STORMWATER AUSTRALIA

Stormwater Quality Improvement Device Evaluation Protocol (SQIDEP)

VERIFICATION CERTIFICATE

Applicant Information

Company Name	ATLAN Stormwater
Company Address	130 Sandstone Place Parkinson, QLD 4115
Website	www.atlan.com.au
Contact Email	sales@atlan.com.au

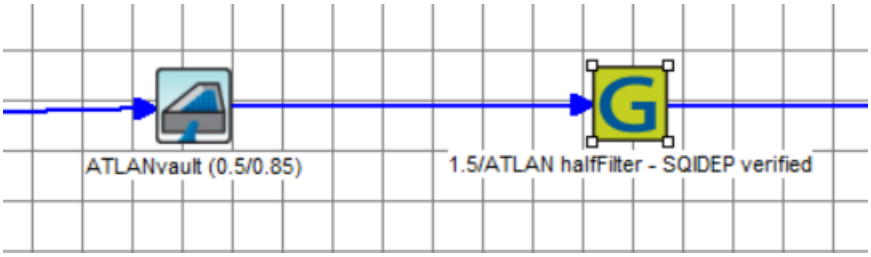
Verified Technology

Product Title	**ATLANFilter – Half Height**
SQIDEP Pathway	Body of Evidence Evaluation Pathway (Local Field Trial Supplement)
Reviewed Documents	The following documents form the basis of this independent evaluation: • SPEL Body of Evidence application submission (Prepared by Drapper Environmental Consultants) • SQIDEP Body of Evidence Submission, Half Height Cartridge supplementary report, Sippy Downs Drive, (Drapper Environmental Consultants, 2 June 2022); • ALS Chain of Custody, Certificates of Analysis, and Quality Control Reports (2020); • Statutory Declaration by Drapper Environmental Consultants, 8 April 2022; • Sippy Downs Drive Filter Hydrographs (1 April 2020 – 3 February 2022); • SQIDEP Supplementary Information, Field Monitoring of a SPEL Half Height Filter at Sippy Downs Drive (Drapper Environmental Consultants, 30 May 2023); • Laboratory Chain of Custody forms, Quality Control reports, QC Compliance Reviews & Certificates of Analysis • SQIDEP Independent Evaluators Joint Report, SPELFilter (full height) (DesignFlow and AECOM, 5 December 2022); • SQIDEP Independent Evaluators Joint Report, SPEL Half Height Filter (DesignFlow and AECOM, July 2023).

Technology Information

Applicant's Verified Performance Claims	Total Suspended Solids (TSS) Total Phosphorus (TP) Total Nitrogen (TN) Gross Pollutants	85 % 74 % 59 % 0 %
Test Stormwater Runoff	The presented runoff pollutant test results complied with the SQIDEP typical stormwater pollutant concentrations for urban environments. The device has therefore been tested within the pollutant loading ranges specified by SQIDEP v1.3 for typical urban environments (Urban Roads, Residential, Industrial, Commercial).	
Test Catchment Type	Urban Road	

Maintenance Performed during monitoring	Without pre-treatment, the filter vault for the Half-height SPELFilters was maintained every six months via vacuum eduction. Filter cartridges were not replaced.

Verified method to model in MUSIC	Modelling a Half-height ATLANFilter in MUSIC is as follows;  1. Use a detention basin node to represent the vault • with modified 'K' values with K=1 • use size of 0.5m^2 per cartridge and 0.5m extended detention depth • adopt a nominal detention time of 0.1 hours (plus or minus 10%). 2. Use a generic node with: • a high flow bypass of 1.5 L/s per cartridge • pollutant reductions of 85% for TSS • pollutant reductions of 74% for TP • pollutant reductions of 59% for TN. When entering the data into MUSIC the detention basin surface area and high flow bypass rate of the generic node is factored up depending on the number of filter cartridges proposed. All other values listed above remain the same (note: the *Notional Detention Time* is adjusted by changing the *Low Flow Pipe Diameter*). Input Properties should reflect those shown below:

Pollutant	Influent range	Effluent Range	Reduction
Total Suspended Solids (TSS)	1000	150	85%
Total Phosphorous (TP)	5	1.3	74%
Total Nitrogen (TN)	50	20.5	59%

Conditions	The limitations of the acceptance of these claims include: • As with the majority of treatment devices, designers should consider the need for pre-treatment on a case-by-case basis with regard to ensuring the longevity of the Filters. Pre-treatment with a gross pollutant trap, or similar, is recommended. • The life expectancy of the media should be regularly monitored and replaced in accordance with the Manufacturer's Technical Guidelines/Maintenance Manual.

Independent Reviewers

Evaluator	Evaluator
Dr Robin Allison	Dr Ricky Kwan
DesignFlow	AECOM

Issue of Verification Certificate

Acceptance by SQIDEP Governance Panel	August 2023
Acceptance by Stormwater Australia Board of Directors	September 2023
Verification Issued	October 2023
Stormwater Australia Verification Certificate Number Reference	SA-2023/07b-VC

Verified under SQIDEP Version 1.3

Body of Evidence Evaluation Pathway