

Project: Mount Rosser Bypass
Location: Russell Pen to Moneague
Client: EnviroPlanners Ltd

Date: August 2007

Rational Equation

$$Q=0.00278 CIA$$

Where,

Q = peak runoff rate (m³/s)

C = runoff Coefficient from Table in Sheet 2

I = average rainfall intensity (mm/hr)

A = the drainage area (hectares)

Pre- 1:25yr

	<i>Km Name</i>						
C	unitless						
I (depends on segment)	mm/hr						
A*	hectares						
Conversion factor							
Calculated Peak Discharge, Q	m ³ /s						
TOTAL	m ³ /s						

Post-Development - road surface runoff being added to these discharge points 1:25yr

		<i>Typical Road Section 100m length</i>	3+340 River (Byndloss Gully)	5+600 River (Byndloss Gully)	0+750 River (tributary of Byndloss Gully)	6+265 River (tributary of Byndloss Gully)
C	unitless	0.9				
I (depends on segment)	mm/hr	363.5				
A (area of a typical 100m length of highway)	hectares	0.3				
Conversion factor		0.00278				
Calculated Peak Discharge for 100m length of highway, Q _r	m ³ /s	0.23				
Factor equal to nos. of 100m length of road draining to section		1.0				
Discharge = factor x Q _r		0.23				
TOTAL	m ³ /s	0.23				

*est. from Google Earth

Percentage change	#DIV/0!	6%	3%	0%	2%
-------------------	---------	----	----	----	----

Metric units

Values obtained from Drainage and Hydrology Report, Volume II (2000)

Calculated values

3+340 River (Byndloss Gully)	5+600 River (Byndloss Gully)	0+750 River (tributary of Byndloss Gully)	6+265 River (tributary of Byndloss Gully)
0.35	0.35	0.6	0.35
206	180	156	209
18	83	855	117
0.00278	0.00278	0.00278	0.00278
3.6	14.5	221.9	23.7
0.00	3.6	14.5	221.9
			23.7