Stormwater Quality Improvement Device Evaluation Protocol (SQIDEP)

VERIFICATION CERTIFICATE

Applicant Information

Applicant Name	**Atlan Stormwater**
Applicant Address	**130 Sandstone Place, Parkinson QLD 4115**
Phone Number	**07 32716960**
Email	**Andy.Hornbuckle@atlan.com.au**
Website	**www.atlan.com.au**

Verified Technology	**FlowFilter**
Issue Date	**23 August 2024**
Reviewed Documents	Atlan Body of Evidence application submission (Prepared by Drapper Environmental Consultants, January 2024) ALS Environmental. (2024). Lab Reports from Sept 2022 to March 2023. Drapper Environmental Consultants. (12 May 2023). Costco - Main Works - StormwaterDetailed Plan, Issue A. Drapper Environmental Consultants. (16 Jan 2024). Field Monitoring of ATLAN FLOWFILTER Costco, Moorabbin - Issue 2. Drapper Environmental Consultants. (n.d.). Costco hydrographs_Iss1 .pdf. May 2022. Drapper Environmental Consultants. (n.d.). Costco_rainfall_record.xlsx. April 2023. Drapper Environmental Consultants. (n.d.). Image - Outlet Starflow.jpg. Drapper Environmental Consultants. (n.d.). Image - StarflowInlet.jpg. Drapper Environmental Consultants. (Jan 2024). Costco hydrographs 16012024.pdf.

	Drapper Environmental Consultants. (Jan 2024). Costco_Event Record_Jan2024.pdf. Drapper Environmental Consultants. (Jan 2024). Gross Pollutant Capture Photos. Drapper Environmental Consultants. (May 2023). Costco Rainfall_Calculation_Iss1.pdf. Drapper Environmental Consultants. (May 2023). Spreadsheet Costco Moorabin Hydrosystem (FlowFilter). Drapper Environmental Consultants. (n.d.). Movie Downstream pit.mp4. Drapper Environmental Consultants. (n.d.). Movie Inlet Starflow.mp4. Drapper Environmental Consultants. (n.d.). RFI Response_16 Jan 2024.pdf. Jan 2024. Drapper, D. (June 2023). Statutory Declaration. Jensen, P. (May 2023). Statutory Declaration. O'Callaghan, E. (June 2023). Statutory Declaration. SPEL Stormwater. (31 May 2023). SQIDEP Body of Evidence application form. Stormwater Australia. (n.d.). Stormwater quality imlorovement device evaluation prootcol (SQIDEP) Laboratory testing pathway (Draft V 1.2). Stormwater Australia. Stormwater, A. (May 2023). Sample event records from 2nd September 2022 to 31 March 2023. Water Research Laboratory (UNSW). (February 2020). Performance testing of the SPEL Hydrosystem. Waterlabs Australia. (July 2024). ATLAN STORMWATER Costco - FlowFilter Hydraulic Performance (Treatable Flowrate) Lab Testing report - Issue 2.

Technology Information

Applicant's Verified Performance	Treatable flow rate = 4 L/s per filter cartridge This treatable flow rate requires the internal high flow bypass (crest of the internal riser) to be at least 630mm above the top of the cartridges. If this is not achieved in the design, then the treatable flow rate is not appropriate.

Claims	Total Suspended Solids (TSS) 95 % Total Phosphorus (TP) 93 % Total Nitrogen (TN) 45 % Lead (Pb) 90% Gross Pollutants 100 % Zinc 53 %

Maintenance performed during monitoring	Inspection every 3 months. Vacuum clean of gross pollutants / sediment occurred twice during monitoring period 6 months apart.

Verified method to model in MUSIC	Modelling of the FlowFilter system in MUSIC should be undertaken as follows: 1. Generic Treatment Node or Gross pollutant Trap a. Low Flow Bypass = 0 b. High Flow Bypass = 0.004 m^3/s x number of cartridges (4L/s x number of cartridges 2. Transfer functions set to achieve the following removal rates: a. Flow 0% reduction b. TSS 95% reduction c. TP 93% reduction d. TN 45% reduction e. Gross pollutants 100% reduction

Conditions	The limitations of the acceptance of these claims include: • SQIDEP did not provide gross pollutant monitoring guidance at the time of this assessment. This was discussed with SQIDEP panel and based on previous assessments of similar products a removal of 100% gross pollutants up to the treatable flow rate has been adopted provided the assessors are comfortable that the filter system will effectively capture and hold gross pollutants (greater than 5mm). The assessors were comfortable the filter system will effectively capture and hold gross pollutants up the treatment flows rate so a removal of 100% was adopted.

Independent Reviewers	Shaun Leinster Andrew Judge

Accepted by Governance Panel	26 August 2024
Accepted by Stormwater Australia Board	26 August 2024