

JOY IN WATER

ATLAN.COM.AU | ISSUE # 9

**Twin Vortceptors at Cranbourne:
Water Quality Outcomes & Gross
Pollutant Capture**

**5 Warning Signs: Your
Bioretention Needs
Maintenance**

**Introducing Atlan:
Protector of the Oceans**

Atlan
STORMWATER

FORMERLY

 **spelstormwater**
joy in water



19



12



09



08

Contents

ISSUE # 9

- 04 Atlan News Highlights
- 06 Atlan Stormwater: Protector of the Oceans
- 08 Atlan Project Spotlights
- 10 Twin Vortceptors at Cranbourne: Water Quality Outcomes & Gross Pollutant Capture
- 12 Team Member Spotlight Trent Doyle & Myles Tredinnick
- 14 Floating Treatment Wetlands: An Innovative Path to Sustainable Treatment and Thriving Habitats
- 15 Stormwater Conveyance: Atlan Junction Pit
- 16 Saving Strata Costs with Bioretention Maintenance
- 18 5 Warning Signs: Your Bioretention Needs Maintenance
- 19 Cleaning Up Lakeside in Springfield

Welcome

A WORD FROM OUR CEO



ANDY HORNBUCKLE
CEO

We are very pleased to announce to you that we have changed to Atlan Stormwater, which commenced at the beginning of July 2023 – and invite you to explore our new name in this edition of our rebadged magazine 'Joy in Water'.

The stormwater network is the unfortunate and unsuspecting conveyance system, or highway, for plastic and gross pollution to reach our shared streams, rivers, bays, and seas. At Atlan, working upstream in the urban catchments is our job.

Atlan was the greatest King of Atlantis, and he is also known as the Protector of the Oceans - and that is who we are and that is where we're going.

As Atlan Stormwater, we will continue our work as Zero Pollution Ambassadors who believe that clean waterways are a right, not a privilege, and we will honour our legacy to work every day to ensure a Joy in Water experience for you with your children and grandchildren.

So, I am very pleased to tell you about our rename to Atlan Stormwater.

Same family. New name.



1300 773 500
atlan.com.au



“

As Atlan Stormwater, our generational assets will continue to preserve Joy in Water experiences for you, and your children, and their children.

ANDY HORNBUCKLE
CEO ATLAN STORMWATER



Atlán: Breaking New Ground

Out with the old and in with the blue! We are excited to see the production of our first Atlán Stormwater FRP (fibre-reinforced polymer) and concrete assets. Fabricated and freighted from our Brisbane and Sydney manufacturing facilities, these generational assets are landing across the country!

We look forward to showing you some new Atlán case studies as production kicks into gear on these fresh-look stormwater solutions, but for the moment – take in the blue.



Introducing 'Joy in Water' Magazine

Our magazine has a new name! Joy in Water is a core part of our business – and now it's the namesake of this publication. We reflect this everyday with the stormwater solutions we manufacture, the generational assets we maintain and the waterways we protect.

We look forward to continuing to bring you the latest news, case studies and insight into the stormwater sector.

We look to build on Flow magazine – and you can find all our previous Flow magazines in our back-catalogue!



SCAN QR



ENGINEERS AUSTRALIA

Engineers Australia: Continuing Our Partnership

Our first online seminar and article are online in partnership with Engineers Australia. We look forward to the continuation of this partnership under our new Atlán banner.

Joining Engineers Australia's Thought Leadership Series, our webinar explored how clean water solutions are being developed for the future through collaboration with government, engineers, and contractors. Find the presentation on-demand, available through our Catchment LMS (Learning Management System).



SCAN QR



'Gain More Ground' with Atlán Stormwater & Cirtex

We look forward to hosting Cirtex for our industry seminars across the country, as we take on the topic of 'Gaining More Ground' through innovative solutions to stormwater and retaining infrastructure on modern developments.

Maximising lot yield and increasing useable land is a key outcome of projects on local developments. Sign up for the Atlán Learning Catchment to check out this webinar, which will be available on-demand in the coming months.



SCAN QR

Detention, Retention & Conveyance: Expanding Our Product Range

Helping our clients meet their diverse needs for water quantity and conveyance, CircaVault and Custom Junction Pits are two popular additions to our product range. With versatile detention, retention and conveyance solutions, our team can help tailor engineering configurations to meet your site-requirements and catchments.

Custom Junction Pits

Manufactured and fabricated to suit your conveyance specifications, our custom junction pits offer project-specific solutions for pipe connection, maintenance access points, and the redirection of stormwater flows.

CircaVault

CircaVault is our range of round precast concrete tanks - a modular, cost-effective approach to OSD (On-site Stormwater Detention), stormwater harvesting, rainwater and filter tank configurations.



Bioretention Maintenance: Taking On Your Frequently Asked Questions!

How often do bioretention systems need maintenance? What causes erosion of bioretention media? How can we avoid costly rectification works?

We are building our resource library to answer everything you need to know about the management, maintenance and upkeep of bioretention systems and green assets. We would love to hear from you if you have questions about bioretention maintenance.

You Ask We Answer

Find out more information or submit a question!



SCAN QR



INTRODUCING

Atlan Stormwater: Protector of the Oceans



SAME FAMILY. NEW NAME.

Atlan was the greatest King of Atlantis and Protector of the Oceans – and as Atlan Stormwater we will continue our legacy of protecting Joy in Water experiences for future generations.

As a family business, established in 1972, we have worked hard for decades to maintain our position as Australia's leading stormwater specialist. In Australia and New Zealand, we have greatly diversified our stormwater quality, quantity, conveyance, and maintenance product range in our mission as Zero Pollution Ambassadors.

Nothing will change the quality of our products and our service, or the generational assets you currently enjoy from us. Our values, team, and innovation will remain – and our commitment to sustainable stormwater solutions will continue.

Clean waterways, oceans and seas is our goal.

Stormwater Solutions: Full-Service Capabilities

Our full-service approach to the innovative design, local fabrication, and long-term maintenance of stormwater assets across the Australia and New Zealand region will continue.

We are the same family, same people, and same team – with a new name that aligns with our vision and secures our future.

We will continue to support our network of councils, developers, engineers, and contractors to implement our community's water-sensitive urban design assets. We will also remain key sponsors of Stormwater Shepherds and support their mission to stop pollution at the source - the home, the business and the stormwater drain.

We are innovators and problem solvers in the stormwater industry.

As one of the region's leaders in the provision of stormwater infrastructure, Atlan is committed to a high-performance stormwater network – and we sustain our push to encourage key programs and directives that shape the sector, such as Stormwater Australia's SQIDEP (Stormwater Quality Improvement Device Evaluation Protocol).

We look forward to introducing our new product range over the coming financial year, but remain committed to meeting our client's needs for installing, servicing and maintaining our existing network of assets. Building a sustainable, greener future for you and your family is our purpose.



Forever *Joy in water*

Joy in Water has been a cornerstone of our business since 1972, and this value underpins and spans our work and our lives. It is a principle that governs all we do; from the solutions we manufacture to the advice we provide.

Whether it's weekends at the beach with our families, exploring our nation's pristine waterways, or paddling our rivers and estuaries in our kayaks – the joy we experience from clean water is precious and worth fighting for.

Protecting our waterways for future generations is a key part of our SPEL journey that we will carry with us as Atlan Stormwater. We are clean water custodians, and we believe that together, we can all protect our riverine and marine ecosystems.

Our waterways are the lifelines that lead into our tributaries, lakes, and oceans – and their health is vital for our recreation, livelihoods, and enjoyment of our natural environment. They provide beautiful landscapes and moments that everyone in the world should be blessed to experience.

Over 12 million tonnes of plastic pollution enter our oceans each year. Urban pollution must be stopped at the source. By capturing this pollution in our catchments, we can protect our vulnerable waterways, rivers, lakes and oceans.

The design, fabrication, and maintenance of our stormwater network creates a more sustainable future for our communities – and Atlan Stormwater will continue its work as an industry leader to protect Joy in Water for future generations.

We take stock of our Joy in Water moments and will build upon this philosophy into our future. Atlan Stormwater reflects our drive to sustain our most precious resource - beautiful, clean, pristine water. Our business, our family and our combined passion for our waterways depend on it.



PROJECT SPOTLIGHT

Protecting Waterways with Floating Treatment Wetlands in Sussex Inlet

A vibrant, green seaside community nestled in the South Coast region of New South Wales, Sussex Inlet is a waterfront town built on a network of tidal canals – bordered by both St George’s Basin and the Pacific Ocean.

The local community is known for its picturesque waterways, vital for tourism, water sports, fishing, swimming, and boating. Stopping the conveyance of pollution from nearby urban areas into these marine environments is an essential part of ongoing efforts to support sustainable development in the area.

Sussex Inlet Golf Village is a master planned residential development situated a stone’s throw from Badgee Lagoon. Atlan Stormwater (formerly operating as SPEL Stormwater) has been there throughout its development to help the village meet its environmental objectives.

Proposed expansions include a retirement village and several residential subdivisions, and on-site stormwater treatment assets have scaled to meet the growing requirements of this scenic development.

The Green & Golden Bell Frog: Protecting Endangered Species

Atlan Stormwater (formerly SPEL Stormwater) provided innovative Floating Treatment Wetlands assets to treat stormwater runoff from the nearby residential and golf course catchments.

In 2020, the first phase saw installation of 200 square metres of Floating Treatment Wetlands. Flourishing in the following years, with treatment specific plants established, the success of this system saw a second phase commence in 2023. This added 550 square metres of wetlands modules, which help to service the growth in nearby residential subdivisions.

The beauty of floating wetlands systems lies in their biomimicry of natural wetlands environments. Naturally filtering stormwater, these systems improve water quality and reduce pollutants, sediment, nutrients and algal growth. Using biological, chemical and physical processes to benefit downstream water quality, they contribute to the health of Sussex Inlet’s diverse ecosystems.

Providing habitat for local wildlife is another essential benefit of these sustainable systems. Beyond the typical fish, bird and amphibian species that call these areas home, the Atlan Floating Treatment Wetlands system has seen endangered species, the Green and Golden Bell Frog, take residence.

Native to southeastern Australia, these medium-sized frogs possess a striking colouration ranging from bright green to gold, adorned with black spotting. They thrive in wetlands, swamps, and areas with still or slow-moving water.



These innovative stormwater treatment assets offer both environmental and aesthetic benefits – and improve lot yield and maximise usable land compared to traditional wetlands. By addressing stormwater management challenges and providing habitat for wildlife, they are contributing to protecting the Green and Golden Bell Frog while building a greener, more sustainable future for all.

PROJECT SPOTLIGHT

Kingsford Smith Airport: Safe Hangar Storage for Firefighting Foam

Located eight kilometres south of the Sydney CBD, Kingsford Smith Airport is home to Rex Airline's airport hangar facility and headquarters.

With funding and support from the NSW state government, the facility acts as the airline's national hub. Planning to extend their fleet of Boeing 737s to nine aircraft, the hangar is crucial to sustaining Rex's local flight schedule and associated plane assets.

Atlan Stormwater joined the construction of this project with the design, fabrication and installation of high-flow storage and sump assets to store firefighting foam - an integral component of the on-site fire suppression system.

Maximising Hangar Space with Underground Storage

Paramount to the safety of the airport and its personnel, the iconic hangar project required 140,000 litres of high-flow storage capacity. Four TankStor units and a separate sump will meet these on-site requirements.

Installed below a traffic area used by service vehicles for nearby aircraft, and load rated to twenty tonnes, the underground placement of these assets maximises available hangar space and maintains trafficability.

These purpose-designed TankStor units were engineered using a combination of FRP (fibre-reinforced polymer) and resins compatible with storing commercial airport-grade firefighting foams. Their design will prevent cracks and leaks in the tank shell and keep foam stored in the correct conditions.

Adjustments to buoyancy calculations helped meet foam storage design specs and on-site conditions, which included the potential for 200 millimetres of groundwater.

Compared to cast-in-situ alternatives, the TankStor units were ready to install on delivery, which supplied cost-benefits by reducing time for on-site fabrication and minimising open excavations. This approach also eliminated the risk of groundwater negatively impacting the installation phase by expediting this phase of the project.

Key benefits of these assets are the TankStor's 100-year design life, ease of installation, and single-piece prefabrication. Providing carbon reductions and installation efficiencies over traditional reinforced concrete alternatives, the FRP design and engineering of these assets helps to secure the site's sustainable outcomes.





Twin Vortceptors at Cranbourne: Water Quality Outcomes & Gross Pollutant Capture

Cranbourne West's Green Link Estate is a leading-edge industrial development in Melbourne's south-east. A 79-hectare site with a 6-star green rating, the site's operational sustainability frameworks are reflected across its innovative environmental features and designs.

This rating signifies one of the highest potential environmental ratings in the country and will serve the growing logistics needs in Melbourne's South-Eastern Metropolitan region. Sustainable infrastructure is an integral part of the site's future – with electric car charging stations, state-of-the-art building management systems, and the incorporation of extensive green spaces.

An essential aspect of on-site sustainability, stormwater treatment assets will ensure important water quality objectives are met.

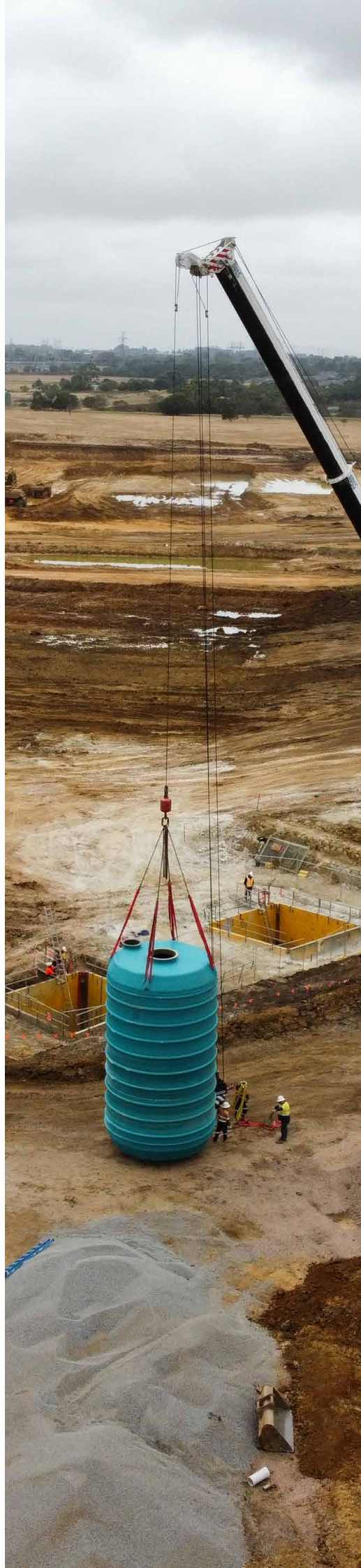
The master-planned estate includes parkland, walking tracks and bespoke landscaping – accompanied by expansive wetlands to help meet biodiversity goals and the provision of local habitat for native flora and fauna.

Gross Pollutant Capture: Protecting On-site Wetlands

Stormwater solutions are key to the Green Link project's water management strategies. Atlan Stormwater was delighted to provide a unique dual GPT (Gross Pollutant Trap) configuration to help capture pollution conveyed by stormwater in the large industrial catchment area.

The crown jewels of this installation are two monstrous twin SVO 1600 Vortceptor units, which screen gross pollutants and other contaminants; which include debris, silt, hydrocarbons, and nutrients across the large catchment prior to discharge into the nearby wetlands.

With tested treatment efficiencies of 99% Gross Pollutants (GP), 70% Total Suspended Solids (TSS), 30% Total Phosphorous (TP) – the high-performance capabilities of the



Vortceptor will help ensure on-site water quality and WSUD (Water Sensitive Urban Design) best-practice.

A non-blocking hydrodynamic separation process, coupled with the self-cleaning screens of the Vortceptor, provides lower overheads across the service life of both units. The high flowrate capacity of the SVO 1600 shows the benefits of this device's scalable design – with the tandem configuration tailored to fit the demands of the large industrial site.

Accompanied by two 5x5 metre diversion chambers, the seamless installation of these concrete units was driven by a modular panel-style design and fabrication process. Combined with the single-piece fibreglass design of the Vortceptor, the result was a 5-hour installation supported by cost-efficient delivery, lifting and handling phases.

Sustainable Stormwater Outcomes

Carbon reductions for the Vortceptor's FRP (Fibre-Reinforced Polymer) design will provide 70% CO² reduction over a traditional concrete GPT – an important point considering the site's goal of achieving a net-zero carbon framework. A 25-year warranty is also a great boon for asset management.

Ensuring the treatment of outgoing stormwater runoff to capture a diverse range of pollutants – the dual Vortceptors will provide better environmental outcomes across the site. Epitomising our creed that 'clean waterways are a right, not a privilege', the installation is underpinned by a 50-year design life, with the resulting generational asset serving the community for many years to come.

Check out our project videos & blog!



SCAN QR



ATLAN SUPPORTS: CHARITY HIGHLIGHT

Trent Doyle & Myles Tredinnick

Youngcare's Simpson Desert Challenge is a charity event that throws trekkers into a challenging 225-kilometre cross desert journey for nine days.

Atlan Stormwater was pleased to fund local Brisbane trekker, De Luca's Myles Tredinnick, who joined us for an interview with teammate Brent Doyle.

Battling harsh weather conditions, participants raise funds for Youngcare's commitment to supporting the lives of young people with high physical support needs, and their loved ones.

It is called the Ultimate Challenge – how many kilometres did you cover per day?

Myles: So, we did 232 kilometres in total and most days we walked about 30km – with two smaller days around 25km.

Were there any particularly challenging days?

Brent: The variance in temperature (was extreme), we woke up one morning to ice on the tents, the chopper and the cars. Then one day it was about 35 degrees – so we'd try to get our walking done early in the morning and step off at 5 or 6AM. We also walked through a windstorm – and it was horrendous trying to walk through the headwinds.

Myles: The winds picked up at 2AM and tents were getting blown away, and it was pretty intense.

What did you learn from the experience?

Myles: I think for me a big one is that there is no need to stress the little things. If you can't change something, there's no need to stress about it. Minor things that previously would've stressed me – now it is what it is... it's fine and it's going to play out alright.

Brent: I think anything you set your mind to you can achieve – we obviously trained a fair bit, but surprisingly the whole walk I didn't think that it was impossible, or that we needed to stop. If you are dedicated, the human body is pretty amazing.



What is the community support mean for you given the donations received?

Myles: I think it was unreal. To have the younger crowd get behind and back me - and come to the event and play their part with their donations – it was really good. To raise awareness for Youngcare as well, it meant a lot to me, and people have already asked how they can join the Desert Challenge.

Is Youngcare a charity you have previously aligned with?

Brent: As a business De Luca supports Youngcare, and Nick De Luca has done the trek twice and sits on the board. It is engrained in our values with what Youngcare do.

Myles: Both Brent and I have had previous influence with Youngcare, and have done the Budgie Bowl, Pay It Forward Day and Ribs & Rumps Lunch. We have always been involved, but never done something to this scale – it was quite rewarding.

Would you do it again?

Brent: I'd do it tomorrow.

Myles: I'd like to do it again but maybe not in the near future – maybe when I reach another milestone in my life like when I reach 30. Youngcare also does the Three Peaks walk through the snow down south, and I'd do that tomorrow... I'd love to do it (walk) again, but maybe just not the Desert atmosphere.

Any last messages to your supporters?

Myles: Thanks to everyone who has helped me, including Atlan Stormwater (formerly SPEL Stormwater) of course. It wouldn't be possible for us to do this walk without the support crew that backed us out there. They play a major part, don't really get anything for what they do, and no one really knows about their work. There were about 10 support crew with their vehicles.... it wouldn't be possible without them.



Providing grants, at-home support and specialist disability housing, Youngcare's goal is to improve the lives of thousands of young Australians living with physical disabilities.



PRODUCT SPOTLIGHT

Floating Treatment Wetlands:

An Innovative Path to Sustainable Treatment and Thriving Habitats



ENGINEERS AUSTRALIA



STORMWATER

Exploring our partnership with Engineers Australia, we look at our co-feature article with Atlan Stormwater's Senior Environmental Scientist, Sam Kowald.

By now the benefits of floating islands are well-established. They deliver a range of benefits including:

- Removing nutrients from catchment water flows.
- Reducing the land take compared with constructed wetlands and conventional treatment such as bioretention.
- Reducing pollutant loads in water bodies that have high background concentrations of pollutants.
- Creating new habitat to act as safe refuge for local wildlife, including nesting birds and amphibians as well as providing a habitat below the water that can shelter fish and frogs from larger predators.

"Floating wetlands can do everything from treating water to creating an ecosystem that helps to keep habitats sustainable and thriving," says Sam Kowald.

"Below the water surface, the root structure of the floating wetlands

becomes a habitat for micro and macro-organisms, and above the surface there is an ecosystem that supports various creatures."

Floating islands form in nature in one of two ways. Plants growing from the bank over the water's surface may become dislodged during a storm, or thick layers of floating plants may clump together and start to accumulate soil and biomass.

Biomimicry & Constructed Wetlands

Through closely observing natural wetlands systems, Atlan Stormwater has created floating treatment wetlands that enhance the benefits of traditional constructed wetlands.

To create these innovative systems, Atlan Stormwater installs a modular floating structure that replicates a natural floating wetland. This allows Atlan Stormwater's engineers to place the wetland in an ideal location, before planting selected wetland species in a stable position in the water column. As these plants grow, their roots are exposed to the water which increases biofilm formation compared to constructed islands.

Constructed wetlands use three main removal pathways to treat nutrients. These are: attached nutrients settling

out in the sediment, nutrient uptake by plants, and microbiological processes.

Floating wetlands enhance each of the three removal pathways. The exposed roots in the water column provide surface area for biofilm growth and increase sedimentation. The floating nature of the wetland structure also encourages strong plant growth by providing optimal growing conditions.

Biofilm supercharges the treatment of the water flows. When sediment in the water passes through the root mass, it is captured by the biofilm. As it gets heavier, the sediment falls off and settles to the bottom of the water body, providing better removal of TSS (Total Suspended Solids) than a constructed wetland relying on gravity and attenuation times alone.

Consequently, floating treatment wetlands reduce the footprint of land required to meet water quality objectives, by up to 60 per cent when compared to traditional constructed wetlands. This improves land useability for the developer, whilst providing more open water and potential increases to land value.



SCAN QR

Read more in our article with partners Engineers Australia!

Atlan Junction Pit



Atlan Junction Pits are key stormwater conveyance solutions for projects requiring the redirection of stormwater flows, connections for pipework, or the provision of manhole access to underlying assets.

Our custom junction pits are manufactured to meet your on-site engineering requirements with coring, custom inlets, and variable dimensions. These versatile precast concrete designs can be tailored to meet your on-site footprint with a wide variety of incoming and outgoing pipe sizes, and inlet and outlet configurations.

Providing safe entry points for maintenance and routine cleaning, custom junction pits are often installed on sites where personnel require pipe access – and are designed to meet local guidelines and industry codes.

Locally Manufactured: Customisable Designs for Australian Projects

We maintain high levels of quality control throughout the fabrication of our custom junction pits with local manufacturing at our Brisbane concrete production facilities. Our ability to fabricate and project accurate supply & delivery times ensures your custom junction pits meet your project timelines.

Our precast concrete assets come with a 50-year design life and suit a wide range of applications across industrial, commercial, and residential projects.

By fabricating assets off-site, construction times are minimised on-site compared to traditional cast-in-situ approaches. This modular approach produces a host of benefits, including reduced wet weather delays and open excavation times.

Custom junction pits reflect your design parameters and seamlessly integrate into your stormwater and drainage infrastructure. Manufactured for full trafficability, Atlan's junction pit range is suited to installation below traffic areas and transport bays.

APPLICATIONS

- Car Parks & Shopping Centres
- Industrial Estates
- Transport Infrastructure, Depots & Loading Bays
- Government Projects & Council Assets
- Airport Aprons & Tarmacs
- Tunnels, Highways & Transport Corridors
- Recycling Yards



SCAN QR

Saving Strata Costs with Bioretention Maintenance





Bioretention systems and green assets bridge the gap between natural systems and stormwater infrastructure - these vibrant planted areas enhance our urban landscape by improving water quality outcomes and drainage capabilities.

A well-maintained bioretention system is a sustainable and aesthetic approach to stormwater treatment – well-mulched with a flourishing growth media full of healthy plants. These systems provide environmental benefits and amenity gains for your local community, but their upkeep through routine maintenance schedules is essential.

Green assets have versatile capabilities for filtration, remediation and biological processes that remove pollutants from stormwater. Media that performs to specification helps to sustain suitable plant species, and this vegetation helps to control and treat stormwater flows.

Bioretention systems add value to our local communities and foster green development and sustainability. Providing extended detention capabilities, they also ensure resiliency to flash flooding by allowing stormwater to 'soak' - known as infiltration.

Why is Bioretention Maintenance Important?

Maintenance is imperative to ensuring the service life of your bioretention systems. For local communities, councils and strata bodies, a well-maintained bioretention system will continue to increase property values, while retaining the treatment qualities that protect nearby environments and keep our waterways healthy.

Bioretention systems have multiple media layers, including mulch, biofiltration media, and drainage. These layers support plant growth and hydraulic specifications – such as infiltration and flow rate.

These layers all need regular assessment. Without routine maintenance, these systems risk costly failure, which results in serious issues, such as poor plant health and barren media layers to blocked drainage and ponding.

The Cost of Failing to Maintain Green Assets

A failed bioretention can be costly to restore – with media replacement, replanting and drainage issues all requiring remedial works for rectification. Often, this is far more costly than routine maintenance, which allows for preventive measures to stop system failure and ongoing damage from occurring.

By solving these problems early, we can continue to protect other nearby stormwater assets and local waterways.

For example, persistent ponding may occur if water level issues in a bioretention system are unresolved - which can lead to plant failure, damage to the growth media, and create a breeding ground for insects. Not only is the cost of fixing the drainage or unblocking sediment bays incurred, but the growth media and plants may also require replacement.

Failures of bioretention systems can result in safety concerns for strata residents and cause complex issues downstream.

Atlan Stormwater offers a full range of maintenance services for stormwater assets. We can also help you to audit your systems and provide scheduled routine maintenance – which minimises cost across your asset's service life and provides cost-benefits to rebuilding damaged or failed systems.



SCAN QR

Find out more about stormwater maintenance.



5

Warning Signs: Your Bioretention Needs Maintenance

A well-maintained bioretention system. Routine maintenance saves you time and money - and ensures assets are sustainably managed.

Have you had your bioretention system checked out lately?

A maintenance schedule is your way of ensuring the health and vibrancy of your bioretention system across its service life, but unfortunately, many bioretention systems remain undermaintained.

Knowing the early warning signs of a system in poor health can help you circumvent costly rectification work or repairs. The efficacy of these stormwater assets is impacted by environmental factors that range from dry periods to flooding and storms.

We examine five key warning signs that your bioretention system needs a maintenance visit and assessment!

1 Sediment Build-Up & Silt

Unmanaged sediment build-up is the bane of a free-flowing bioretention system, building in forebays and blocking media layers. The accumulation of this sediment may result in the clogging of inlets and restrictions to the inflow of stormwater through the bioretention system.

Sediment build-up is often unsightly and provides an ideal environment for invasive species and weeds to germinate. This sediment can be assessed and removed during routine maintenance.

2 Ponding & Still Water

Poor drainage results in ponding water, an obvious sign that your bioretention system is not performing well. Often, this may be a result of clogged or damaged

underdrains and outlets – which can be rectified with timely maintenance. This saves your bioretention from being unsightly, and minimizes safety concerns such as still water, breeding insects like mosquitos, and drowning hazards.

3 Weeds

The growing media in bioretention systems is ideal for plants that treat stormwater – which also makes it a haven for weeds and invasive species. Regular weeding is part of routine maintenance and ensures that these weeds are removed before taking root. It also stops them from competing with the treatment plants, which are responsible for providing root systems that treat stormwater chemically and biologically.

4 Low Vegetation & Withering Plants

Lack of vegetation or withering plants may have many contributing factors, such as lack of nutrients, poor soil quality and erosion. Particularly in dry environments, or areas with high latent heat such as car parks, an undermaintained or unwatered bioretention system will have withering plants, inhibited growth or even plant death.

5 Plant Debris & Rubbish

Stormwater often carries pollutants downstream, including plastic waste, gross pollutants, rubbish, and debris. Removing these bulk pollutants is part of routine maintenance – not only does this stop its conveyance downstream, but it also prevents blockages, and improves the aesthetics and amenity of the bioretention areas.



Cleaning Up Lakeside in Springfield

We thank our enthusiastic volunteers for joining us for an amazing day in the Springfield Lakes area, which saw close to 700 pieces of litter, debris and refuse cleaned from the local catchment that feeds into Spring Lake Park and local waterways.

Sponsored by Atlan Stormwater (formerly SPEL Stormwater), and supported by volunteers from EJ & Commbank, our first quarter 2023 clean-up aligned with Clean-Up Australia Day in March. Joined by local state MP Charis Mullen, it was great to see Springfield Lakes' local representative supporting the clean-up – and helping to create sustainable outcomes for this local waterway.

Major items removed from the local waterways include supermarket trolleys, metal signs, glass items, and office chairs - which threaten the health of local wildlife and the local community.

The clean-up was a terrific opportunity to consider the correct treatment of stormwater in our urban catchments. We had amazing conversations with our volunteers about implementing stormwater treatment in local projects to capture pollution such as fine sediment, heavy metals, rubbish, and debris.

Stay Tuned: Stormwater Shepherds Clean-Ups

As a lakeside community, Springfield Lakes is an ideal place to return to continue our work and help support healthy outcomes for local waterways. Clean-ups improve local amenities and ensure better environmental upsides for local parks, creeks and rivers.

Funded and well-maintained stormwater infrastructure helps to capture pollution at the source – our catchments. By preventing the conveyance of pollution downstream, stormwater assets keep our waterways clean - and our oceans too.

Do you have a local waterway in need of care?

We are looking for potential partner organisations, corporates, and sponsors to support our clean-up events and would love to hear from you! Let us know about your local waterways. Together, we can pitch in to rehabilitate our urban waterways and stop the conveyance of pollution to our oceans, rivers, and lakes.

Reach out & chat to us about clean-ups in your local area.



SCAN QR

“

Thank you so much for the work you're doing! To see a video where you are helping restore the environment by cleaning up the waterways gives me hope for Springfield and the greater region yet!

Our native bushland and waterways are one of our greatest assets and vital to the health and prosperity of the community and wildlife. Great Work!!!

**USERNAME
@SLIPERYTUNA001**

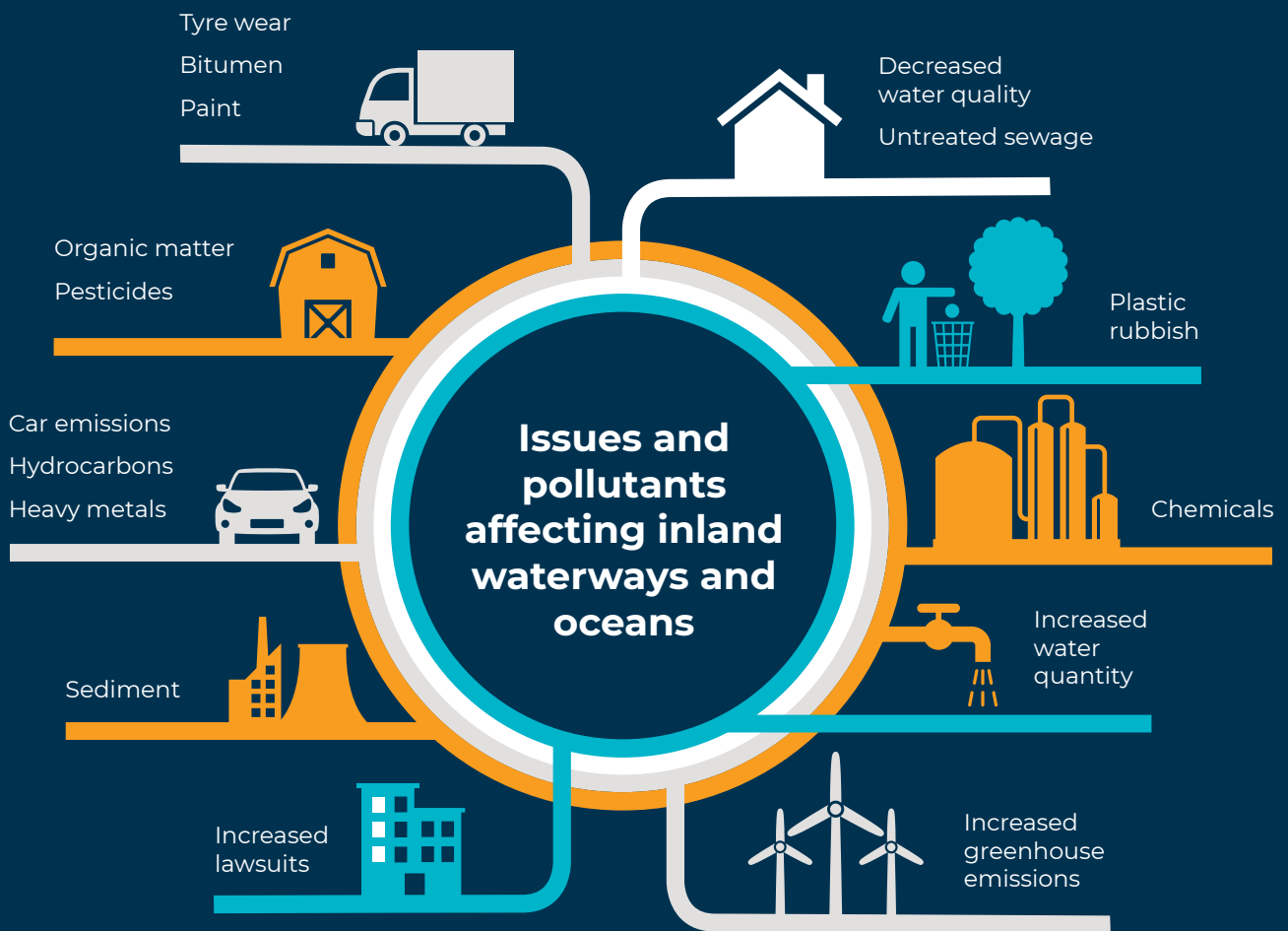
**CHECK OUT THE VIDEO
[YOUTUBE.COM/
WATCH?V=JZHUEUXEVHM](https://www.youtube.com/watch?v=JZHUEUXEVHM)**

ATLAN IS A MAJOR SUPPORTER OF



STORMWATER SHEPHERDS

Our oceans & waterways are in crisis.
Preventing plastic pollution is critical to a sustainable future.



5.25 trillion

pieces of plastic waste estimated to be in our oceans

269 thousand

tonnes of waste floats on the ocean's surface

4 billion

microfibers per km² dwell below the surface



Donate today
www.stormwatershepherds.org.au