PENRITH CITY COUNCIL

music@link

MUSIC-*link* Report

Project Details		Company Details	
Project:	32 Sydney St, St Marys	**Company:**	nf billyard
Report Export Date:	21/07/2020	**Contact:**	noel
Catchment Name:	14836 - 32 Sydney St	**Address:**	NA
Catchment Area:	0.101ha	**Phone:**	
Impervious Area*:	76.2376237623762%	**Email:**	[redacted]
Rainfall Station:	67113 PENRITH		
Modelling Time-step:	6 Minutes		
Modelling Period:	1/01/1999 - 31/12/2008 11:54:00 PM		
Mean Annual Rainfall:	691mm		
Evapotranspiration:	1158mm		
MUSIC Version:	6.3.0		
MUSIC-link data Version:	6.33		
Study Area:	Penrith		
Scenario:	Penrith Development		

* takes into account area from all source nodes that link to the chosen reporting node, excluding Import Data Nodes

Treatment Train Effectiveness		Treatment Nodes		Source Nodes	
Node: Receiving Node	**Reduction**	**Node Type**	**Number**	**Node Type**	**Number**
Flow	18.6%	Sedimentation Basin Node	1	Urban Source Node	5
TSS	86.6%	Rain Water Tank Node	1		
TP	66.2%	Generic Node	1		
TN	51.9%	GPT Node	2		
GP	100%				

Comments

- The 'SF Chamber' detention node (sedimentation basin) has been modified to represent a tank to hold volume for use with the Ocean Protect filter. k values has been set to 1 to prevent the tank from "treating" the flow as it would within a grassed above ground OSD.

- Roof node base flow values are as per the MUSIC modelling guidelines which indicate base flow has no effect for impervious areas and therefore no value is needed.

Passing Parameters

Node Type	Node Name	Parameter	Min	Max	Actual
GPT	1 x OceanGuard200um	Hi-flow bypass rate (cum/sec)	None	99	0.02
GPT	5 x OceanGuard200um	Hi-flow bypass rate (cum/sec)	None	99	0.1
Receiving	Receiving Node	% Load Reduction	None	None	18.6
Receiving	Receiving Node	GP % Load Reduction	90	None	100
Receiving	Receiving Node	TN % Load Reduction	45	None	51.9
Receiving	Receiving Node	TP % Load Reduction	60	None	66.2
Receiving	Receiving Node	TSS % Load Reduction	85	None	86.6
Sedimentation	1200 x 1200 Pit	High Flow Bypass Out (ML/yr)	None	None	0
Urban	Driveway - 235m² (100% Imp.)	Area Impervious (ha)	None	None	0.024
Urban	Driveway - 235m² (100% Imp.)	Area Pervious (ha)	None	None	0
Urban	Driveway - 235m² (100% Imp.)	Total Area (ha)	None	None	0.024
Urban	Driveway Bypass - 31m² (100% Imp.)	Area Impervious (ha)	None	None	0.003
Urban	Driveway Bypass - 31m² (100% Imp.)	Area Pervious (ha)	None	None	0
Urban	Driveway Bypass - 31m² (100% Imp.)	Total Area (ha)	None	None	0.003
Urban	Landscape - 235m² (100% Perv.)	Area Impervious (ha)	None	None	0
Urban	Landscape - 235m² (100% Perv.)	Area Pervious (ha)	None	None	0.024
Urban	Landscape - 235m² (100% Perv.)	Total Area (ha)	None	None	0.024
Urban	Paved - 23m² (100% Imp.)	Area Impervious (ha)	None	None	0.002
Urban	Paved - 23m² (100% Imp.)	Area Pervious (ha)	None	None	0
Urban	Paved - 23m² (100% Imp.)	Total Area (ha)	None	None	0.002
Urban	Roof - 483m² (100% Imp.)	Area Impervious (ha)	None	None	0.048
Urban	Roof - 483m² (100% Imp.)	Area Pervious (ha)	None	None	0
Urban	Roof - 483m² (100% Imp.)	Total Area (ha)	None	None	0.048

Only certain parameters are reported when they pass validation

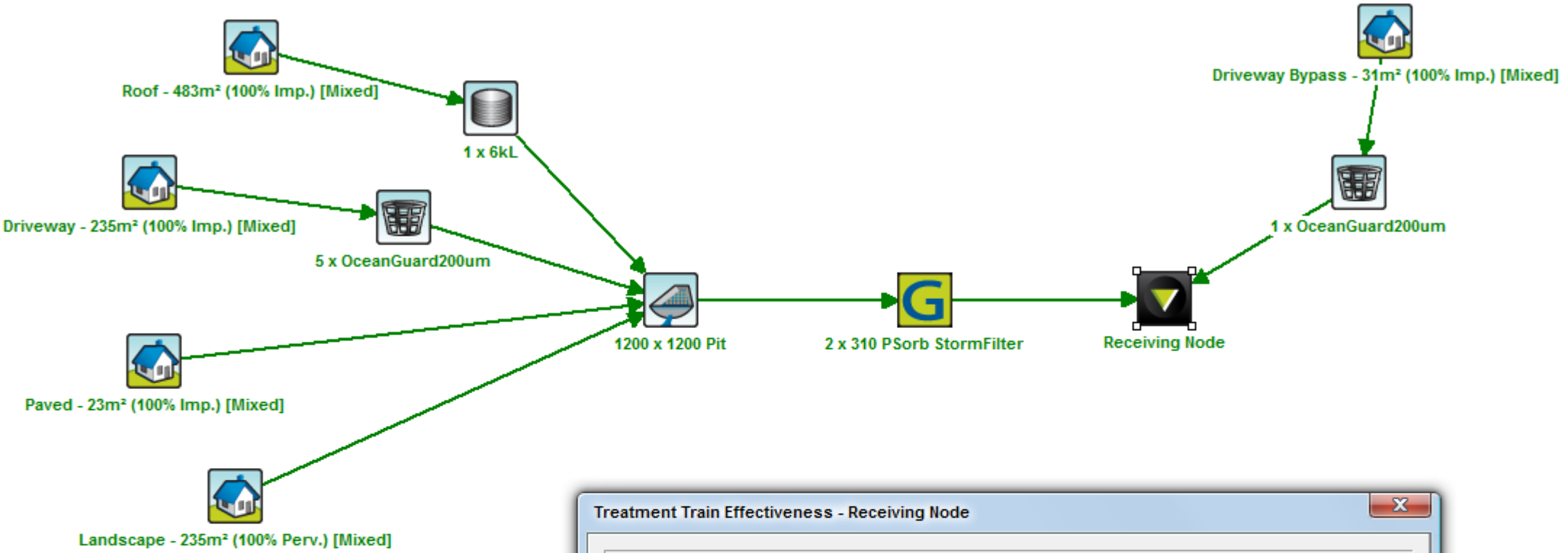
PENRITH CITY COUNCIL

music@link

Failing Parameters

Node Type	Node Name	Parameter	Min	Max	Actual
Rain	1 x 6kL	% Reuse Demand Met	80	None	59.80
Sedimentation	1200 x 1200 Pit	Notional Detention Time (hrs)	8	12	0.11
Sedimentation	1200 x 1200 Pit	Total Nitrogen - k (m/yr)	500	500	1
Sedimentation	1200 x 1200 Pit	Total Phosphorus - k (m/yr)	6000	6000	1
Sedimentation	1200 x 1200 Pit	Total Suspended Solids - k (m/yr)	8000	8000	1
Urban	Roof - 483m² (100% Imp.)	Baseflow Total Nitrogen Mean (log mg/L)	0.11	0.11	0
Urban	Roof - 483m² (100% Imp.)	Baseflow Total Nitrogen Standard Deviation (log mg/L)	0.12	0.12	0
Urban	Roof - 483m² (100% Imp.)	Baseflow Total Phosphorus Mean (log mg/L)	-0.85	-0.85	0
Urban	Roof - 483m² (100% Imp.)	Baseflow Total Phosphorus Standard Deviation (log mg/L)	0.19	0.19	0
Urban	Roof - 483m² (100% Imp.)	Baseflow Total Suspended Solids Mean (log mg/L)	1.2	1.2	0
Urban	Roof - 483m² (100% Imp.)	Baseflow Total Suspended Solids Standard Deviation (log mg/L)	0.17	0.17	0

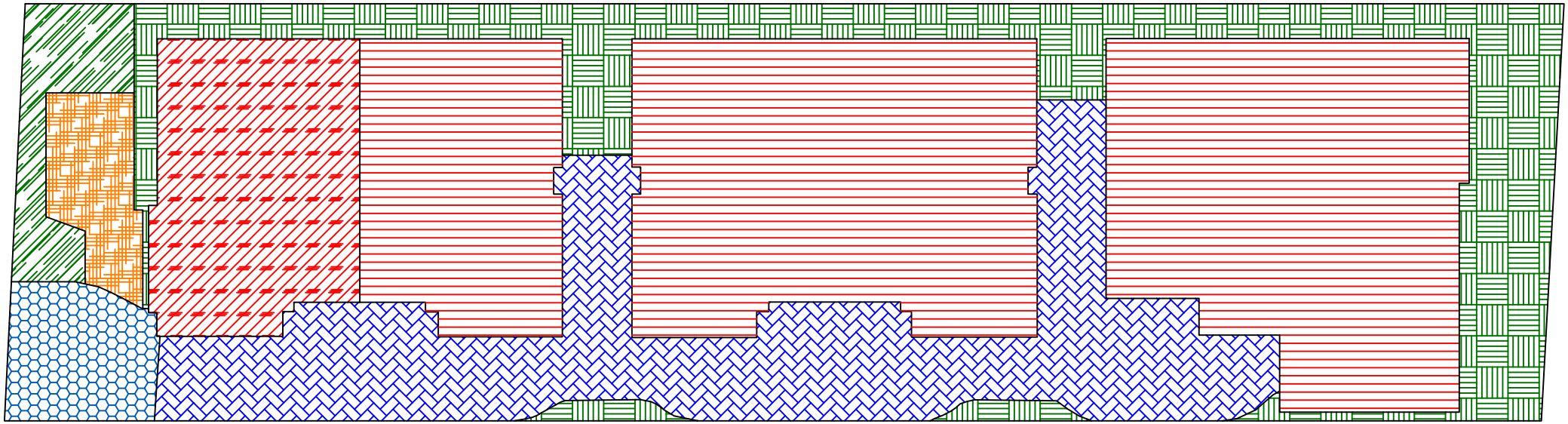
Only certain parameters are reported when they pass validation



Treatment Train Effectiveness - Receiving Node

	Sources	Residual Load	% Reduction
Flow (ML/yr)	0.478	0.389	18.6
Total Suspended Solids (kg/yr)	70.3	9.42	86.6
Total Phosphorus (kg/yr)	0.145	0.0491	66.2
Total Nitrogen (kg/yr)	1.09	0.524	51.9
Gross Pollutants (kg/yr)	12.8	0	100

MUSIC Model Site Area Breakup



Roof to RWT: 455m²

Driveway to Basket: 209m²

Landscape: 170m²

Roof : 92m²

Driveway Bypass: 30m²

Paved: 25m²

Landscape Bypass: 28m²

14836 - 32 Sydney St, St Marys (Rev1 - Site Area Breakup)