STORMWATER AUSTRALIA

Stormwater Quality Improvement Device Evaluation Protocol (SQIDEP)

VERIFICATION CERTIFICATE

Applicant Information

Applicant Name	**Atlan Stormwater**
Applicant Address	130 Sandstone Place, Parkinson, QLD 4115
Website	www.atlan.com.au
Contact Email	Andy.hornbuckle@atlan.com.au

Verified Technology

Product Title	**Atlan Stormsack**
SQIDEP Pathway	**Field Evaluation via reviewed QAPP**
Reviewed Documents	The following documents form the basis of this independent evaluation: 1. Stormsack detailed performance report (Stormsack DPR) (Issue 2) Dapper, D., Waldron, S., & Nyakas, L. (2024). SQIDEP Detailed Performance Report – Stormsack (Issue 2), Drapper Environmental Consultants, Crestmead, Queensland, Australia 2. Hydraulic Performance (Treatable Flowrate) Lab Testing report (Issue 1), 5 July 2024 Dapper, D., Nyakas, L. (2024). Hydraulic Performance (Treatable Flowrate) Lab Testing report (Issue 1), Drapper Environmental Consultants, Crestmead, Queensland, Australia 3. ATLAN Stormsack Device Lab Testing Report (Issue 3), 5 July 2024 Dapper, D.; Nyakas, L. ATLAN Stormsack Device Lab Testing Report (Issue 3); Drapper Environmental Consultants: Crestmead, Queensland, Australia, 2024. 4. StormSack Performance Assessment, Report Number: MHL2325, Manly Hydraulics Laboratory, November 2014.

Technology Information

Applicant's Verified Performance Claims (ER)

Parameter	
Total suspended solids	**45%**
Total phosphorus	**47%**
Total nitrogen	**25%**
Total petroleum hydrocarbons	**Not claimed**
Gross pollutants	**100 %**

IEP's comments: Nil.
IEP's recommendations: All performance claims are considered compliant up to the treatment flow rate for the applicable device. Verified flow rates are included in the table below:

Size of Stormsack (Pit dimensions) (mm)	TFR for MUSIC modelling – high flow bypass in litres per second
450 x 450	10
600 x 600	25
600 x 900	32
900 x 900	39
1200 x 900	50
1200 x 1200	65

Test Stormwater Runoff

21 compliant stormwater events. Water chemistry was compliant with Table 1 in SQIDEP v1.3. Minimum number of aliquots collected, and samples were representative.

Test Catchment

- The field testing for the ATLAN Stormsack (200) was carried out at Griffith University, Carpark H, Parkland Campus, Griffith Way, Southport, QLD, 4215.
- The catchment area draining to the device was reported to be 1,181 m^2 directly connected to the Stormsack. The catchment was reported to be 66% impervious with the remainder including a eucalyptus forested area which drains to the Stormsack.

Maintenance Performed during monitoring

The Stormsack should be cleaned/maintained when accumulated pollutants reach the trigger level of 150mm depth in the bag, or 50% capacity by volume.

The monitored Stormsack was maintained twice during the SQIDEP monitoring program due to construction loads received from earthworks undertaken in the upstream catchment. Regular inspection of the Stormsack is recommended, as per the manufacturer's O&M manual.

Verified method:

The Reviewers have verified that the method undertaken complies with the intent and specifics of SQIDEP v1.3.

A more detailed Independent Evaluatores Report is available to get an understanding of what was checked and how the claim was verified.

Conditions/Notes

MUSIC modelling shall be carried out as follows:

A generic node is to be used in MUSIC with a high flow bypass set to the applicable TFR (see table below) for the size of the Atlan Stormsack proposed and with inlet and outlet concentrations as follows:

Pollutant	**Inlet concentration**	**Outlet Concentration**
TSS	100	55
TP	100	53
TN	10	7.5

Size of Stormsack (Pit dimensions) (mm)	TFR for MUSIC modelling – high flow bypass in litres per second
450 x 450	10
600 x 600	25
600 x 900	32
900 x 900	39
1200 x 900	50
1200 x 1200	65

Independent Reviewers

Evaluator Name	Evaluator Signature
Mark Liebman	
Baden Myers	

Issue of Verification Certificate

Acceptance by SQIDEP Governance Panel	
Acceptance by Stormwater Australia Board of Directors	
Verification Issued	
Stormwater Australia Verification Certificate Number Reference	SA-2024/12-VC

Verified under SQIDEP Version 1.3

Body of Evidence Pathway