

MEMO

TO: Kerry Wynne **DATE:** 9th February 2023
FROM: Justin Courtier/Phil Read **PROJECT NO.:** J000502
COPY: Harrison Hitchins
SUBJECT: Response to s92 Further Information Request – Ropata Village (Rev A)

The following is in response to Hutt City Council's request for additional information received on the 27th January:

Stormwater

"The methodology used by Awa to assess the stormwater detention volume does not comply with the requirements of the Regional Standard for Water Services – which requires design in accordance using the 12 hour nested storm as outlined in the Wellington Water Reference Guide for Design Storm Hydrology.

Could the engineers please revise their calculations on this basis?"

- A Storm and Sanitary Analysis (SSA) model has been run in accordance with the aforementioned document, which results in the following amendments to the 'Pre-development vs Post-development' findings:
 - o Peak site discharge (100y 12h) increases from 108.45 L/s to 109.86 L/s (+1.3%)
 - o Total runoff volume increases from 432.78m³ to 437.86m³ (+1.2%)
- The current design allows for a total runoff volume increase of 17m³, which is greater than the increase shown in the above SSA model run (5.08m³), therefore no change to the stormwater system is required.

"Could the engineers confirm / demonstrate that there is enough land set aside for stormwater treatment, and also that the proposed stormwater network allows for treatment of stormwater from road areas prior to mixing with 'clean' stormwater from roofs and/or landscaped areas?"

- An area has been set aside for a rain garden adjacent to Unit 14, of approximately 25m² in size. This area can receive runoff from the entry and carpark access (~350m²). The 25m² rain garden is able to treat ~415m² of runoff area and therefore is of a sufficient size to treat runoff from the above sub catchment.
- The remaining road area consists of the main carpark (~300m²), which cannot be directed to the 25m² raingarden due to the proposed landform. We propose to treat this area using a separate proprietary rain garden (SPeLBasin or similar – refer to Figure 2 below). The approximate size and location of this is shown below in Figure 1.
- Detailed rain garden design to be undertaken at the building consent stage.



Figure 1: Proposed Treatment Device Locations

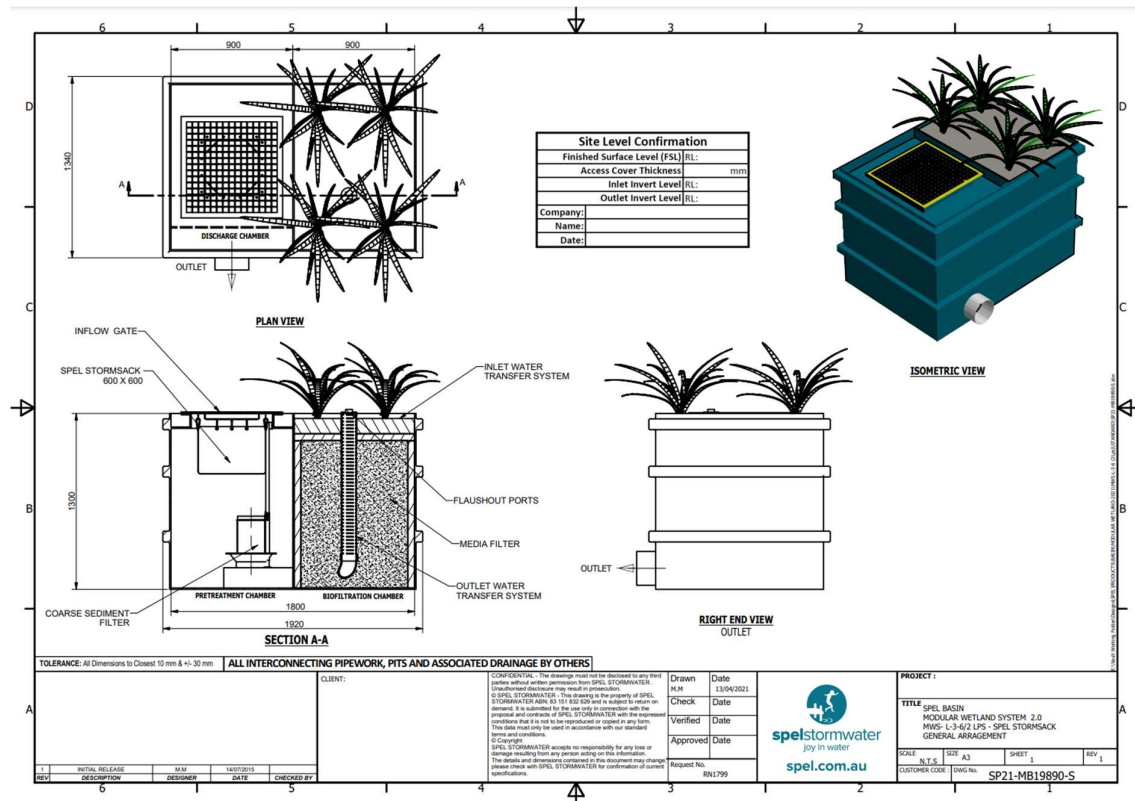


Figure 2: SPEL Basin Details (sourced from: <https://www.spel.co.nz/spelbasin/>)

Wastewater

“WWL and HCC engineers advise that the wastewater discharge proposal is acceptable. They have suggested that the pump station is located in a part of the site that allows future maintenance to be carried out without blocking the entrance (such as closer to Unit 14, but clear of the overland flowpath).”

- [Noted, an alternate pump station location will be considered and revised for Building Consent/Engineering Approval.](#)



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