of 1

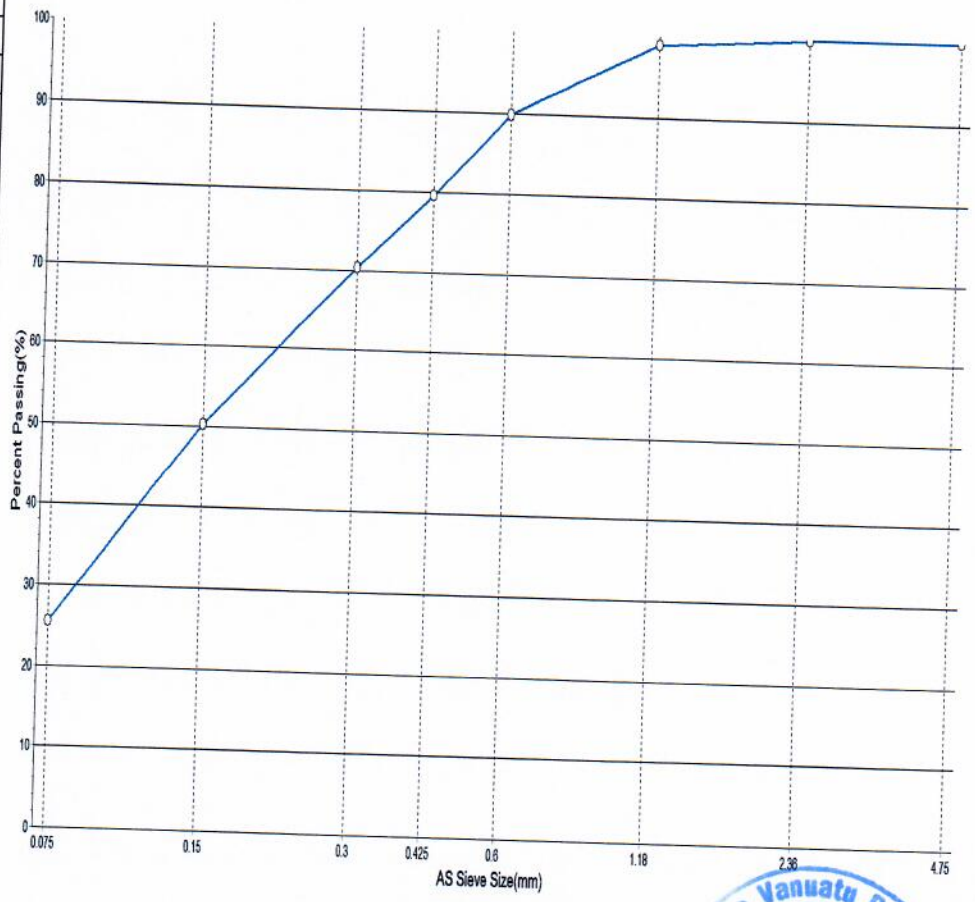
Sample Number :	S-1480
Sampling Method :	
Sampled By :	Client
Date Sampled :	26/06/2018
Date Tested :	18/06/2018
Material Type :	
Material Source :	
Remarks :	

SAMPLE LOCATION

Teouma Bridge
BH2
Depth 30m

Test Number :	**Depth 30m**
Lot Number :	**BoreHole 2**
Specification Number :	

AS Sieve Size(mm)	Percent Passing	Specification Limits
100		
75		
63		
53		
37.5		
26.5		
19.0		
16.0		
13.2		
9.5		
6.7		
4.75	**100**	
2.36	**100**	
1.18	**99**	
0.600	**90**	
0.425	**80**	
0.300	**70**	
0.150	**50**	
0.075	**26**	



APPROVED SIGNATORY

Document Code
RF141-6

REPUBLIC OF VANUATU

MINISTRY OF INFRASTRUCTURE AND PUBLIC UTILITIES

PUBLIC WORKS DEPARTMENT.

MATERIALS LABORATORY PORT VILA

Moisture Content Report

Client :	**TONKIN + TAYLOR**	Report Number:	**CL/116 - 29**
Address :	**Port Vila, Port Vila**	Report Date :	**18/07/2018**
Project Name :	**Teouma Bridge**	Order Number :	
Project Number :	**CL/116**	Test Method :	**AS1289.2.1.1**
Location:	**Efate , Port Vila**		**Page 1 of 1**

Sample Number :	S-1513	S-1514	S-1515	S-1517
Test Number :	Depth 6m	Depth 7.5m	Depth 16.5m	Depth 19.5m
Sampling Method :				
Date Sampled :	26/06/2018	26/06/2018	26/06/2018	26/06/2018
Date Tested :	16/07/2018	16/07/2018	16/07/2018	16/07/2018
Material Type :				
Material Source :				
Lot Number :				
Sample Location :	Teouma Bridge BoreHole 3 Depth 6m	Teouma Bridge BoreHole 3 Depth 7.5m	Teouma Bridge BoreHole 3 Depth 16.5m	Teouma Bridge BoreHole 3 Depth 19.5m
Oven Temperature (°C) :				
Soil Description :				
Moisture Content (%) :	**54**	**60.5**	**88**	**34.8**
Remarks :				

APPROVED SIGNATORY

07/08/2018

Document Code
RP120-6

REPUBLIC OF VANUATU

MINISTRY OF INFRASTRUCTURE AND PUBLIC UTILITIES

PUBLIC WORKS DEPARTMENT.

MATERIALS LABORATORY PORT VILA

Moisture Content Report

Client :	**TONKIN + TAYLOR**	Report Number:	**CL/116 - 30**
Address :	**Port Vila, Port Vila**	Report Date :	**18/07/2018**
Project Name :	**Teouma Bridge**	Order Number :	
Project Number :	**CL/116**	Test Method :	**AS1289.2.1.1**
Location:	**Efate , Port Vila**		**Page 1 of 1**

Sample Number :	S-1518	S-1519	S-1522	S-1524
Test Number :	Depth 21m	Depth 22.5m	Depth 10m	Depth 12m
Sampling Method :				
Date Sampled :	26/06/2018	26/06/2018	26/06/2018	26/06/2018
Date Tested :	16/07/2018	16/07/2018	16/07/2018	16/07/2018
Material Type :				
Material Source :				
Lot Number :				
Sample Location :	Teouma Bridge BoreHole 3 Depth 21m	Teouma Bridge BoreHole 3 Depth 22.5m	Teouma Bridge BoreHole 3 Depth 10m	Teouma Bridge BoreHole 3 Depth 12m
Oven Temperature (°C) :				
Soil Description :				
Moisture Content (%) :	**40.4**	**75.5**	**39.2**	**46.4**
Remarks :				

APPROVED SIGNATORY

02/08/2018

Document Code
RF120-6

REPUBLIC OF VANUATU

MINISTRY OF INFRASTRUCTURE AND PUBLIC UTILITIES

PUBLIC WORKS DEPARTMENT.

MATERIALS LABORATORY PORT VILA

Moisture Content Report

Client :	**TONKIN + TAYLOR**	Report Number:	**CL/116 - 38**
Address :	**Port Vila, Port Vila**	Report Date :	**23/07/2018**
Project Name :	**Teouma Bridge**	Order Number :	
Project Number :	**CL/116**	Test Method :	**AS1289.2.1.1**
Location:	**Efate , Port Vila**	**Page 1 of 1**	

Sample Number :	S-1527	S-1529	S-1530	S-1532
Test Number :	Depth 30m	Depth 36m	Depth 39m	Depth 45m
Sampling Method :				
Date Sampled :	26/06/2018	26/06/2018	26/06/2018	26/06/2018
Date Tested :	19/07/2018	19/07/2018	19/07/2018	19/07/2018
Material Type :				
Material Source :				
Lot Number :				
Sample Location :	Teouma Bridge BoreHole 3 Depth 30m	Teouma Bridge BoreHole 3 Depth 36m	Teouma Bridge BoreHole 3 Depth 39m	Teouma Bridge BoreHole 3 Depth 45m
Oven Temperature (°C) :				
Soil Description :				
Moisture Content (%) :	**69**	**42.2**	**64.5**	**58.5**
Remarks :				

APPROVED SIGNATORY

02/08/2018

Document Code
RF120-6

REPUBLIC OF VANUATU

MINISTRY OF INFRASTRUCTURE AND PUBLIC UTILITIES

PUBLIC WORKS DEPARTMENT.

MATERIALS LABORATORY PORT VILA

Particle Size Distribution Report

Client :	**TONKIN + TAYLOR**	Report Number:	**CL/116 - 31**
Address :	**Port Vila, Port Vila**	Report Date :	**19/07/2018**
Project Name :	**Teouma Bridge**	Order Number :	
Project Number :	**CL/116**	Test Method :	**AS1289.3.6.1**
Location:	**Efate , Port Vila**	**Page 1 of 1**	

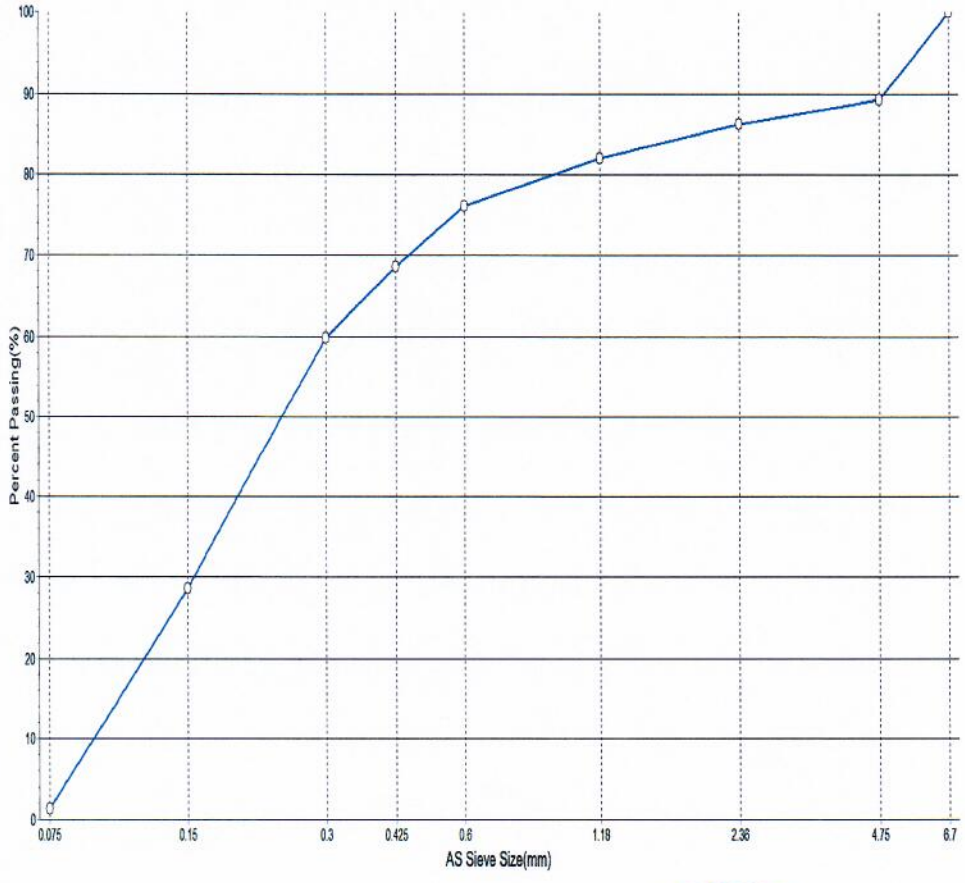
Sample Number :	S-1513
Sampling Method :	
Sampled By :	Client
Date Sampled :	26/06/2018
Date Tested :	18/07/2018
Material Type :	
Material Source :	
Remarks :	

SAMPLE LOCATION

Teouma Bridge
BoreHole 3
Depth 6m

Test Number :	**Depth 6m**
Lot Number :	
Specification Number :	

AS Sieve Size(mm)	Percent Passing	Specification Limits
100		
75		
63		
53		
37.5		
26.5		
19.0		
16.0		
13.2		
9.5		
6.7	**100**	
4.75	**89**	
2.36	**86**	
1.18	**82**	
0.600	**76**	
0.425	**69**	
0.300	**60**	
0.150	**29**	
0.075	**1**	



APPROVED SIGNATORY

Document Code
RF141-6

REPUBLIC OF VANUATU

MINISTRY OF INFRASTRUCTURE AND PUBLIC UTILITIES

PUBLIC WORKS DEPARTMENT.

MATERIALS LABORATORY PORT VILA

Particle Size Distribution Report

Client :	**TONKIN + TAYLOR**	Report Number:	**CL/116 - 32**
Address :	**Port Vila, Port Vila**	Report Date :	**19/07/2018**
Project Name :	**Teouma Bridge**	Order Number :	
Project Number :	**CL/116**	Test Method :	**AS1289.3.6.1**
Location:	**Efate , Port Vila**	**Page 1 of 1**	

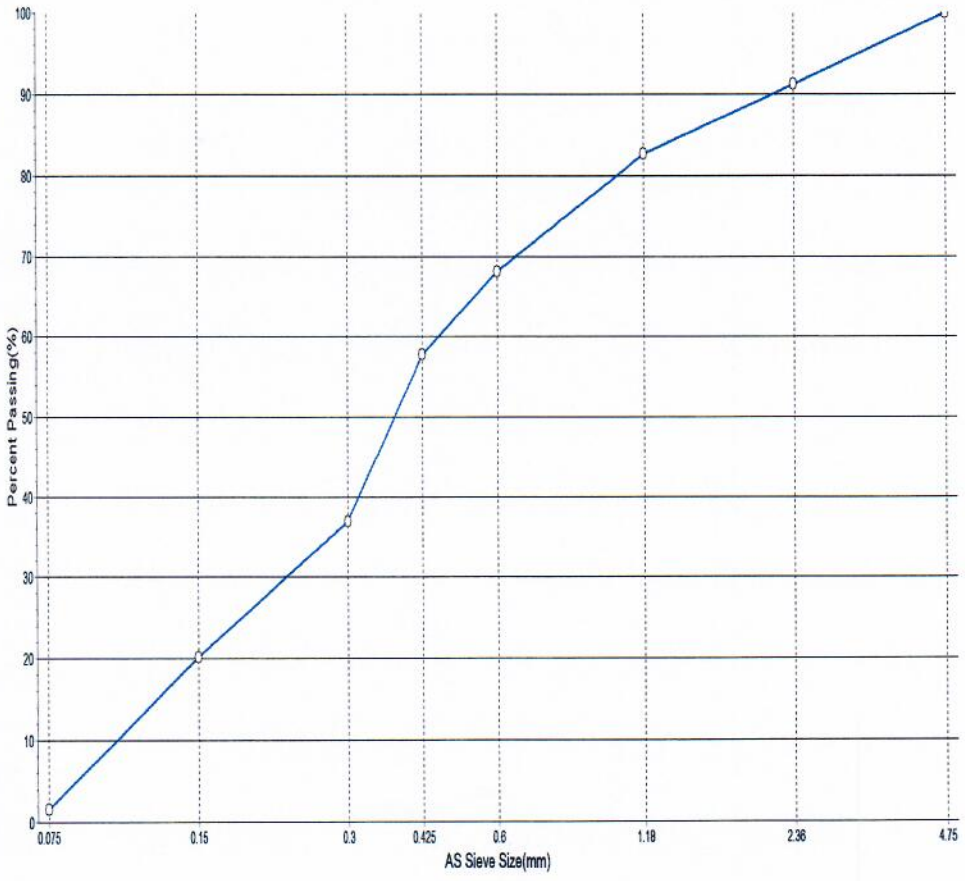
Sample Number :	S-1517
Sampling Method :	
Sampled By :	Client
Date Sampled :	26/06/2018
Date Tested :	18/07/2018
Material Type :	
Material Source :	
Remarks :	

SAMPLE LOCATION

Teouma Bridge
BoreHole 3
Depth 19.5m

Test Number :	**Depth 19.5m**
Lot Number :	
Specification Number :	

AS Sieve Size(mm)	Percent Passing	Specification Limits
100		
75		
63		
53		
37.5		
26.5		
19.0		
16.0		
13.2		
9.5		
6.7		
4.75	**100**	
2.36	**91**	
1.18	**83**	
0.600	**68**	
0.425	**58**	
0.300	**37**	
0.150	**20**	
0.075	**2**	



APPROVED SIGNATORY

02/08/2018

Document Code
RP141-6

REPUBLIC OF VANUATU

MINISTRY OF INFRASTRUCTURE AND PUBLIC UTILITIES

PUBLIC WORKS DEPARTMENT.

MATERIALS LABORATORY PORT VILA

Particle Size Distribution Report

Client :	TONKIN + TAYLOR	Report Number:	CL/116 - 33
Address :	Port Vila, Port Vila	Report Date :	19/07/2018
Project Name :	Teouma Bridge	Order Number :	
Project Number :	CL/116	Test Method :	AS1289.3.6.1
Location:	Efate , Port Vila	Page 1 of 1	

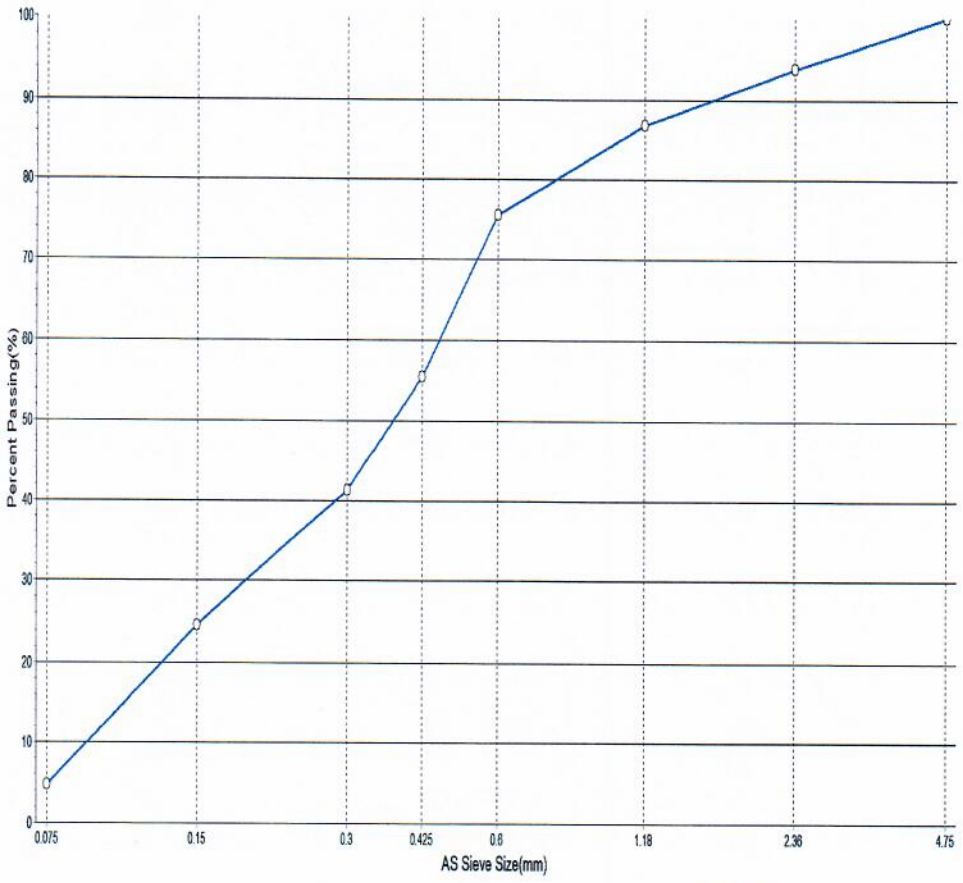
Sample Number :	S-1519
Sampling Method :	
Sampled By :	Client
Date Sampled :	26/06/2018
Date Tested :	18/07/2018
Material Type :	
Material Source :	
Remarks :	

SAMPLE LOCATION

Teouma Bridge
BoreHole 3
Depth 22.5m

Test Number :	**Depth 22.5m**
Lot Number :	
Specification Number :	

AS Sieve Size(mm)	Percent Passing	Specification Limits
100		
75		
63		
53		
37.5		
26.5		
19.0		
16.0		
13.2		
9.5		
6.7		
4.75	**100**	
2.36	**94**	
1.18	**87**	
0.600	**75**	
0.425	**56**	
0.300	**41**	
0.150	**25**	
0.075	**5**	



APPROVED SIGNATORY

Document Code
RF141-6

REPUBLIC OF VANUATU

MINISTRY OF INFRASTRUCTURE AND PUBLIC UTILITIES

PUBLIC WORKS DEPARTMENT.

MATERIALS LABORATORY PORT VILA

Particle Size Distribution Report

Client :	TONKIN + TAYLOR	Report Number:	CL/116 - 34
Address :	Port Vila, Port Vila	Report Date :	19/07/2018
Project Name :	Teouma Bridge	Order Number :	
Project Number :	CL/116	Test Method :	AS1289.3.6.1
Location:	Efate , Port Vila		Page 1 of 1

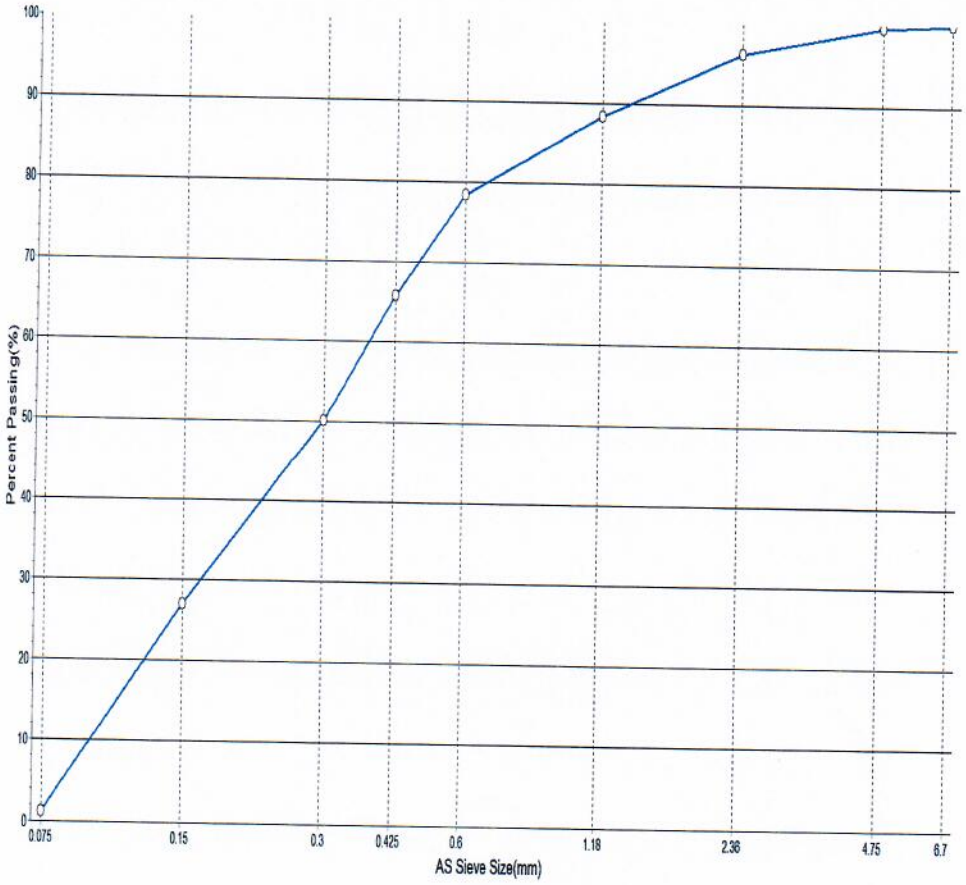
Sample Number :	S-1522
Sampling Method :	
Sampled By :	Client
Date Sampled :	26/06/2018
Date Tested :	18/07/2018
Material Type :	
Material Source :	
Remarks :	

SAMPLE LOCATION

Teouma Bridge
BoreHole 3
Depth 10m

Test Number :	**Depth 10m**
Lot Number :	
Specification Number :	

AS Sieve Size(mm)	Percent Passing	Specification Limits
100		
75		
63		
53		
37.5		
26.5		
19.0		
16.0		
13.2		
9.5		
6.7	**100**	
4.75	**100**	
2.36	**96**	
1.18	**88**	
0.600	**78**	
0.425	**66**	
0.300	**50**	
0.150	**27**	
0.075	**1**	



APPROVED SIGNATORY

Document Code
RF141-6

REPUBLIC OF VANUATU

MINISTRY OF INFRASTRUCTURE AND PUBLIC UTILITIES

PUBLIC WORKS DEPARTMENT.

MATERIALS LABORATORY PORT VILA

Particle Size Distribution Report

Client :	TONKIN + TAYLOR	Report Number:	CL/116 - 35
Address :	Port Vila, Port Vila	Report Date :	19/07/2018
Project Name :	Teouma Bridge	Order Number :	
Project Number :	CL/116	Test Method :	AS1289.3.6.1
Location:	Efate , Port Vila		Page 1 of 1

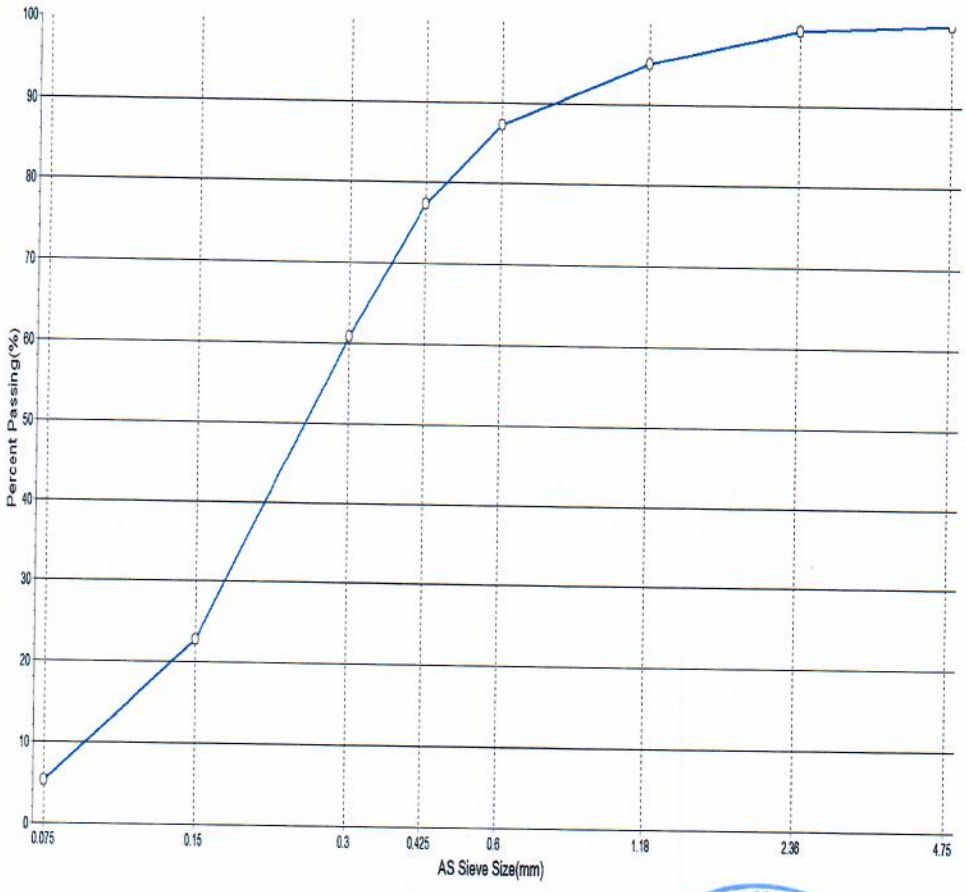
Sample Number :	S-1524
Sampling Method :	
Sampled By :	Client
Date Sampled :	26/06/2018
Date Tested :	18/07/2018
Material Type :	
Material Source :	
Remarks :	

SAMPLE LOCATION

Teouma Bridge
BoreHole 3
Depth 12m

Test Number :	**Depth 12m**
Lot Number :	
Specification Number :	

AS Sieve Size(mm)	Percent Passing	Specification Limits
100		
75		
63		
53		
37.5		
26.5		
19.0		
16.0		
13.2		
9.5		
6.7		
4.75	**100**	
2.36	**99**	
1.18	**95**	
0.600	**87**	
0.425	**77**	
0.300	**61**	
0.150	**23**	
0.075	**5**	



APPROVED SIGNATORY

Document Code
RF141-6

REPUBLIC OF VANUATU

MINISTRY OF INFRASTRUCTURE AND PUBLIC UTILITIES

PUBLIC WORKS DEPARTMENT.

MATERIALS LABORATORY PORT VILA

Particle Size Distribution Report

Client :	**TONKIN + TAYLOR**	Report Number:	**CL/116 - 39**
Address :	**Port Vila, Port Vila**	Report Date :	**23/07/2018**
Project Name :	**Teouma Bridge**	Order Number :	
Project Number :	**CL/116**	Test Method :	**AS1289.3.6.1**
Location:	**Efate , Port Vila**		**Page 1 of 1**

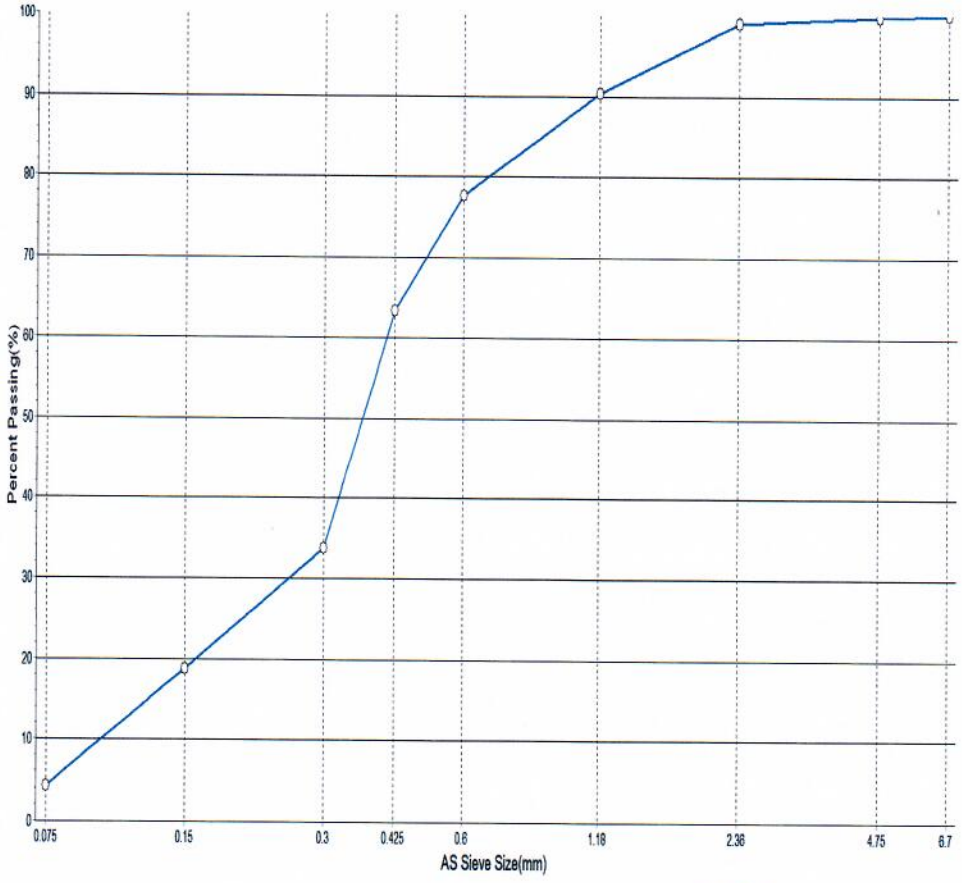
Sample Number :	S-1529
Sampling Method :	
Sampled By :	Client
Date Sampled :	26/06/2018
Date Tested :	19/07/2018
Material Type :	
Material Source :	
Remarks :	

SAMPLE LOCATION

Teouma Bridge
BoreHole 3
Depth 36m

Test Number :	**Depth 36m**
Lot Number :	
Specification Number :	

AS Sieve Size(mm)	Percent Passing	Specification Limits
100		
75		
63		
53		
37.5		
26.5		
19.0		
16.0		
13.2		
9.5		
6.7	**100**	
4.75	**100**	
2.36	**99**	
1.18	**90**	
0.600	**78**	
0.425	**63**	
0.300	**34**	
0.150	**19**	
0.075	**4**	



APPROVED SIGNATORY

02/08/2018

Document Code
RF141-6

REPUBLIC OF VANUATU

MINISTRY OF INFRASTRUCTURE AND PUBLIC UTILITIES

PUBLIC WORKS DEPARTMENT.

MATERIALS LABORATORY PORT VILA

Particle Size Distribution Report

Client :	TONKIN + TAYLOR	Report Number:	CL/116 - 40
Address :	Port Vila, Port Vila	Report Date :	23/07/2018
Project Name :	Teouma Bridge	Order Number :	
Project Number :	CL/116	Test Method :	AS1289.3.6.1
Location:	Efate , Port Vila	Page 1 of 1	

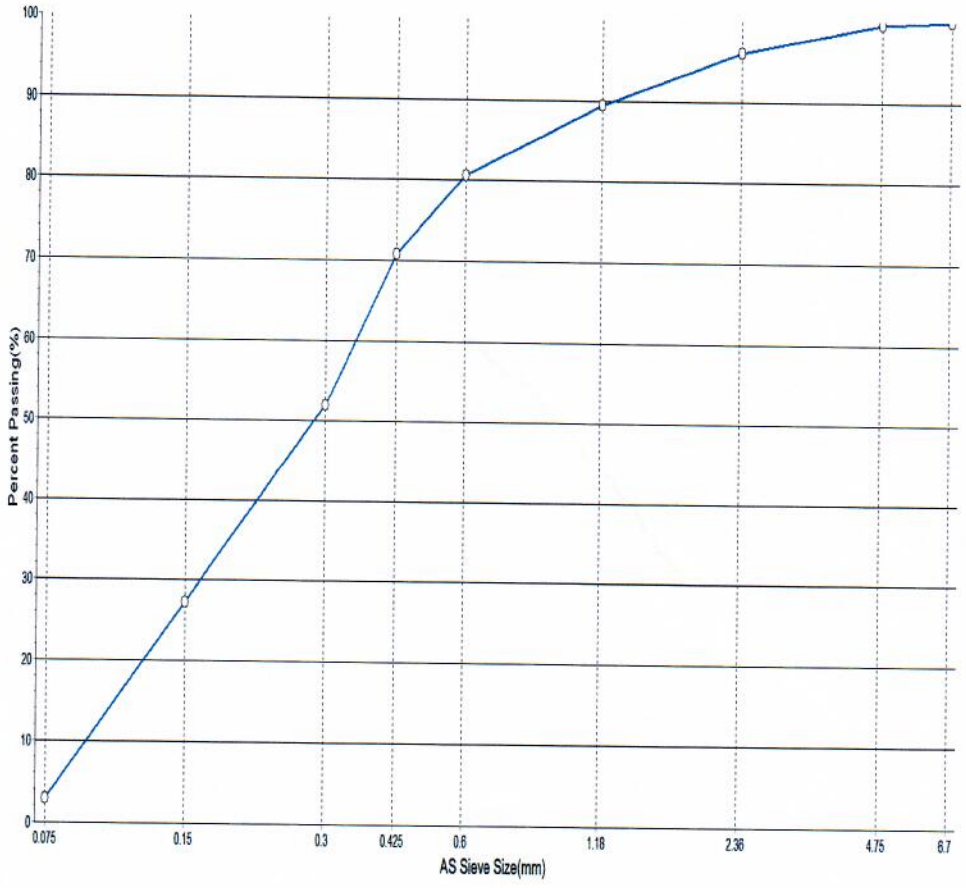
Sample Number :	S-1532
Sampling Method :	
Sampled By :	Client
Date Sampled :	26/06/2018
Date Tested :	19/07/2018
Material Type :	
Material Source :	
Remarks :	

SAMPLE LOCATION

Teouma Bridge
BoreHole 3
Depth 45m

Test Number :	Depth 45m
Lot Number :	
Specification Number :	

AS Sieve Size(mm)	Percent Passing	Specification Limits
100		
75		
63		
53		
37.5		
26.5		
19.0		
16.0		
13.2		
9.5		
6.7	100	
4.75	100	
2.36	96	
1.18	89	
0.600	80	
0.425	71	
0.300	52	
0.150	27	
0.075	3	



APPROVED SIGNATORY

02/08/2018

Document Code
RF141-6

REPUBLIC OF VANUATU

MINISTRY OF INFRASTRUCTURE AND PUBLIC UTILITIES

PUBLIC WORKS DEPARTMENT.

MATERIALS LABORATORY PORT VILA

Moisture Content Report

Client :	**TONKIN + TAYLOR**	Report Number:	**CL/116 - 41**
Address :	**Port Vila, Port Vila**	Report Date :	**25/07/2018**
Project Name :	**Teouma Bridge**	Order Number :	
Project Number :	**CL/116**	Test Method :	**AS1289.2.1.1**
Location:	**Efate , Port Vila**	**Page 1 of 1**	

Sample Number :	S-1543	S-1544	S-1546	S-1547
Test Number :	Depth 1.5m	Depth 1.95m	Depth 3.45m	Depth 4.5m
Sampling Method :				
Date Sampled :	26/06/2018	26/06/2018	26/06/2018	26/06/2018
Date Tested :	23/07/2018	23/07/2018	23/07/2018	23/07/2018
Material Type :				
Material Source :	BoreHole 4	Borehole 4	Borehole 4	Borehole 4
Lot Number :				
Sample Location :	Teouma Bridge Borehole 4 Depth 1.5m	Teouma Bridge Borehole 4 Depth 1.95m	Teouma Bridge Borehole 4 Depth 3.45m	Teouma Bridge Borehole 4 Depth 4.5m
Oven Temperature (°C) :				
Soil Description :				
Moisture Content (%) :	**67**	**40.6**	**76**	**43.2**
Remarks :				

APPROVED SIGNATORY

02/08/2018

Document Code
RF120-6

REPUBLIC OF VANUATU

MINISTRY OF INFRASTRUCTURE AND PUBLIC UTILITIES

PUBLIC WORKS DEPARTMENT.

MATERIALS LABORATORY PORT VILA

Moisture Content Report

Client :	**TONKIN + TAYLOR**	Report Number:	**CL/116 - 42**
Address :	**Port Vila, Port Vila**	Report Date :	**25/07/2018**
Project Name :	**Teouma Bridge**	Order Number :	
Project Number :	**CL/116**	Test Method :	**AS1289.2.1.1**
Location:	**Efate , Port Vila**	**Page 1 of 1**	

Sample Number :	S-1549	S-1550	S-1552	
Test Number :	Depth 7.5m	Depth 7.95m	Depth 12m	
Sampling Method :				
Date Sampled :	26/06/2018	26/06/2018	26/06/2018	
Date Tested :	23/07/2018	23/07/2018	23/07/2018	
Material Type :				
Material Source :	Borehole 4	Borehole 4	Borehole 4	
Lot Number :				
Sample Location :	Teouma Bridge Borehole 4 Depth 7.5m	Teouma Bridge Borehole 4 Depth 7.95m	Teouma Bridge Borehole 4 Depth 12m	
Oven Temperature (°C) :				
Soil Description :				
Moisture Content (%) :	**74.5**	**81**	**76**	
Remarks :				

APPROVED SIGNATORY

02/08/2018

Document Code
RF120-6

REPUBLIC OF VANUATU

MINISTRY OF INFRASTRUCTURE AND PUBLIC UTILITIES

PUBLIC WORKS DEPARTMENT.

MATERIALS LABORATORY PORT VILA

Moisture Content Report

Client :	**TONKIN + TAYLOR**	Report Number:	**CL/116 - 43**
Address :	**Port Vila, Port Vila**	Report Date :	**25/07/2018**
Project Name :	**Teouma Bridge**	Order Number :	
Project Number :	**CL/116**	Test Method :	**AS1289.2.1.1**
Location:	**Efate , Port Vila**	**Page 1 of 1**	

Sample Number :	S-1553	S-1555	S-1556	
Test Number :	Depth 12.5m	Depth 15.45m	Depth 16.5m	
Sampling Method :				
Date Sampled :	26/06/2018	26/06/2018	26/06/2018	
Date Tested :	23/07/2018	23/07/2018	23/07/2018	
Material Type :				
Material Source :	Borehole 4	Borehole 4	Borehole 4	
Lot Number :				
Sample Location :	Teouma Bridge Borehole 4 Depth 12.5m	Teouma Bridge Borehole 4 Depth 15.45m	Teouma Bridge Borehole 4 Depth 16.5m	
Oven Temperature (°C) :				
Soil Description :				
Moisture Content (%) :	**94.5**	**93**	**87**	
Remarks :				

APPROVED SIGNATORY

02/08/2018

Document Code
RF120-6

REPUBLIC OF VANUATU

MINISTRY OF INFRASTRUCTURE AND PUBLIC UTILITIES

PUBLIC WORKS DEPARTMENT.

MATERIALS LABORATORY PORT VILA

Particle Size Distribution Report

Client :	**TONKIN + TAYLOR**	Report Number:	**CL/116 - 44**
Address :	**Port Vila, Port Vila**	Report Date :	**25/07/2018**
Project Name :	**Teouma Bridge**	Order Number :	
Project Number :	**CL/116**	Test Method :	**AS1289.3.6.1**
Location:	**Efate , Port Vila**		**Page 1 of 1**

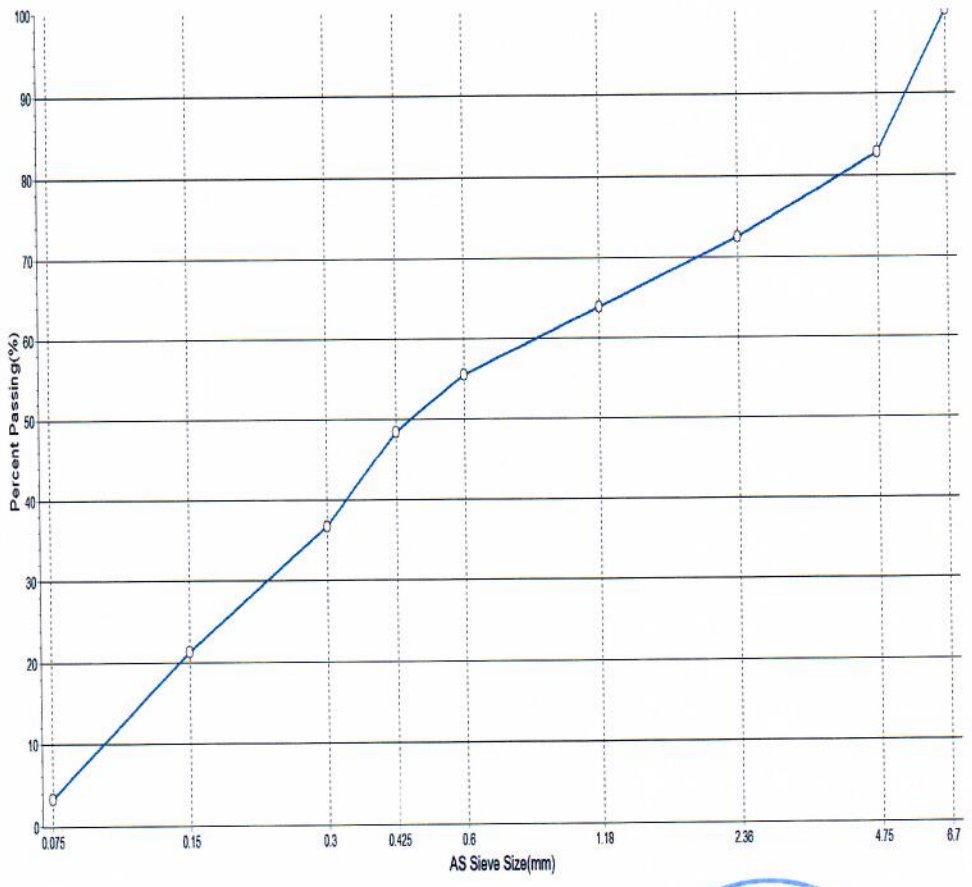
Sample Number :	S-1544
Sampling Method :	
Sampled By :	Client
Date Sampled :	26/06/2018
Date Tested :	25/07/2018
Material Type :	
Material Source :	Borehole 4
Remarks :	

SAMPLE LOCATION

Teouma Bridge
Borehole 4
Depth 1.95m

Test Number :	**Depth 1.95m**
Lot Number :	
Specification Number :	

AS Sieve Size(mm)	Percent Passing	Specification Limits
100		
75		
63		
53		
37.5		
26.5		
19.0		
16.0		
13.2		
9.5		
6.7	**100**	
4.75	**83**	
2.36	**73**	
1.18	**64**	
0.600	**56**	
0.425	**48**	
0.300	**37**	
0.150	**21**	
0.075	**3**	



APPROVED SIGNATORY

26/06/2018

Document Code
RF141-6

REPUBLIC OF VANUATU

MINISTRY OF INFRASTRUCTURE AND PUBLIC UTILITIES

PUBLIC WORKS DEPARTMENT.

MATERIALS LABORATORY PORT VILA

Particle Size Distribution Report

Client :	**TONKIN + TAYLOR**	Report Number:	**CL/116 - 45**
Address :	**Port Vila, Port Vila**	Report Date :	**25/07/2018**
Project Name :	**Teouma Bridge**	Order Number :	
Project Number :	**CL/116**	Test Method :	**AS1289.3.6.1**
Location:	**Efate , Port Vila**		**Page 1 of 1**

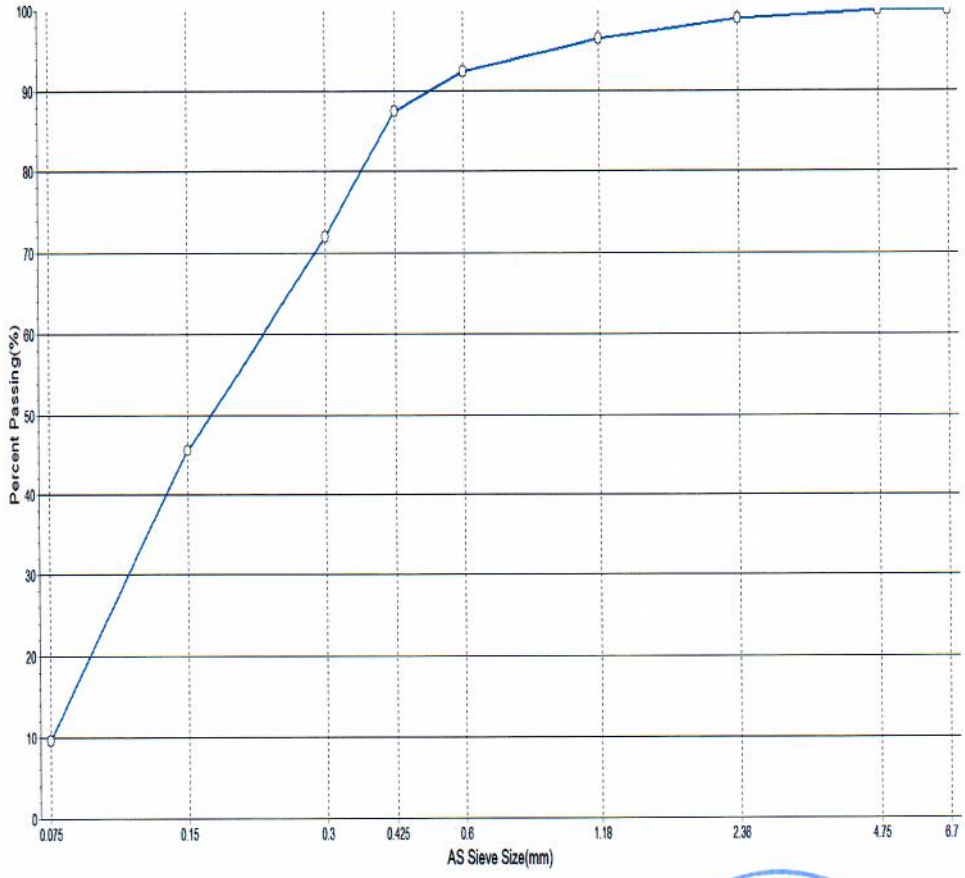
Sample Number :	S-1546
Sampling Method :	
Sampled By :	Client
Date Sampled :	26/06/2018
Date Tested :	25/07/2018
Material Type :	
Material Source :	Borehole 4
Remarks :	

SAMPLE LOCATION

Teouma Bridge
Borehole 4
Depth 3.45m

Test Number :	**Depth 3.45m**
Lot Number :	
Specification Number :	

AS Sieve Size(mm)	Percent Passing	Specification Limits
100		
75		
63		
53		
37.5		
26.5		
19.0		
16.0		
13.2		
9.5		
6.7	**100**	
4.75	**100**	
2.36	**99**	
1.18	**96**	
0.600	**92**	
0.425	**87**	
0.300	**72**	
0.150	**45**	
0.075	**10**	



APPROVED SIGNATORY

02/08/2018

Document Code
RF141-6

REPUBLIC OF VANUATU

MINISTRY OF INFRASTRUCTURE AND PUBLIC UTILITIES

PUBLIC WORKS DEPARTMENT.

MATERIALS LABORATORY PORT VILA

Particle Size Distribution Report

Client :	**TONKIN + TAYLOR**	Report Number:	**CL/116 - 47**
Address :	**Port Vila, Port Vila**	Report Date :	**26/07/2018**
Project Name :	**Teouma Bridge**	Order Number :	
Project Number :	**CL/116**	Test Method :	**AS1289.3.6.1**
Location:	**Efate , Port Vila**		**Page 1 of 1**

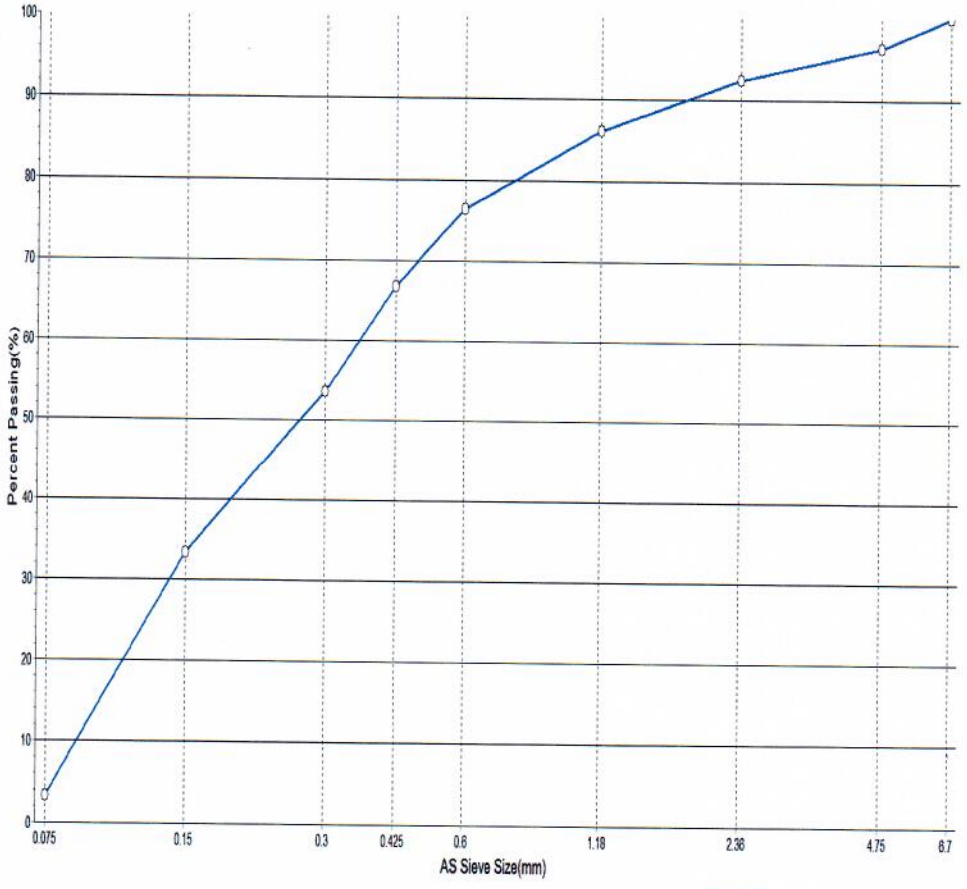
Sample Number :	S-1550
Sampling Method :	
Sampled By :	Client
Date Sampled :	26/06/2018
Date Tested :	26/06/2018
Material Type :	
Material Source :	Borehole 4
Remarks :	

SAMPLE LOCATION

Teouma Bridge
Borehole 4
Depth 7.95m

Test Number :	**Depth 7.95m**
Lot Number :	
Specification Number :	

AS Sieve Size(mm)	Percent Passing	Specification Limits
100		
75		
63		
53		
37.5		
26.5		
19.0		
16.0		
13.2		
9.5		
6.7	**100**	
4.75	**96**	
2.36	**92**	
1.18	**86**	
0.600	**76**	
0.425	**67**	
0.300	**54**	
0.150	**33**	
0.075	**3**	



APPROVED SIGNATORY

02/08/2018

Document Code
RF141-6

REPUBLIC OF VANUATU

MINISTRY OF INFRASTRUCTURE AND PUBLIC UTILITIES

PUBLIC WORKS DEPARTMENT.

MATERIALS LABORATORY PORT VILA

Particle Size Distribution Report

Client :	**TONKIN + TAYLOR**	Report Number:	**CL/116 - 46**
Address :	**Port Vila, Port Vila**	Report Date :	**25/07/2018**
Project Name :	**Teouma Bridge**	Order Number :	
Project Number :	**CL/116**	Test Method :	**AS1289.3.6.1**
Location:	**Efate , Port Vila**		**Page 1 of 1**

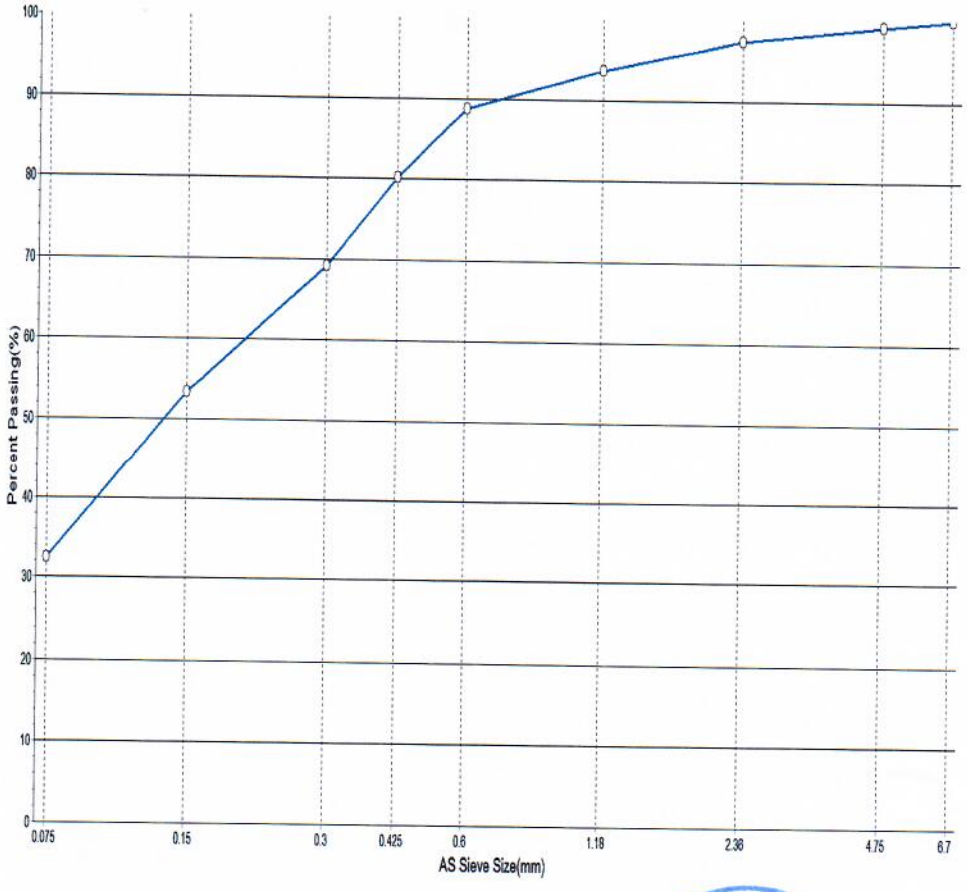
Sample Number :	S-1553
Sampling Method :	
Sampled By :	Client
Date Sampled :	26/06/2018
Date Tested :	25/07/2018
Material Type :	
Material Source :	Borehole 4
Remarks :	

SAMPLE LOCATION

Teouma Bridge
Borehole 4
Depth 12.5m

Test Number :	**Depth 12.5m**
Lot Number :	
Specification Number :	

AS Sieve Size(mm)	Percent Passing	Specification Limits
100		
75		
63		
53		
37.5		
26.5		
19.0		
16.0		
13.2		
9.5		
6.7	**100**	
4.75	**99**	
2.36	**97**	
1.18	**94**	
0.600	**89**	
0.425	**80**	
0.300	**69**	
0.150	**54**	
0.075	**32**	



APPROVED SIGNATORY

Document Code
RF141-6

REPUBLIC OF VANUATU

MINISTRY OF INFRASTRUCTURE AND PUBLIC UTILITIES

PUBLIC WORKS DEPARTMENT.

MATERIALS LABORATORY PORT VILA

Particle Size Distribution Report

Client :	TONKIN + TAYLOR	Report Number:	CL/116 - 48
Address :	Port Vila, Port Vila	Report Date :	26/07/2018
Project Name :	Teouma Bridge	Order Number :	
Project Number :	CL/116	Test Method :	AS1289.3.6.1
Location:	Efate , Port Vila		Page 1 of 1

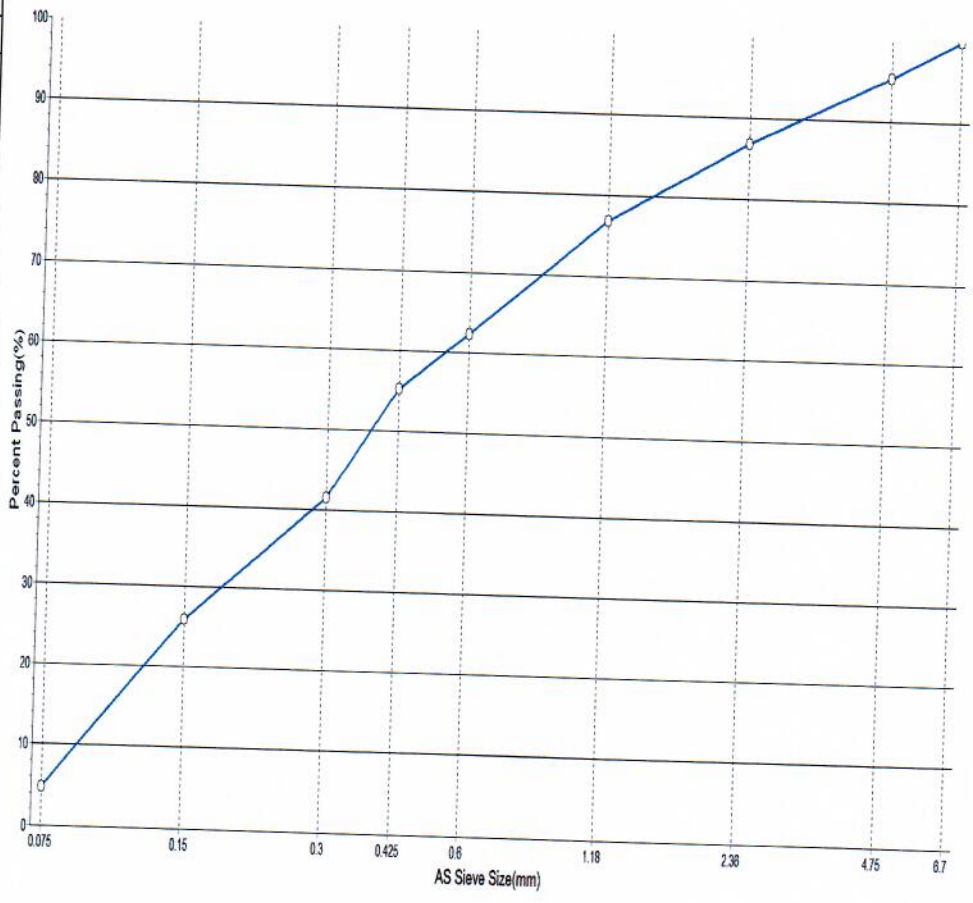
Sample Number :	S-1555
Sampling Method :	
Sampled By :	Client
Date Sampled :	26/06/2018
Date Tested :	26/06/2018
Material Type :	
Material Source :	Borehole 4
Remarks :	

SAMPLE LOCATION

Teouma Bridge
Borehole 4
Depth 15.45m

Test Number :	Depth 15.45m
Lot Number :	
Specification Number :	

AS Sieve Size(mm)	Percent Passing	Specification Limits
100		
75		
63		
53		
37.5		
26.5		
19.0		
16.0		
13.2		
9.5		
6.7	100	
4.75	95	
2.36	87	
1.18	77	
0.600	62	
0.425	55	
0.300	41	
0.150	26	
0.075	5	



APPROVED SIGNATORY

02/08/2018

Document Code
RF141-6

REPUBLIC OF VANUATU

MINISTRY OF INFRASTRUCTURE AND PUBLIC UTILITIES

PUBLIC WORKS DEPARTMENT.

MATERIALS LABORATORY PORT VILA

California Bearing Ratio Report (1 Point)

Client :	**TONKIN + TAYLOR**	Report Number:	**CL/116 - 53**
Address :	**Port Vila, Port Vila**	Report Date :	**27/08/2018**
Project Number :	**CL/116**	Order Number :	
Project Name :	**Teouma Bridge**	Test Method :	**AS1289.6.1.1**
Location:	**Efate , Port Vila**	**Page 1 of 1**	

Sample Number :	S-1602
Date Sampled :	13/08/2018
Date Tested :	25/08/2018
Sampled By :	Client
Sampling Method :	
Material Source :	
Material Type :	
Remarks :	

SAMPLE LOCATION

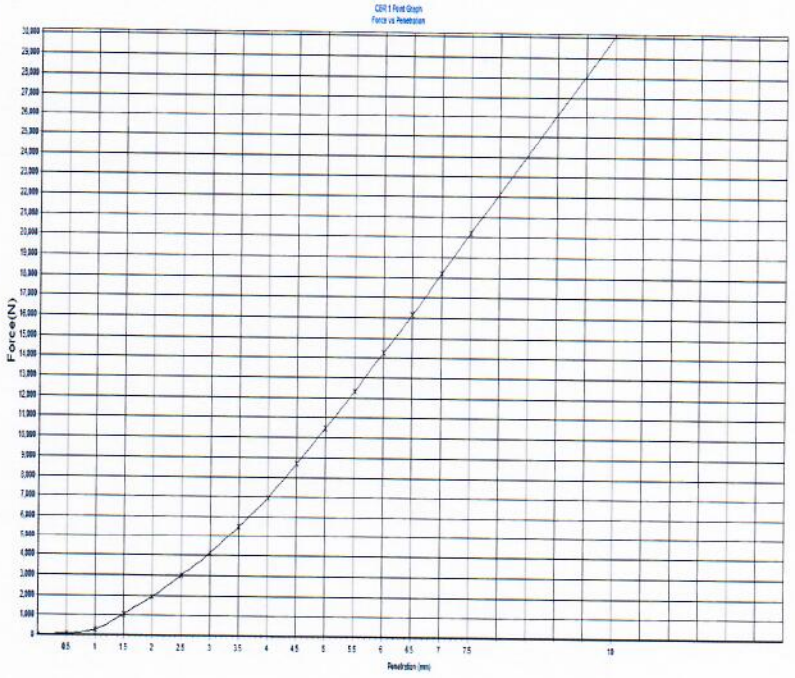
Teouma Bridge

Location 1 (Refer to attached map)

Lot Number :

Test Number :

Moisture Method :	AS1289.2.1.1
Maximum Dry Density (t/m³) :	1.775
Optimum Moisture Content (%) :	15.6
Compactive Effort :	Modified
Nominated Percentage of MDD :	100
Nominated Percentage of OMC :	100
Achieved Percentage of MDD :	1140
Achieved Percentage of OMC :	129.0
Dry Density Before Soak (t/m³) :	20.228
Dry Density After Soak (t/m³) :	20.228
Moisture Content Before Soak (%) :	20.2
Moisture Content After Soak (%) :	34.1
Density Ratio After Soak (%) :	1140
Field Moisture Content (%) :	14.3
Top Moisture Content - After Penetration (%) :	8.6
Total Moisture Content - After Penetration (%) :	8.6
Soak Condition :	Soaked
Soak Period (days) :	4
Swell (%) :	0.0
CBR Surcharge (kg) :	4.5
Oversize (%) :	
Oversize Material Replaced (%) :	



CBR 2.5mm (%) :	80
CBR 5.0mm (%) :	**100**
CBR Value (%) :	**100**

Site Selection :	
Soil Description :	

APPROVED SIGNATORY

REPUBLIC OF VANUATU

MINISTRY OF INFRASTRUCTURE AND PUBLIC UTILITIES

PUBLIC WORKS DEPARTMENT.

MATERIALS LABORATORY PORT VILA

California Bearing Ratio Report (1 Point)

Client :	**TONKIN + TAYLOR**	Report Number:	**CL/116 - 54**
Address :	**Port Vila, Port Vila**	Report Date :	**27/08/2018**
Project Number :	**CL/116**	Order Number :	
Project Name :	**Teouma Bridge**	Test Method :	**AS1289.6.1.1**
Location:	**Efate , Port Vila**	**Page 1 of 1**	

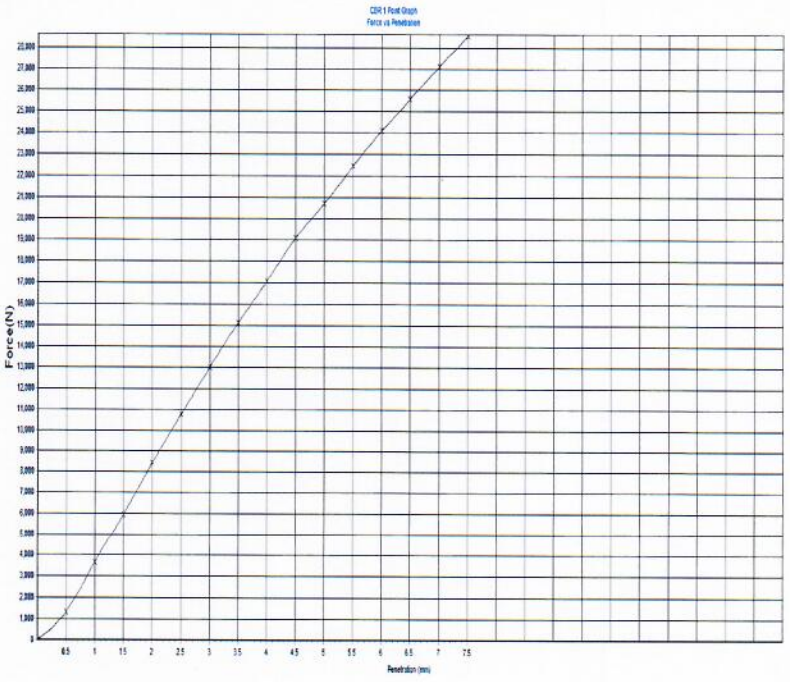
Sample Number :	S-1603
Date Sampled :	13/08/2018
Date Tested :	25/08/2018
Sampled By :	Client
Sampling Method :	
Material Source :	
Material Type :	
Remarks :	

SAMPLE LOCATION

Teouma Bridge
Location 2 (Refer to attached map)

Lot Number :
Test Number :

Moisture Method :	AS1289.2.1.1
Maximum Dry Density (t/m³) :	1.967
Optimum Moisture Content (%) :	11.7
Compactive Effort :	Modified
Nominated Percentage of MDD :	100
Nominated Percentage of OMC :	100
Achieved Percentage of MDD :	1197
Achieved Percentage of OMC :	91.0
Dry Density Before Soak (t/m³) :	23.539
Dry Density After Soak (t/m³) :	
Moisture Content Before Soak (%) :	10.6
Moisture Content After Soak (%) :	34.1
Density Ratio After Soak (%) :	
Field Moisture Content (%) :	11.7
Top Moisture Content - After Penetration (%) :	13.0
Total Moisture Content - After Penetration (%) :	
Soak Condition :	Soaked
Soak Period (days) :	4
Swell (%) :	0.0



CBR Surcharge (kg) :	4.5	CBR 2.5mm (%) :	90
Oversize (%) :		CBR 5.0mm (%) :	**110**
Oversize Material Replaced (%) :		**CBR Value (%) :**	**110**

Site Selection :	
Soil Description :	

APPROVED SIGNATORY

REPUBLIC OF VANUATU

MINISTRY OF INFRASTRUCTURE AND PUBLIC UTILITIES

PUBLIC WORKS DEPARTMENT.

MATERIALS LABORATORY PORT VILA

California Bearing Ratio Report (1 Point)

Client :	**TONKIN + TAYLOR**	Report Number:	**CL/116 - 55**
Address :	**Port Vila, Port Vila**	Report Date :	**27/08/2018**
Project Number :	**CL/116**	Order Number :	
Project Name :	**Teouma Bridge**	Test Method :	**AS1289.6.1.1**
Location:	**Efate , Port Vila**	**Page 1 of 1**	

Sample Number :	S-1604
Date Sampled :	13/08/2018
Date Tested :	25/08/2018
Sampled By :	Client
Sampling Method :	
Material Source :	
Material Type :	
Remarks :	

SAMPLE LOCATION

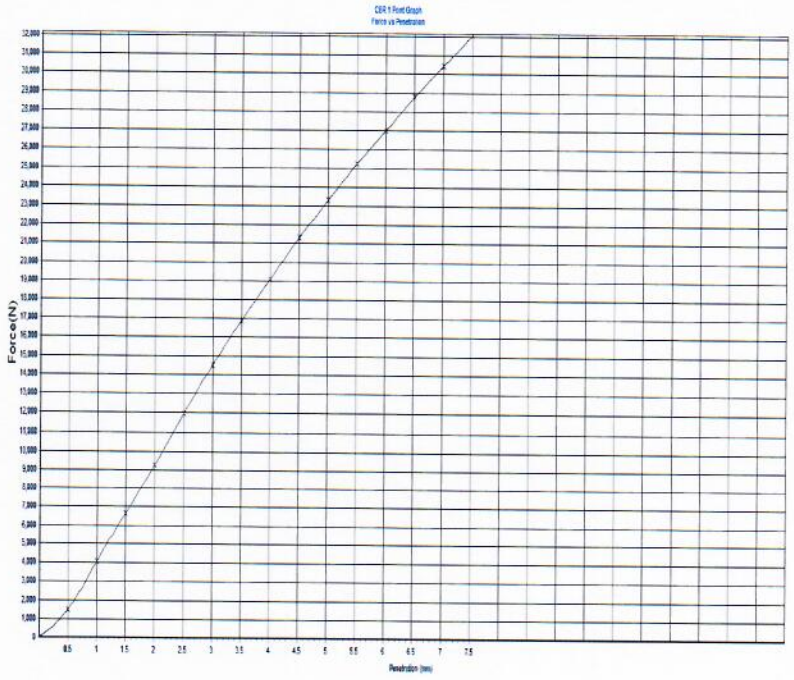
Teouma Bridge

Location 3 (Refer to attached map)

Lot Number :

Test Number :

Moisture Method :	AS1289.2.1.1
Maximum Dry Density (t/m³) :	2.01
Optimum Moisture Content (%) :	10.9
Compactive Effort :	Modified
Nominated Percentage of MDD :	100
Nominated Percentage of OMC :	100
Achieved Percentage of MDD :	1177
Achieved Percentage of OMC :	104.0
Dry Density Before Soak (t/m³) :	23.648
Dry Density After Soak (t/m³) :	23.648
Moisture Content Before Soak (%) :	11.3
Moisture Content After Soak (%) :	12.6
Density Ratio After Soak (%) :	1177
Field Moisture Content (%) :	1222.2
Top Moisture Content - After Penetration (%) :	11.4
Total Moisture Content - After Penetration (%) :	11.9
Soak Condition :	Soaked
Soak Period (days) :	4
Swell (%) :	0.0



CBR Surcharge (kg) :	4.5	CBR 2.5mm (%) :	100
Oversize (%) :		CBR 5.0mm (%) :	**120**
Oversize Material Replaced (%) :		**CBR Value (%) :**	**120**

Site Selection :	
Soil Description :	

APPROVED SIGNATORY

REPUBLIC OF VANUATU

MINISTRY OF INFRASTRUCTURE AND PUBLIC UTILITIES

PUBLIC WORKS DEPARTMENT.

MATERIALS LABORATORY PORT VILA

Atterberg Limits Report

Client :	TONKIN + TAYLOR	Report Number:	CL/116 - 9
Address :	Port Vila, Port Vila	Report Date :	5/06/2018
Project Name :	Teouma Bridge	Order Number :	
Project Number :	CL/116	Test Method :	AS1289.3.1.1
Location:	Efate , Port Vila		Page 1 of 1

Sample Number :	S-1363			
Test Number :	#1			
Date Sampled :	17/05/2018			
Date Tested :	17/05/2018			
Sampled By :	Client			
Sampling Method :				
Material Source :	Spycon Quarry			
Material Type :	Base Course			
Sample Location :	Teouma Bridge Spycon Quarry Base Course Efate			
Lot Number :				
Moisture Method :	AS1289.2.1.1			
Sample History :				
Sample Preparation :	Dry			
Notes :				
Mould Length (mm) :	250			
Liquid Limit (%) :	Not Obtainable			
Plastic Limit (%) :	Not Obtainable			
Plasticity Index (%) :	NP (Non Plastic)			
Linear Shrinkage (%) :	1.0			
SPECIFICATION DETAILS				
Specification Number :				
Liquid Limit - Max :				
Plasticity Index - Max :				
Linear Shrinkage - Max :				
Remarks :	-			

APPROVED SIGNATORY

Republique Vanuatu Republic Department of Public Works GOVERNMENT Public Works

Document Code
RF25-17

REPUBLIC OF VANUATU

MINISTRY OF INFRASTRUCTURE AND PUBLIC UTILITIES

PUBLIC WORKS DEPARTMENT.

MATERIALS LABORATORY PORT VILA

Moisture Content Report

Client :	**TONKIN + TAYLOR**	Report Number:	**CL/116 - 4**
Address :	**Port Vila, Port Vila**	Report Date :	**22/05/2018**
Project Name :	**Teouma Bridge**	Order Number :	
Project Number :	**CL/116**	Test Method :	**AS1289.2.1.1**
Location:	**Efate , Port Vila**		**Page 1 of 1**

Sample Number :	S-1363			
Test Number :	#1			
Sampling Method :				
Date Sampled :	17/05/2018			
Date Tested :	17/05/2018			
Material Type :	Base Course			
Material Source :	Spycon Quarry			
Lot Number :				
Sample Location :	Teouma Bridge Spycon Quarry Base Course Efate			
Oven Temperature (°C) :	105-110			
Soil Description :				
Moisture Content (%) :	**12.4**			
Remarks :				

APPROVED SIGNATORY

Document Code
RF120-6

REPUBLIC OF VANUATU

MINISTRY OF INFRASTRUCTURE AND PUBLIC UTILITIES

PUBLIC WORKS DEPARTMENT.

MATERIALS LABORATORY PORT VILA

Particle Size Distribution Report

Client :	TONKIN + TAYLOR	Report Number:	CL/116 - 3
Address :	Port Vila, Port Vila	Report Date :	22/05/2018
Project Name :	Teouma Bridge	Order Number :	
Project Number :	CL/116	Test Method :	AS1289.3.6.1
Location:	Efate , Port Vila		Page 1 of 1

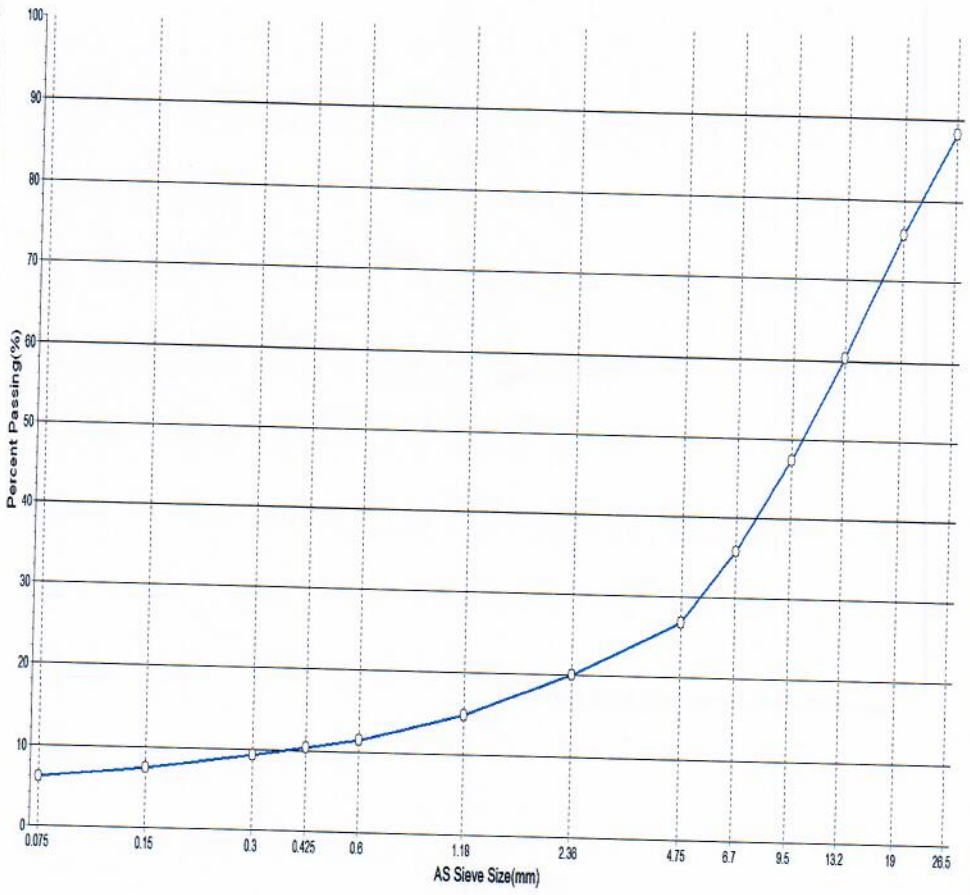
Sample Number :	S-1363
Sampling Method :	
Sampled By :	Client
Date Sampled :	17/05/2018
Date Tested :	17/05/2018
Material Type :	Base Course
Material Source :	Spycon Quarry
Remarks :	

SAMPLE LOCATION

Teouma Bridge
Spycon Quarry
Base Course
Efate

Test Number :	#1
Lot Number :	
Specification Number :	

AS Sieve Size(mm)	Percent Passing	Specification Limits
100		
75		
63		
53		
37.5		
26.5	89	
19.0	76	
16.0		
13.2	61	
9.5	48	
6.7	36	
4.75	27	
2.36	21	
1.18	15	
0.600	12	
0.425	11	
0.300	10	
0.150	8	
0.075	7	



APPROVED SIGNATORY

Document Code
RF141-6

REPUBLIC OF VANUATU

MINISTRY OF INFRASTRUCTURE AND PUBLIC UTILITIES

PUBLIC WORKS DEPARTMENT.

MATERIALS LABORATORY PORT VILA

Moisture Density Relationship Report

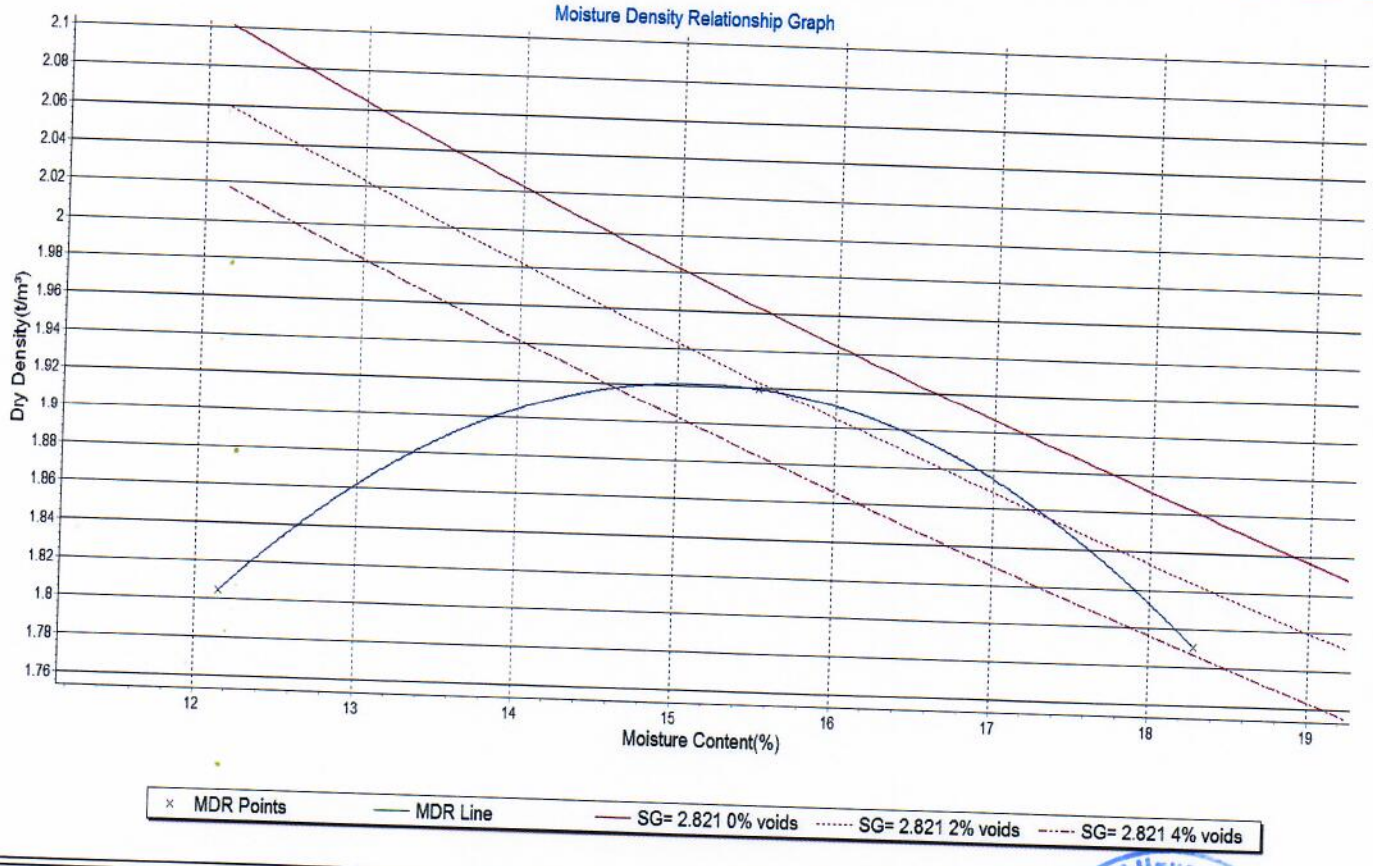
Client :	TONKIN + TAYLOR	Report Number:	CL/116 - 1/1
Address :	Port Vila, Port Vila	Report Date :	22/05/2018
Project Name :	Teouma Bridge	Order Number :	
Project Number :	CL/116	Test Method :	AS1289.5.1.1
Location:	Efate , Port Vila		Page 1 of 1

Sample Number :	S-1363
Sampling Method :	
Sampled By :	Client
Date Sampled :	17/05/2018
Date Tested :	17/05/2018
Material Type :	Base Course
Material Source :	Spycon Quarry
Remarks :	

SAMPLE LOCATION
Teouma Bridge
Spycon Quarry
Base Course
Efate

Test Number :	#1
Lot Number :	
Moisture Method :	AS1289.2.1.4

Maximum Size (mm) :	19.0	**Maximum Dry Density (t/m³) :**	**1.93**
Oversize Dry (%) :		**Optimum Moisture Content (%) :**	**15.5**
Oversize Density (t/m³) :			



APPROVED SIGNATORY

Document Code
RF124-7

REPUBLIC OF VANUATU

MINISTRY OF INFRASTRUCTURE AND PUBLIC UTILITIES

PUBLIC WORKS DEPARTMENT.

MATERIALS LABORATORY PORT VILA

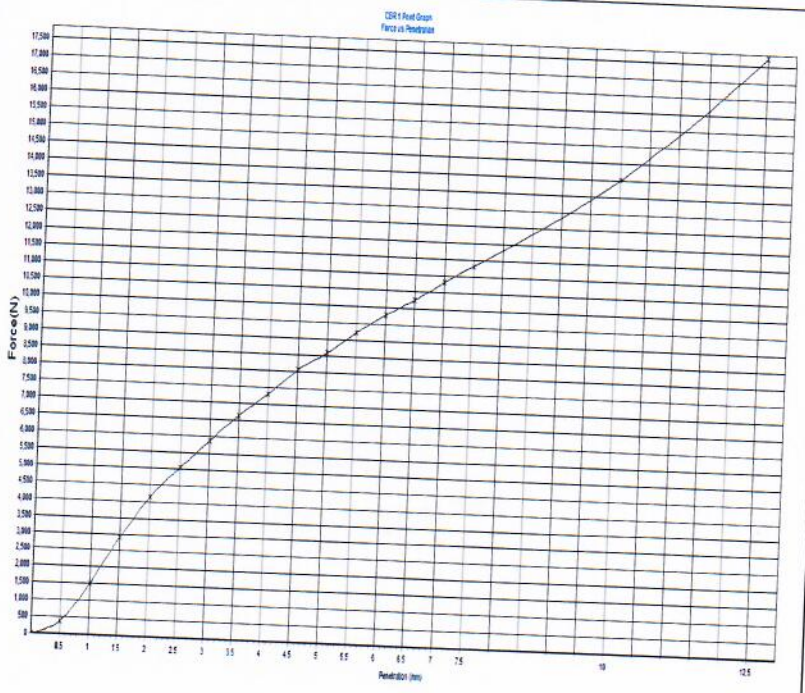
California Bearing Ratio Report (1 Point)

Client :	TONKIN + TAYLOR	Report Number:	CL/116 - 7
Address :	Port Vila, Port Vila	Report Date :	5/06/2018
Project Number :	CL/116	Order Number :	
Project Name :	Teouma Bridge	Test Method :	AS1289.6.1.1
Location:	Efate , Port Vila		Page 1 of 1

Sample Number :	S-1363
Date Sampled :	17/05/2018
Date Tested :	17/05/2018
Sampled By :	Client
Sampling Method :	
Material Source :	Spycon Quarry
Material Type :	Base Course
Remarks :	

SAMPLE LOCATION
Teouma Bridge
Spycon Quarry
Base Course
Efate
Lot Number :
Test Number : #1

Moisture Method :	AS1289.2.1.1
Maximum Dry Density (t/m³) :	1.921
Optimum Moisture Content (%) :	15.1
Compactive Effort :	Standard
Nominated Percentage of MDD :	100
Nominated Percentage of OMC :	100
Achieved Percentage of MDD :	94
Achieved Percentage of OMC :	73.0
Dry Density Before Soak (t/m³) :	1.8
Dry Density After Soak (t/m³) :	1.8
Moisture Content Before Soak (%) :	11.0
Moisture Content After Soak (%) :	15.6
Density Ratio After Soak (%) :	94
Field Moisture Content (%) :	8.9
Top Moisture Content - After Penetration (%) :	14.7
Total Moisture Content - After Penetration (%) :	14.7
Soak Condition :	Soaked
Soak Period (days) :	4
Swell (%) :	0.0
CBR Surcharge (kg) :	4.5
Oversize (%) :	
Oversize Material Replaced (%) :	



CBR 2.5mm (%) :	40
CBR 5.0mm (%) :	45
CBR Value (%) :	**45**

Site Selection :	
Soil Description :	

APPROVED SIGNATORY

Document Code
RF39-11

REPUBLIC OF VANUATU

MINISTRY OF INFRASTRUCTURE AND PUBLIC UTILITIES

PUBLIC WORKS DEPARTMENT.

MATERIALS LABORATORY PORT VILA

Atterberg Limits Report

Client :	**TONKIN + TAYLOR**	Report Number:	**CL/116 - 10**
Address :	**Port Vila, Port Vila**	Report Date :	**5/06/2018**
Project Name :	**Teouma Bridge**	Order Number :	
Project Number :	**CL/116**	Test Method :	**AS1289.3.1.1**
Location:	**Efate , Port Vila**	**Page 1 of 1**	

Sample Number :	S-1364			
Test Number :	#2			
Date Sampled :	17/05/2018			
Date Tested :	17/05/2018			
Sampled By :	Client			
Sampling Method :				
Material Source :	Spycon Quarry			
Material Type :	Bulk			
Sample Location :	Teouma Bridge Spycon Quarry Bulk Efate			
Lot Number :				
Moisture Method :	AS1289.2.1.1			
Sample History :				
Sample Preparation :	Dry			
Notes :				
Mould Length (mm) :	250			
Liquid Limit (%) :	Not Obtainable			
Plastic Limit (%) :	Not Obtainable			
Plasticity Index (%) :	NP (Non Plastic)			
Linear Shrinkage (%) :	1.5			
SPECIFICATION DETAILS				
Specification Number :				
Liquid Limit - Max :				
Plasticity Index - Max :				
Linear Shrinkage - Max :				
Remarks :	-			

APPROVED SIGNATORY

Document Code
RF25-17

REPUBLIC OF VANUATU

MINISTRY OF INFRASTRUCTURE AND PUBLIC UTILITIES

PUBLIC WORKS DEPARTMENT.

MATERIALS LABORATORY PORT VILA

Moisture Content Report

Client :	**TONKIN + TAYLOR**	Report Number:	**CL/116 - 11**
Address :	**Port Vila, Port Vila**	Report Date :	**5/06/2018**
Project Name :	**Teouma Bridge**	Order Number :	
Project Number :	**CL/116**	Test Method :	**AS1289.2.1.4**
Location:	**Efate , Port Vila**	**Page 1 of 1**	

Sample Number :	S-1364			
Test Number :	#2			
Sampling Method :				
Date Sampled :	17/05/2018			
Date Tested :	17/05/2018			
Material Type :	Bulk			
Material Source :	Spycon Quarry			
Lot Number :				
Sample Location :	Teouma Bridge Spycon Quarry Bulk Efate			
Oven Temperature (°C) :	105-110			
Soil Description :				
Moisture Content (%) :	**11.7**			
Remarks :				

APPROVED SIGNATORY

Document Code
RF120-6

REPUBLIC OF VANUATU

MINISTRY OF INFRASTRUCTURE AND PUBLIC UTILITIES

PUBLIC WORKS DEPARTMENT.

MATERIALS LABORATORY PORT VILA

Particle Size Distribution Report

Client :	**TONKIN + TAYLOR**	Report Number:	**CL/116 - 5**
Address :	**Port Vila, Port Vila**	Report Date :	**22/05/2018**
Project Name :	**Teouma Bridge**	Order Number :	
Project Number :	**CL/116**	Test Method :	**AS1289.3.6.1**
Location:	**Efate , Port Vila**		**Page 1 of 1**

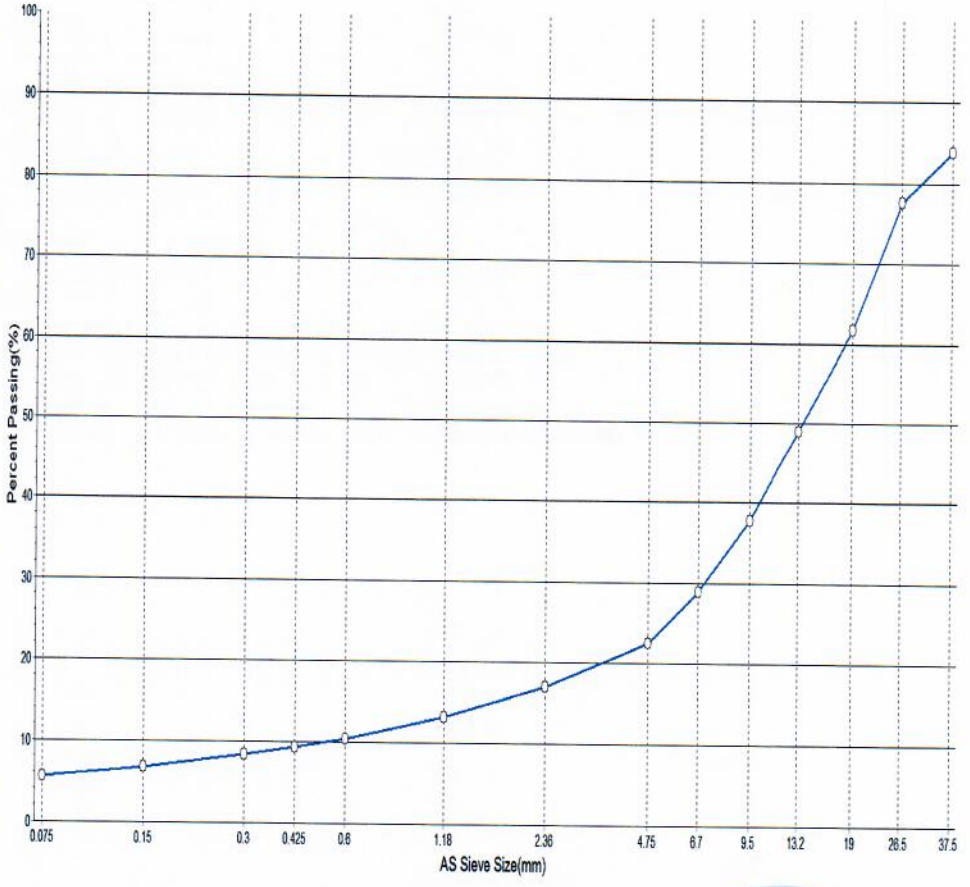
Sample Number :	S-1364
Sampling Method :	
Sampled By :	Client
Date Sampled :	17/05/2018
Date Tested :	17/05/2018
Material Type :	Bulk
Material Source :	Spycon Quarry
Remarks :	

SAMPLE LOCATION

Teouma Bridge
Spycon Quarry
Bulk
Efate

Test Number :	**#2**
Lot Number :	
Specification Number :	

AS Sieve Size(mm)	Percent Passing	Specification Limits
100		
75		
63		
53		
37.5	**84**	
26.5	**78**	
19.0	**62**	
16.0		
13.2	**49**	
9.5	**38**	
6.7	**29**	
4.75	**23**	
2.36	**18**	
1.18	**14**	
0.600	**11**	
0.425	**10**	
0.300	**9**	
0.150	**7**	
0.075	**6**	



APPROVED SIGNATORY

Document Code
RF141-6

REPUBLIC OF VANUATU

MINISTRY OF INFRASTRUCTURE AND PUBLIC UTILITIES

PUBLIC WORKS DEPARTMENT.

MATERIALS LABORATORY PORT VILA

Moisture Density Relationship Report

Client :	TONKIN + TAYLOR	Report Number:	CL/116 - 2/1
Address :	Port Vila, Port Vila	Report Date :	22/05/2018
Project Name :	Teouma Bridge	Order Number :	
Project Number :	CL/116	Test Method :	AS1289.5.1.1
Location:	Efate , Port Vila	Page 1 of 1	

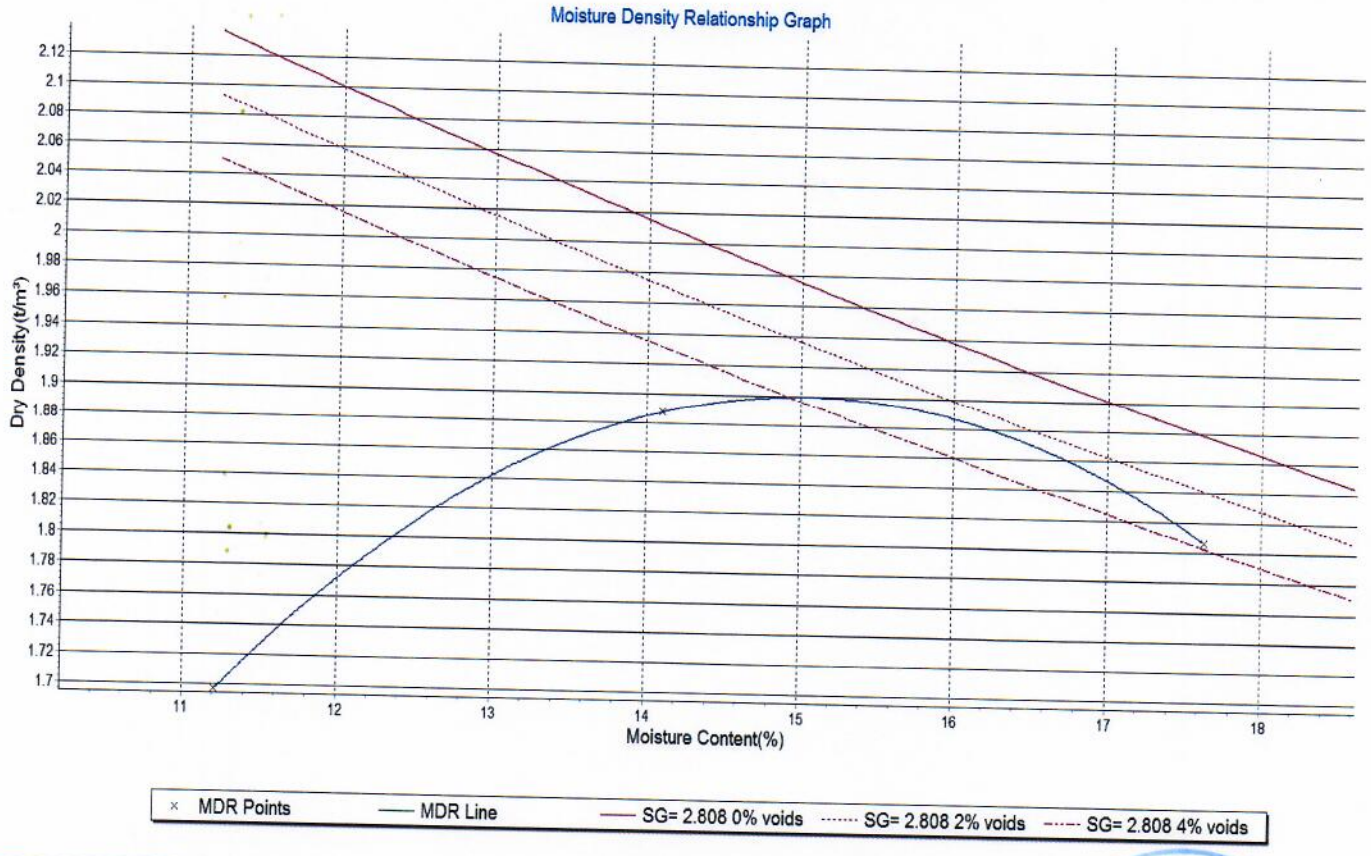
Sample Number :	S-1364
Sampling Method :	
Sampled By :	Client
Date Sampled :	17/05/2018
Date Tested :	17/05/2018
Material Type :	Bulk
Material Source :	Spycon Quarry
Remarks :	

SAMPLE LOCATION
Teouma Bridge
Spycon Quarry
Bulk
Efate

Test Number :	#2
Lot Number :	
Moisture Method :	AS1289.2.1.4

Maximum Size (mm) :	19.0
Oversize Dry (%) :	
Oversize Density (t/m³) :	

Maximum Dry Density (t/m³) :	**1.9**
Optimum Moisture Content (%) :	**15.5**



APPROVED SIGNATORY

Document Code
RF124-7

REPUBLIC OF VANUATU

MINISTRY OF INFRASTRUCTURE AND PUBLIC UTILITIES

PUBLIC WORKS DEPARTMENT.

MATERIALS LABORATORY PORT VILA

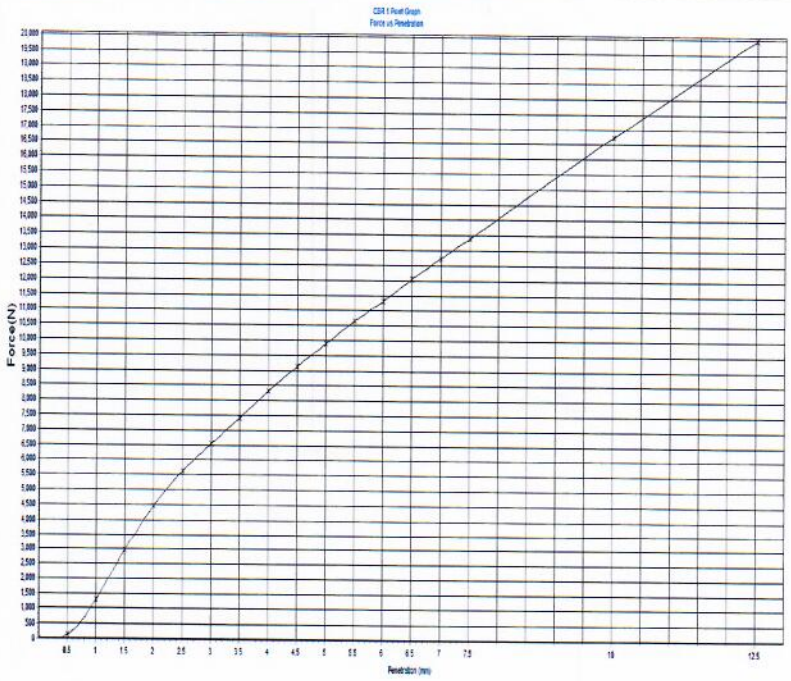
California Bearing Ratio Report (1 Point)

Client :	**TONKIN + TAYLOR**	Report Number:	**CL/116 - 8**
Address :	**Port Vila, Port Vila**	Report Date :	**5/06/2018**
Project Number :	**CL/116**	Order Number :	
Project Name :	**Teouma Bridge**	Test Method :	**AS1289.6.1.1**
Location:	**Efate , Port Vila**	**Page 1 of 1**	

Sample Number :	S-1364
Date Sampled :	17/05/2018
Date Tested :	17/05/2018
Sampled By :	Client
Sampling Method :	
Material Source :	Spycon Quarry
Material Type :	Bulk
Remarks :	

SAMPLE LOCATION
Teouma Bridge
Spycon Quarry
Bulk
Efate
Lot Number :
Test Number : #2

Moisture Method :	AS1289.2.1.1
Maximum Dry Density (t/m³) :	1.9
Optimum Moisture Content (%) :	15.0
Compactive Effort :	Standard
Nominated Percentage of MDD :	100
Nominated Percentage of OMC :	100
Achieved Percentage of MDD :	95
Achieved Percentage of OMC :	75.0
Dry Density Before Soak (t/m³) :	1.81
Dry Density After Soak (t/m³) :	1.81
Moisture Content Before Soak (%) :	11.3
Moisture Content After Soak (%) :	15.5
Density Ratio After Soak (%) :	95
Field Moisture Content (%) :	6.8
Top Moisture Content - After Penetration (%) :	14.7
Total Moisture Content - After Penetration (%) :	32.3
Soak Condition :	Soaked
Soak Period (days) :	4
Swell (%) :	0.0
CBR Surcharge (kg) :	4.5
Oversize (%) :	
Oversize Material Replaced (%) :	



CBR 2.5mm (%) :	50
CBR 5.0mm (%) :	**50**
CBR Value (%) :	**50**

Site Selection :	
Soil Description :	

APPROVED SIGNATORY

Document Code
RF39-11

REPUBLIC OF VANUATU

MINISTRY OF INFRASTRUCTURE AND PUBLIC UTILITIES

PUBLIC WORKS DEPARTMENT.

MATERIALS LABORATORY PORT VILA

California Bearing Ratio Report (1 Point)

Client :	**TONKIN + TAYLOR**	Report Number:	**CL/116 - 61/1**
Address :	**Port Vila, Port Vila**	Report Date :	**18/10/2018**
Project Number :	**CL/116**	Order Number :	
Project Name :	**Teouma Bridge**	Test Method :	**AS1289.6.1.1**
Location:	**Efate , Port Vila**	**Page 1 of 1**	

Sample Number :	S-1707	SAMPLE LOCATION
Date Sampled :	3/10/2018	
Date Tested :	15/10/2018	0-40mm Basecourse
Sampled By :	Jeremiah Bakeo	Spycon Quarry
Sampling Method :	AS1141.3.1	Sample #1
Material Source :	Spycon Quarry	Lot Number : NA
Material Type :	0-40mm Basecourse	Test Number : NA
Remarks :		

Moisture Method :	AS1289.2.1.1		
Maximum Dry Density (t/m³) :	1.962		
Optimum Moisture Content (%) :	13.8		
Compactive Effort :	Modified		
Nominated Percentage of MDD :	100		
Nominated Percentage of OMC :	100		
Achieved Percentage of MDD :	97		
Achieved Percentage of OMC :	96.0		
Dry Density Before Soak (t/m³) :	1.91		
Dry Density After Soak (t/m³) :	1.91		
Moisture Content Before Soak (%) :	13.3		
Moisture Content After Soak (%) :	13.8		
Density Ratio After Soak (%) :	97		
Field Moisture Content (%) :	10.9		
Top Moisture Content - After Penetration (%) :	13.0		
Total Moisture Content - After Penetration (%) :	13.2		
Soak Condition :	Soaked		
Soak Period (days) :	7		
Swell (%) :	0.0		
CBR Surcharge (kg) :	4.5	CBR 2.5mm (%) :	45
Oversize (%) :	11.6	CBR 5.0mm (%) :	**60**
Oversize Material Replaced (%) :		**CBR Value (%) :**	**60**

Site Selection :	
Soil Description :	Sandy GRAVEL: f-c gravel, f-m sand

REPUBLIC OF VANUATU PUBLIC WORKS APPROVED SIGNATORY CMT LABORATORY Travaux Publics GOVERNMENT RÉPUBLIQUE DE VANUATU

REPUBLIC OF VANUATU

MINISTRY OF INFRASTRUCTURE AND PUBLIC UTILITIES

PUBLIC WORKS DEPARTMENT.

MATERIALS LABORATORY PORT VILA

California Bearing Ratio Report (1 Point)

Client :	**TONKIN + TAYLOR**	Report Number:	**CL/116 - 62/1**
Address :	**Port Vila, Port Vila**	Report Date :	**18/10/2018**
Project Number :	**CL/116**	Order Number :	
Project Name :	**Teouma Bridge**	Test Method :	**AS1289.6.1.1**
Location:	**Efate , Port Vila**	**Page 1 of 1**	

		SAMPLE LOCATION	
Sample Number :	S-1708		
Date Sampled :	3/10/2018		
Date Tested :	15/10/2018	0-40mm Basecourse	
Sampled By :	Jeremiah Bakeo	Spycon Quarry	
Sampling Method :	AS1141.3.1	Sample #2	
Material Source :	Spycon Quarry	Lot Number :	NA
Material Type :	0-40mm Basecourse	Test Number :	NA
Remarks :			

Moisture Method :	AS1289.2.1.1		
Maximum Dry Density (t/m³) :	1.897		
Optimum Moisture Content (%) :	12.8		
Compactive Effort :	Modified		
Nominated Percentage of MDD :	100		
Nominated Percentage of OMC :	100		
Achieved Percentage of MDD :	103		
Achieved Percentage of OMC :	91.0		
Dry Density Before Soak (t/m³) :	1.959		
Dry Density After Soak (t/m³) :	1.959		
Moisture Content Before Soak (%) :	11.6		
Moisture Content After Soak (%) :	12.7		
Density Ratio After Soak (%) :	103		
Field Moisture Content (%) :	11.8		
Top Moisture Content - After Penetration (%) :	12.0		
Total Moisture Content - After Penetration (%) :	12.3		
Soak Condition :	Soaked		
Soak Period (days) :	7		
Swell (%) :	0.0		
CBR Surcharge (kg) :	4.5	CBR 2.5mm (%) :	140
Oversize (%) :	19	CBR 5.0mm (%) :	**160**
Oversize Material Replaced (%) :		**CBR Value (%) :**	**160**

Site Selection :	
Soil Description :	Sandy GRAVEL: f-c gravel, f-m sand

REPUBLIC OF VANUATU PUBLIC WORKS APPROVED SIGNATORY CMT LABORATORY Travaux Publics GOVERNMENT RÉPUBLIQUE DE VANUATU

Document Code: RF-39-05

REPUBLIC OF VANUATU

MINISTRY OF INFRASTRUCTURE AND PUBLIC UTILITIES

PUBLIC WORKS DEPARTMENT.

MATERIALS LABORATORY PORT VILA

Moisture Content Report

Client :	TONKIN + TAYLOR	Report Number:	CL/116 - 52
Address :	Port Vila, Port Vila	Report Date :	16/08/2018
Project Name :	Teouma Bridge	Order Number :	
Project Number :	CL/116	Test Method :	AS1289.2.1.1
Location:	Efate , Port Vila	Page 1 of 1	

Sample Number :	S-1602	S-1603	S-1604	
Test Number :				
Sampling Method :				
Date Sampled :	13/08/2018	13/08/2018	13/08/2018	
Date Tested :	14/08/2018	14/08/2018	14/08/2018	
Material Type :				
Material Source :				
Lot Number :				
Sample Location :	Teouma Bridge Location 1 (Refer to attached map)	Teouma Bridge Location 2 (Refer to attached map)	Teouma Bridge Location 3 (Refer to attached map)	
Oven Temperature (°C) :				
Soil Description :				
Moisture Content (%) :	**14.3**	**11.7**	**10.4**	
Remarks :				

APPROVED SIGNATORY

REPUBLIC OF VANUATU

MINISTRY OF INFRASTRUCTURE AND PUBLIC UTILITIES

PUBLIC WORKS DEPARTMENT.

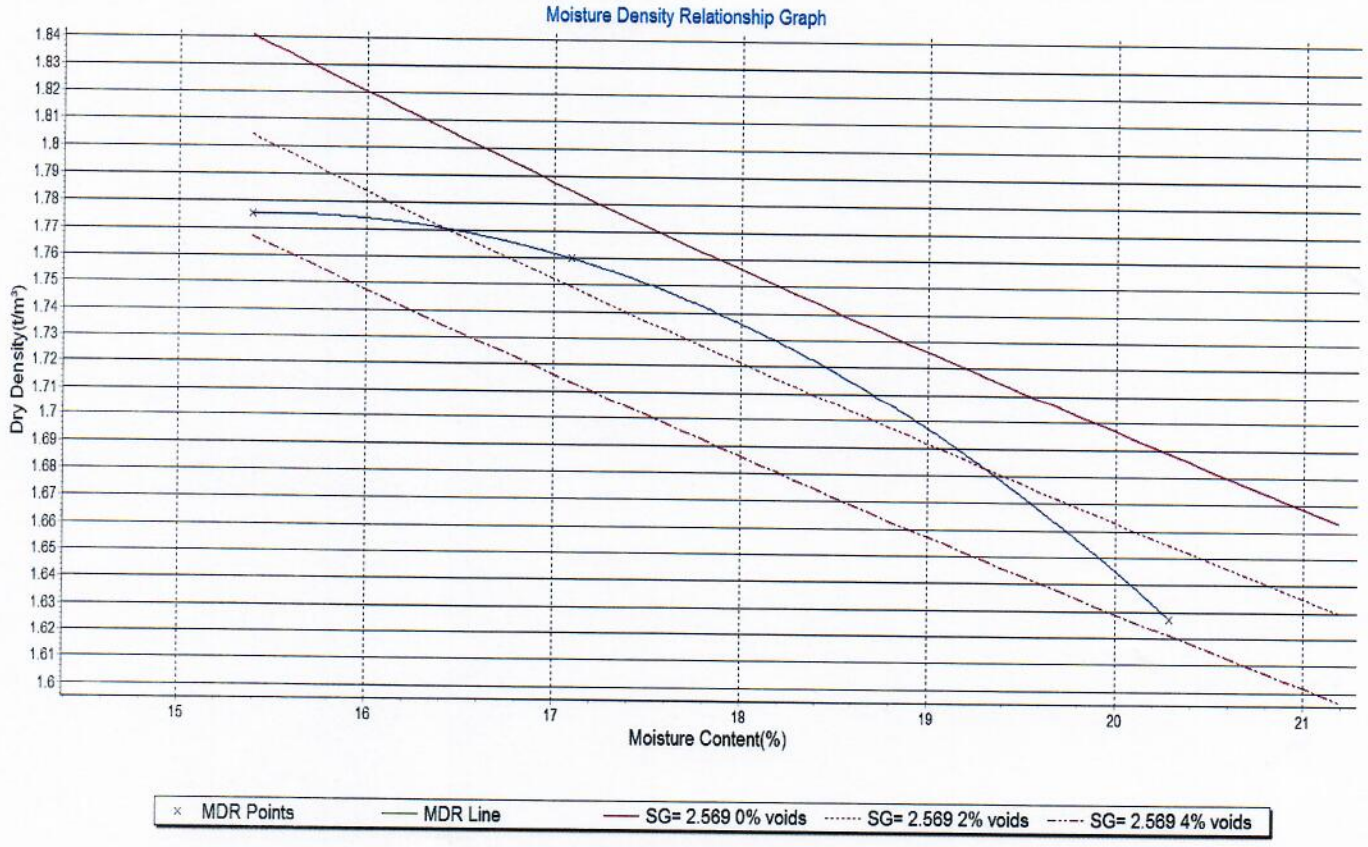
MATERIALS LABORATORY PORT VILA

Moisture Density Relationship Report

Client :	TONKIN + TAYLOR	Report Number:	CL/116 - 49/1
Address :	Port Vila, Port Vila	Report Date :	16/08/2018
Project Name :	Teouma Bridge	Order Number :	
Project Number :	CL/116	Test Method :	AS1289.5.2.1
Location:	Efate , Port Vila	Page 1 of 1	

Sample Number :	S-1602	SAMPLE LOCATION	
Sampling Method :		Teouma Bridge	
Sampled By :	Client	Location 1 (Refer to attached map)	
Date Sampled :	13/08/2018		
Date Tested :	14/08/2018	Test Number :	
Material Type :		Lot Number :	
Material Source :		Moisture Method :	AS1289.2.1.1
Remarks :			

Maximum Size (mm) :	19.0	**Maximum Dry Density (t/m³) :**	**1.78**
Oversize Dry (%) :		**Optimum Moisture Content (%) :**	**15.5**
Oversize Density (t/m³) :			



APPROVED SIGNATORY

REPUBLIC OF VANUATU

MINISTRY OF INFRASTRUCTURE AND PUBLIC UTILITIES

PUBLIC WORKS DEPARTMENT.

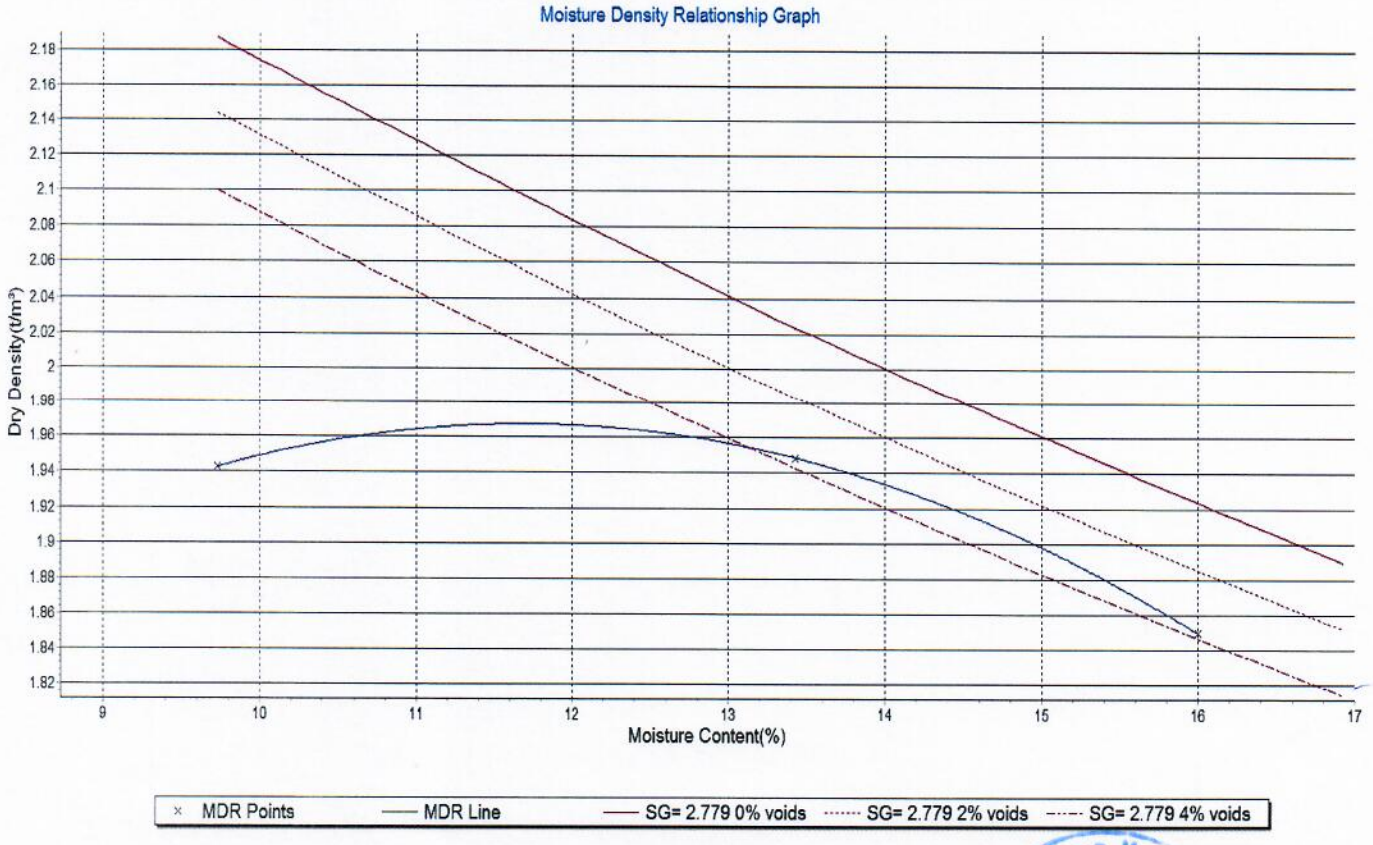
MATERIALS LABORATORY PORT VILA

Moisture Density Relationship Report

Client :	**TONKIN + TAYLOR**	Report Number:	**CL/116 - 50/1**
Address :	**Port Vila, Port Vila**	Report Date :	**16/08/2018**
Project Name :	**Teouma Bridge**	Order Number :	
Project Number :	**CL/116**	Test Method :	**AS1289.5.2.1**
Location:	**Efate , Port Vila**	**Page 1 of 1**	

Sample Number :	S-1603	SAMPLE LOCATION	
Sampling Method :			
Sampled By :	Client	Teouma Bridge	
Date Sampled :	13/08/2018	Location 2 (Refer to attached map)	
Date Tested :	14/08/2018		
Material Type :		Test Number :	
Material Source :		Lot Number :	
Remarks :		Moisture Method :	AS1289.2.1.1

Maximum Size (mm) :	19.0	**Maximum Dry Density (t/m³) :**	**1.97**
Oversize Dry (%) :		**Optimum Moisture Content (%) :**	**11.5**
Oversize Density (t/m³) :			



APPROVED SIGNATORY

REPUBLIC OF VANUATU

MINISTRY OF INFRASTRUCTURE AND PUBLIC UTILITIES

PUBLIC WORKS DEPARTMENT.

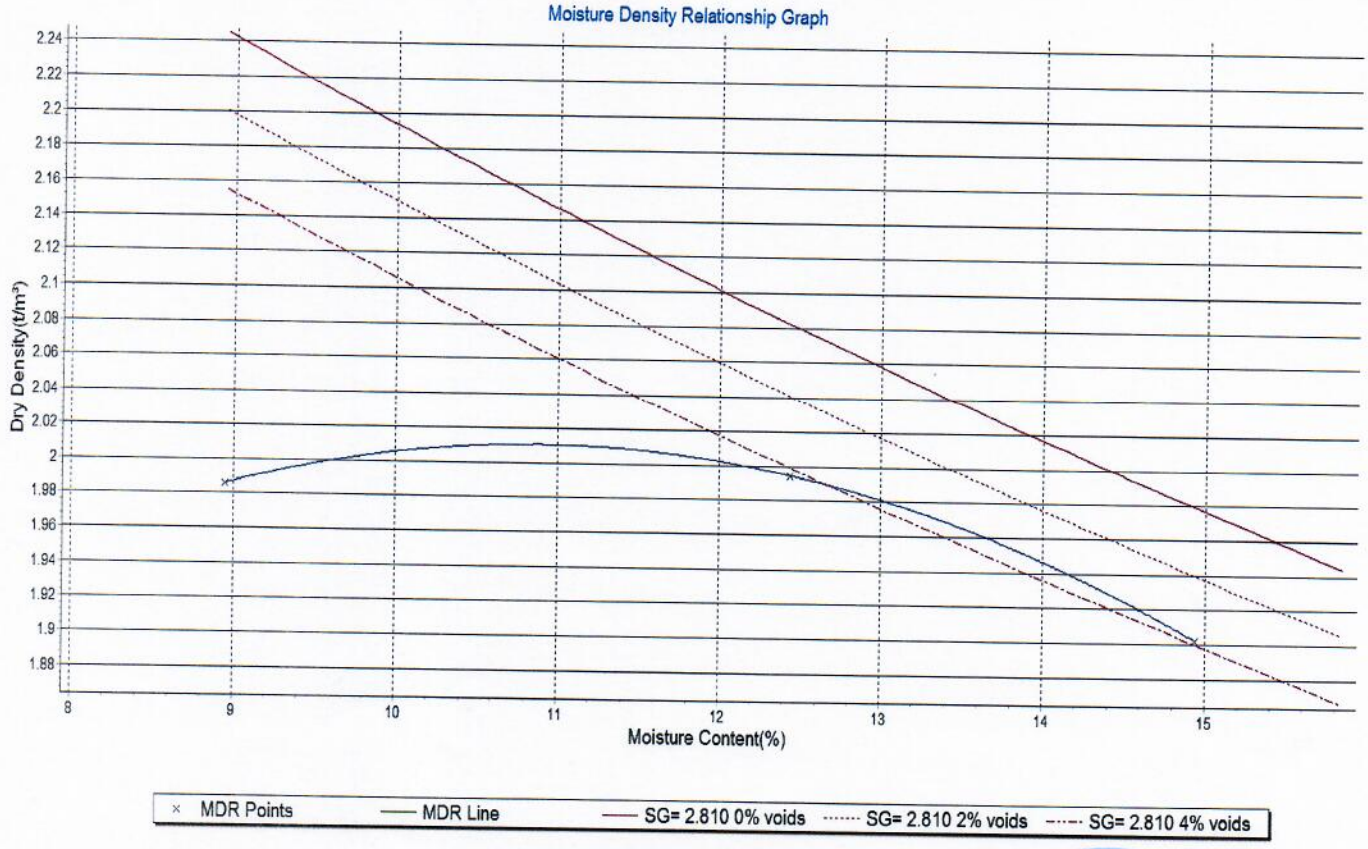
MATERIALS LABORATORY PORT VILA

Moisture Density Relationship Report

Client :	TONKIN + TAYLOR	Report Number:	CL/116 - 51/1
Address :	Port Vila, Port Vila	Report Date :	16/08/2018
Project Name :	Teouma Bridge	Order Number :	
Project Number :	CL/116	Test Method :	AS1289.5.2.1
Location:	Efate , Port Vila	Page 1 of 1	

Sample Number :	S-1604	SAMPLE LOCATION	
Sampling Method :		Teouma Bridge	
Sampled By :	Client	Location 3 (Refer to attached map)	
Date Sampled :	13/08/2018		
Date Tested :	14/08/2018	Test Number :	
Material Type :		Lot Number :	
Material Source :		Moisture Method :	AS1289.2.1.1
Remarks :			

Maximum Size (mm) :	19.0	**Maximum Dry Density (t/m³) :**	**2.01**
Oversize Dry (%) :		**Optimum Moisture Content (%) :**	**11**
Oversize Density (t/m³) :			



APPROVED SIGNATORY

REPUBLIC OF VANUATU

MINISTRY OF INFRASTRUCTURE AND PUBLIC UTILITIES

PUBLIC WORKS DEPARTMENT.

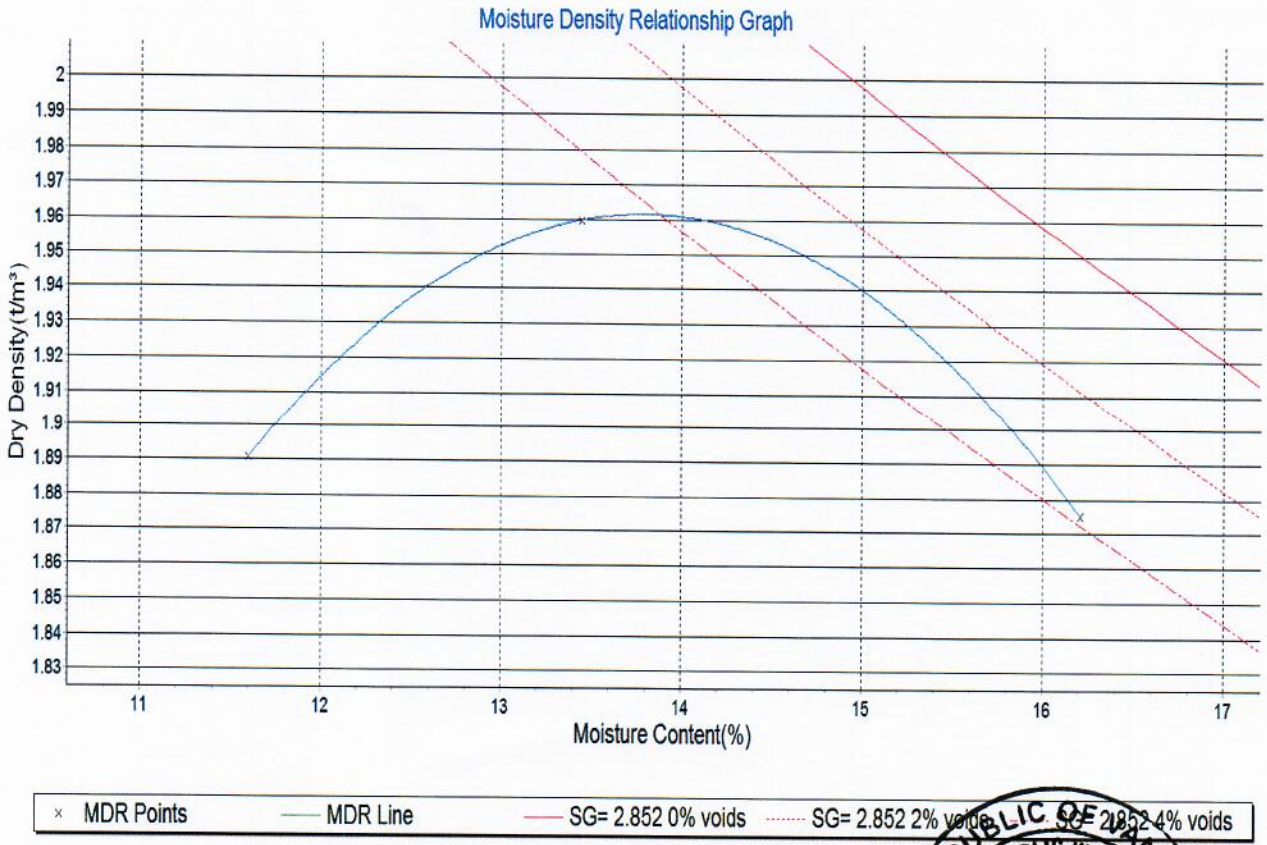
MATERIALS LABORATORY PORT VILA

Moisture Density Relationship Report

Client :	**TONKIN + TAYLOR**	Report Number:	**CL/116 - 59/1**
Address :	**Port Vila, Port Vila**	Report Date :	**18/10/2018**
Project Name :	**Teouma Bridge**	Order Number :	
Project Number :	**CL/116**	Test Method :	**AS1289.5.2.1**
Location:	**Efate , Port Vila**	**Page 1 of 1**	

Sample Number :	S-1707	SAMPLE LOCATION	
Sampling Method :	AS1141.3.1		
Sampled By :	Jeremiah Bakeo	0-40mm Basecourse	
Date Sampled :	3/10/2018	Spycon Quarry	
Date Tested :	8/10/2018	Sample #1	
Material Type :	0-40mm Basecourse	Test Number :	NA
Material Source :	Spycon Quarry	Lot Number :	NA
Remarks :		Moisture Method :	AS1289.2.1.1

Maximum Size (mm) :	19.0	**Maximum Dry Density (t/m³) :**	**1.96**
Oversize Dry (%) :		**Optimum Moisture Content (%) :**	**14**
Oversize Density (t/m³) :			



REPUBLIC OF VANUATU PUBLIC WORKS CMT LABORATORY Travaux Publics

APPROVED SIGNATORY

REPUBLIC OF VANUATU

MINISTRY OF INFRASTRUCTURE AND PUBLIC UTILITIES

PUBLIC WORKS DEPARTMENT.

MATERIALS LABORATORY PORT VILA

Moisture Density Relationship Report

Client :	TONKIN + TAYLOR	Report Number:	CL/116 - 60/1
Address :	Port Vila, Port Vila	Report Date :	18/10/2018
Project Name :	Teouma Bridge	Order Number :	
Project Number :	CL/116	Test Method :	AS1289.5.2.1
Location:	Efate , Port Vila		Page 1 of 1

Sample Number :	S-1708
Sampling Method :	AS1141.3.1
Sampled By :	Jeremiah Bakeo
Date Sampled :	3/10/2018
Date Tested :	8/10/2018
Material Type :	0-40mm Basecourse
Material Source :	Spycon Quarry
Remarks :	

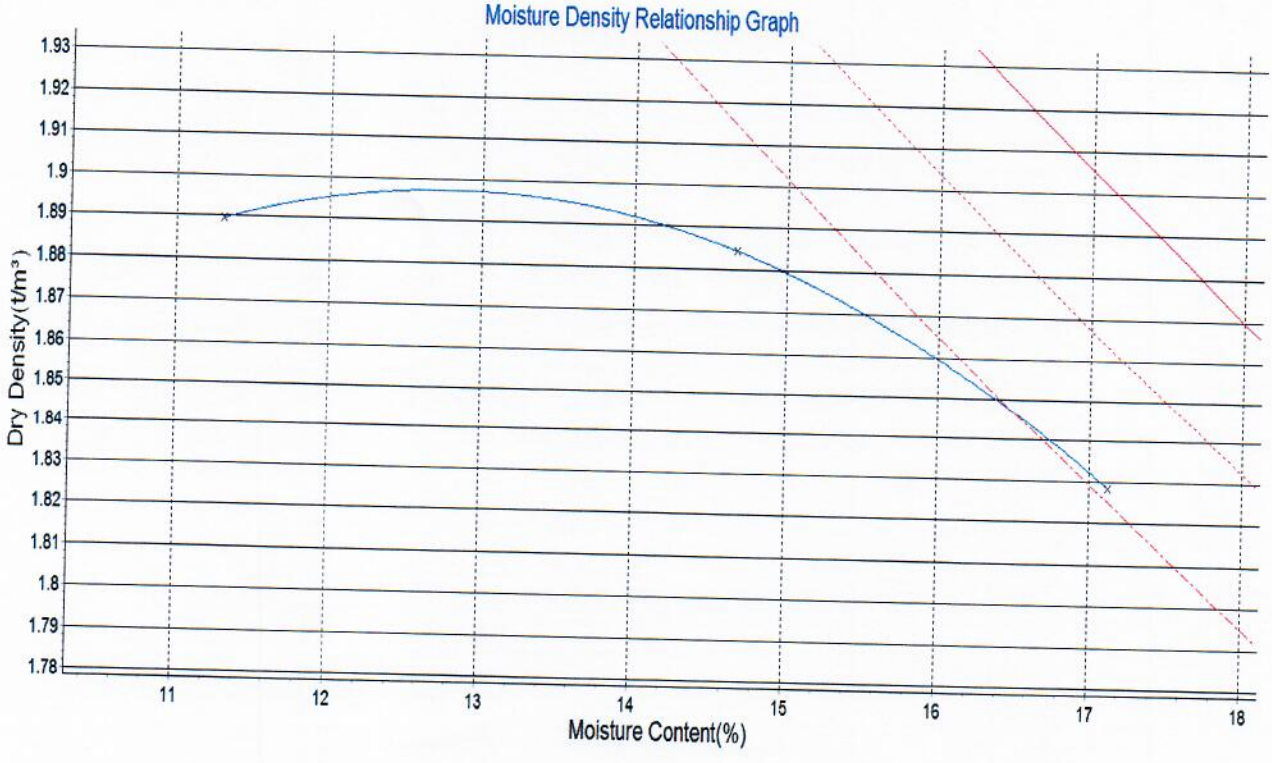
SAMPLE LOCATION

0-40mm Basecourse
Spycon Quarry
Sample #2

Test Number :	NA
Lot Number :	NA
Moisture Method :	AS1289.2.1.1

Maximum Size (mm) :	19.0
Oversize Dry (%) :	
Oversize Density (t/m³) :	

Maximum Dry Density (t/m³) :	**1.9**
Optimum Moisture Content (%) :	**13**



REPUBLIC OF VANUATU PUBLIC WORKS APPROVED SIGNATORY CMT LABORATORY Travaux Publics