

From: Daniel Page Stormwater 360
Sent: Tuesday, 13 February 2018 9:36 AM
To: Noel Billyard
Subject: 09792 – Lot 1 Castlereagh Rd, Penrith (Rev1)

Hi Noel,

Attached is the updated model and site area breakup.

We have modelled the catchment in MUSIC in accordance with the following guidelines & parameters;

- Music version 6.2.1
- "Penrith City Council WSUD Technical Guidelines", Version 1 (Dec 2013)
- SF Chamber node modelled with 'k' values set to 1
- Rainfall Station 67113 Penrith Lakes Aws, 6 Minute Time Step From 1999 To 2008
- Penrith City Council Source Node(s) utilizing modified % impervious area, rainfall threshold, soil properties & pollutant concentrations
- No drainage routing between nodes.

We have modelled the systems to meet the current Penrith City Council WSUD Technical Guideline targets of;

- 85% TSS Reduction
- 60% TP Reduction
- 45% TN Reduction.

Treatment Systems Required

As per the MUSIC design the following Stormwater360 products are required for the project. These are;

- Supply of 10No. EnviroPods Series 200 filters,
- Supply & Installation of 4-cartridge (690 PSorb) Detention StormFilter system,
- Supply & Installation of 4-cartridge (690 PSorb) Detention StormFilter system.

Please see attached pricing options, which includes a quotation for the supply/Installation and also lease (Facilities Management Plan) of the above mentioned goods.

In addition to using our own devices we have also modelled detention as part of the treatment train of devices. Details are;

- StormFilter Chamber utilising 4m² of surface area within the detention tank for cartridge installation.

All treatment systems create a hydraulic loss in order for them to function as per design. Stormwater360 does not quote k factors and only provides the following hydraulic losses at full treatment flow for the **690 Cartridge – 930mm hydraulic loss**

The hydraulic drop in the OSD tank will provide the necessary hydraulic losses and driving head for the cartridges to function as per design.

The cartridges will be located within a section in the detention tank which discharges to the stormwater.

There will need to be access to the detention tank via a manhole to access the cartridges for periodic maintenance.

The Stormwater360 supply includes the fit-out of cartridges, underdrain manifold and casting of a false floor within the on-site detention tank.

The supply and installation of the detention tank, covers, ladders, internal fittings and internal divider walls is by others (if required).

We have attached the MUSIC model for the site and generic drawings for your use.

Kind regards,



Daniel Page
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