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In-Situ Permeability

Prepared for: U + I Building Studio

Address: 4 Stinson Place, Forestville

Job No: 60189-IDF

Date: November 2022

Accredited for compliance
With ISO/IEC 17025
NATA Accreditation No. 19226

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PERMEABILITY TEST REPORT

Client :	**U + I Building Studio**	Ideal Job Number :	**60189-IDF**
Project :	**Soil Permeability**	Test Date :	**1-Nov-22**
Location :	**4 Stinson Place, Forestville**	Tested By :	**J. Giblin**

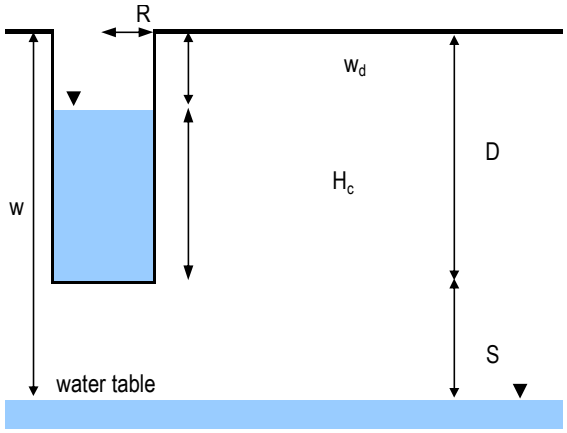
Job ref / borehole ref: BH1 **test location:** Refer to plan

Test Method : AS /NZS 1547:2000 **(refer to sketch)**

Appendix 4.1F Soil Permeability measurement - constant head method

The borehole was soaked with potable water for 10 minutes prior to commencing the test.

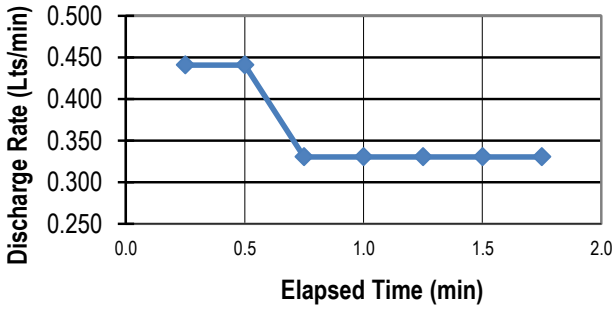
Applies where S > $2H_c$



Test Fluid :	Potable water	
Hole Radius, R :	0.05	m
Hole Depth, D :	0.70	m
Depth to Water, w_d:	0.10	m
Constant Head, H_c :	0.60	m
Depth to Water Table, w (if known) :	NA	m
- date & time :	1/11/22 1:30pm	

Reading No.	Elapsed Time t (mins)	Time Interval dt (mins)	Water Added per dt (litres)	Discharge Rate (litres/min)
1	1:30:00	0.00	0.000	0.00000
2	1:30:15	0.25	0.110	0.44087
3	1:30:30	0.25	0.110	0.44087
4	1:30:45	0.25	0.083	0.33065
5	1:31:00	0.25	0.083	0.33065
6	1:31:15	0.25	0.083	0.33065
7	1:31:30	0.25	0.083	0.33065
8	1:31:45	0.25	0.083	0.33065
9			0.000	
10			0.000	
11			0.000	
12			0.000	

Discharge Rate versus Time



Site conditions

soil moisture condition :	moist
vegetaion cover at test site:	grass cover
slope:	3° towards south eas
surface cracks:	none observed
water logging:	no

Discharge Rate Q = **0.3621** litres/min

Hydraulic Conductivity, K = $\frac{Q\{\sinh^{-1}(H_c/R) - 1\}}{2\pi H_c^2}$

=	**5.8E-06**	**m/sec**
=	**0.5025**	**m/day**
=	**20.94**	**mm/hr**
=	**0.088**	**L/m2/sec**

Notes : 1) Material Description: Silty sand topsoil up to 0.3m overlying silty sand up to 0.7m overlying XW rock

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PERMEABILITY TEST REPORT

Client :	**U + I Building Studio**	Ideal Job Number :	**60189-IDF**
Project :	**Soil Permeability**	Test Date :	**1-Nov-22**
Location :	**4 Stinson Place, Forestville**	Tested By :	**J. Giblin**

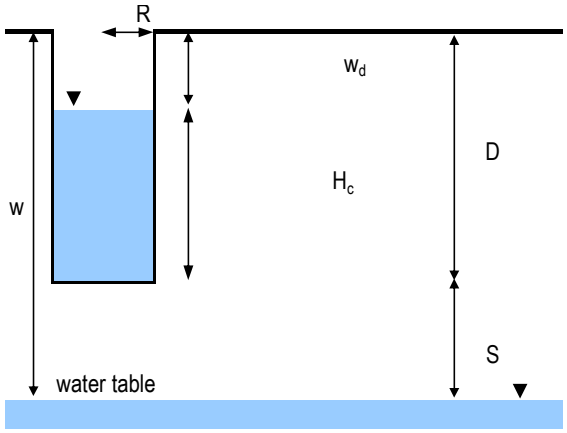
Job ref / borehole ref: BH2 **test location:** Refer to plan

Test Method : AS /NZS 1547:2000 **(refer to sketch)**

Appendix 4.1F Soil Permeability measurement - constant head method

The borehole was soaked with potable water for 10 minutes prior to commencing the test.

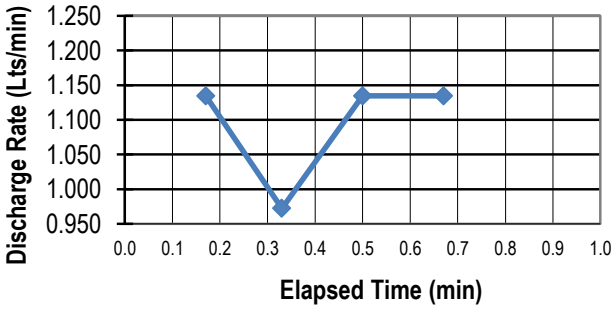
Applies where S > $2H_c$



Test Fluid :	Potable water	
Hole Radius, R :	0.05	m
Hole Depth, D :	1.00	m
Depth to Water, w_d:	0.10	m
Constant Head, H_c :	0.90	m
Depth to Water Table, w (if known) :	NA	m
- date & time :	1/11/22 1:30pm	

Reading No.	Elapsed Time t (mins)	Time Interval dt (mins)	Water Added per dt (litres)	Discharge Rate (litres/min)
1	1:30:00	0.00	0.000	0.00000
2	1:30:10	0.17	0.193	1.13458
3	1:30:20	0.17	0.165	0.97250
4	1:30:30	0.17	0.193	1.13458
5	1:30:40	0.17	0.193	1.13458
6			0.000	
7			0.000	
8			0.000	
9			0.000	
10			0.000	
11			0.000	
12			0.000	

Discharge Rate versus Time



Site conditions

soil moisture condition :	moist
vegetaion cover at test site:	grass cover
slope:	3° towards south eas
surface cracks:	none observed
water logging:	no

Discharge Rate Q = **1.0941** litres/min

Hydraulic Conductivity, K = $\frac{Q\{\sinh^{-1}(H_c/R) - 1\}}{2\pi H_c^2}$

=	**9.3E-06**	**m/sec**
=	**0.8000**	**m/day**
=	**33.33**	**mm/hr**
=	**0.182**	**L/m2/sec**

Notes : 1) Material Description: Silty sand topsoil up to 0.3m overlying silty sand up to 1.0m overlying XW rock

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DRAWING TITLE: Borehole Location Plan
PROJECT NAME: In-Situ Permeability
SITE LOCATION: 4 Stinsen Place, Forestiville

COUNCIL NAME: Northern Beaches Council
JOB NUMBER: 60189-IDF
FIGURE NUMBER: Figure 1

DRAWN BY: Ben
CHECKED BY: Dane
DATE: November 2022

NORTH