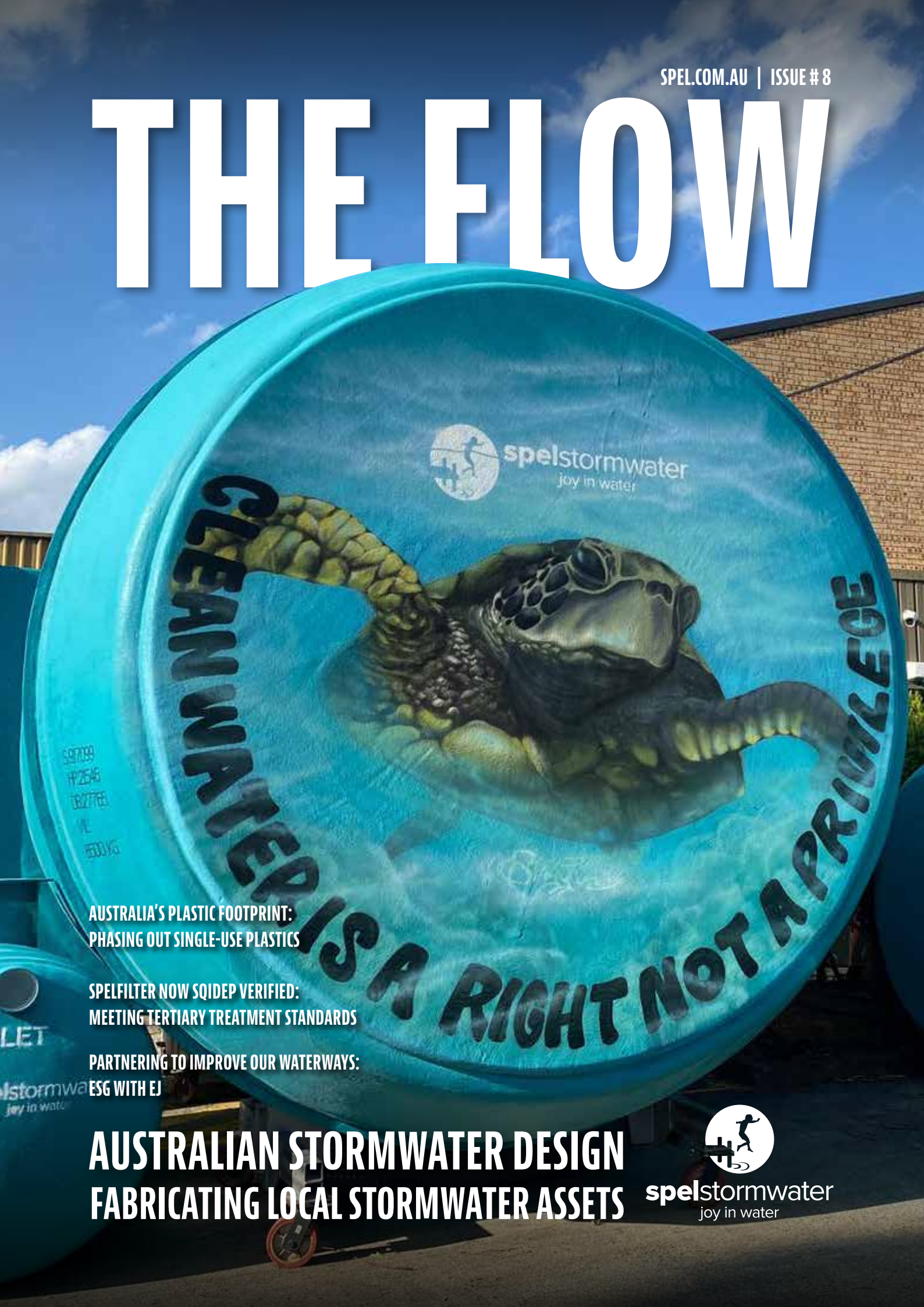
SPEL.COM.AU | ISSUE # 8

THE FLOW



AUSTRALIA'S PLASTIC FOOTPRINT:
PHASING OUT SINGLE-USE PLASTICS

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spelstormwater
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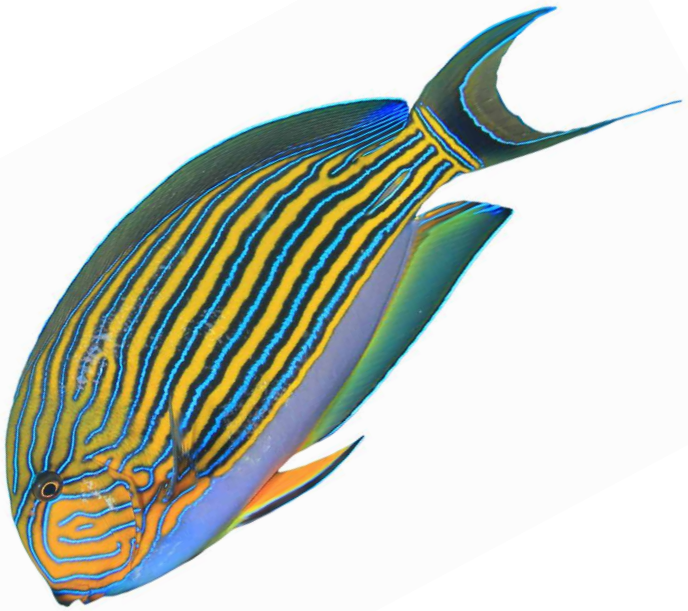


A NOTE FROM OUR CEO

ANDY HORNBUCKLE, CEO

“Clean water is a right, not a privilege.”

Andy Hornbuckle
CEO SPEL Stormwater

After several years of peer review and industry consultation, SQIDEP (Stormwater Quality Improvement Device Evaluation Protocol) was released by Stormwater Australia in 2018. Providing a uniform set of criteria for reporting stormwater device performance, SQIDEP sets the standard for data validation, reliability & quality stormwater outcomes.

We have been fortunate to receive verification for three of our devices – which include the Hydrochannel and SPELBasin. In December 2022, the SPELFilter became the latest of our products to join this reputable group of devices, and you can read more about these developments in this issue.

SPEL Stormwater has always been an ardent supporter of this revolutionary system. It signals that the product ‘does what it says on the box.’ As a provider of high-performance stormwater devices in the Australia region, it makes sense that we want our products to stand up to rigorous testing – and to establish standards that lead to better environmental outcomes.

Clean water is a right, not a privilege... and stopping pollution starts with ensuring we have devices that can effectively remove pollutants at the source – our catchments.

SPEL LEARNING CATCHMENT: OUR SQIDEP WEBINAR

Our February webinar touches on this topic and explores the benefits of the SQIDEP system. You can find this for free and on-demand within the SPEL Learning Catchment – our brand-new Learning Management System.

Presented by SPEL’s Robert Chesterfield, and Dr Darren Drapper, the webinar is an excellent opportunity to learn about the SQIDEP verification process and the ways it is shaping stormwater outcomes across the country.

We support this critical framework and look forward to providing a technical overview of the system.

Register for our LMS & access our webinars free & on-demand.

SPEL HIGHLIGHTS

CELEBRATING WORLD WETLANDS DAY

World Wetlands Day
2 February 2023
It's time for wetland restoration

35% of the world's wetlands have disappeared in the last 50 years. SPEL supports this year's World Wetlands Day, and its message to "Revive & Restore Degraded Wetlands."

Australia has over 66 notable wetlands which cover over 8.3 million hectares of land. Together, we can make sustainable decisions that help harness these natural areas and implement blue-green infrastructure that looks to facilitate the interface between our urban areas and nature.

Scan to learn more about Australia's Wetlands of Importance.

SPEL STORMWATER PARTNERS WITH ENGINEERS AUSTRALIA

ENGINEERS AUSTRALIA

Our EA partnership will extend throughout 2023, and we look forward to showcasing our innovative, sustainable approach to stormwater design.

Founded in 1919, Engineers Australia is the peak not-for-profit body for the engineering profession in Australia - advancing science and engineering for the benefit of the community.

The SPEL community will have access to our co-created content, including webinars, events, & articles, and look forward to sharing our approach to stormwater management and sustainable communities.

Scan the QR code to stay up to date with SPEL's partnership with Engineers Australia.

Scan me!

LEARNING CATCHMENT

SPEL'S LEARNING CATCHMENT: REGISTER FOR OUR NEW LMS

SPEL's Learning Catchment is your premiere stormwater education resource with webinars and coursework available for free & on-demand.

Helping you to log your CPD points, certificates and webinar views in one handy location – our Learning Management System (LMS) is a brand-new platform for accessing our e-learning resources.

OUR HOW-TO OF STORMWATER SERIES

The How-To of Stormwater series is available on-demand through our CPD Library. Exploring key treatment devices for stormwater quality & quantity, the SPEL team steps you through applications, design provisions and case studies explaining key concepts from across the stormwater sector.

- The How-To of OSD: Engineering for Detention Scenarios & Stormwater Harvesting
- The How-To of Proprietary Stormwater Filtration: Water Quality, Tertiary Treatment & WSUD
- The How-To of GPTs: Stormwater Design Choices & Pollution Control

WEBINAR ON DEMAND
EARN CPD POINTS

Sign up to our free LMS to access the Webinar Library.

SPEL.COM.AU/REGISTER-FOR-CATCHMENT-LMS

SQIDEP: EXPLORING STORMWATER STANDARDS

SPELFilter is the latest of our range to be verified by Stormwater Australia's SQIDEP process, and you can read more about these developments in our feature article in this edition of the Flow.

Presented by SPEL Team Leader Robert Chesterfield, and Dr Darren Drapper, our free & on-demand webinar explores SQIDEP and the ways this system is setting the standards for local stormwater outcomes.

REVIEWING 2022: SPEL'S HIGHLIGHT REEL

We thank the SPEL community for their support throughout 2022. It was a great year to give back, whether it was our support of our communities and team members impacted by the floods, SPEL's charity drive for the war in Ukraine, or ongoing work with Stormwater Shepherds, Rapid Relief Team, and Engineers Australia.

Check out our highlight reel.

CELEBRATE JOY IN WATER

To celebrate our Joy In Water values, SPEL co-created these tank murals with the support of local artist Sam Mcaleer to spread our message and appreciation for creating generational assets for the sustainable management of stormwater.

SPELFILTER NOW SQIDEP VERIFIED

MEETING TERTIARY TREATMENT STANDARDS

WHAT IS SQIDEP?

The Stormwater Quality Improvement Device Evaluation Protocol (SQIDEP) is a set of criteria for the field-testing, evaluation, and reporting of the performance of stormwater treatment devices.

SQIDEP drives best practice and ensures that device capabilities and performance are reliably demonstrated and tested by an independent third party. The aim of standardising pollution removal data and verifying stormwater devices is to provide a reputable framework that demonstrates device specifications and consistent water quality outcomes.

With backing from Stormwater Australia, SQIDEP is the first local system to verify stormwater devices meet key performance criteria and pollution removal targets.

APPROVED 23 DEC 2022

SQIDEP VERIFICATION TIMELINE >>>

SPELFILTER

SQIDEP verified in December 2022, SPELFilter has become the latest of our stormwater devices to gain approval through Stormwater Australia's rigorous testing and performance assessment process.

The SPELFilter is our industry-leading cartridge filter system, which provides high-performance pollution removal capabilities for stormwater tertiary treatment scenarios. Stormwater Australia has verified the following data for tertiary treatment outcomes with 85% TSS (Total Suspended Solids), 74% TP (Total Phosphorus), and 59% TN (Total Nitrogen).

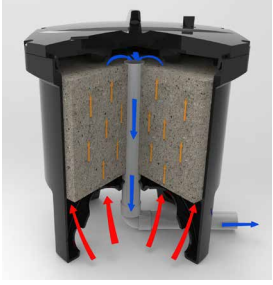
A flexible and scalable solution, the SPELFilter removes pollutants from stormwater before discharge into our water network and surrounding waterways. Optimised to suit your specific site and local authority requirements, the SPELFilter is available in versatile configurations – and is suitable for application in many different catchment areas.

SQIDEP approval shows that the SPELFilter has a proven track record for performance, integrity, and reliability – and is compatible with local regulations and council guidelines.

SQIDEP DATA TABLE - SPELFILTER
Treatable flow rate = 3 L/s per filter cartridge

Total Suspended Solids (TSS)	85%
Total Phosphorus (TP)	74%
Total Nitrogen (TN)	59%

Learn more



LEADING THE WAY FOR CLEANER WATERWAYS

Sustainable design practices have seen an increased demand for stormwater treatment devices. Various local councils and governments are implementing SQIDEP verification requirements to ensure the performance of their stormwater assets.

Stormwater devices are used to overcome the potential negative impacts of discharged stormwater on the health of our water networks and waterways. It is imperative that our stormwater assets are fit for purpose and performance – and clearly defined pollution removal specifications are part of a sustainable future.

The SQIDEP system helps to facilitate quick and effective decision-making when choosing stormwater infrastructure for your projects. SQIDEP champions positive stormwater outcomes, and the approval of the SPELFilter indicates its tertiary filtration specifications and pollution removal capabilities have been verified by third-party testing.

<<< TIMELINE

APPROVED 22 JUNE 2021

SPELBASIN

Providing high-performance stormwater treatment in a condensed footprint, the SPELBasin was Stormwater Australia's first SQIDEP-verified product in 2020.

Incorporating a self-contained treatment train, this sustainable approach to stormwater filtration can be used in place of standard catch basin structures, bioretention cells and media filters.

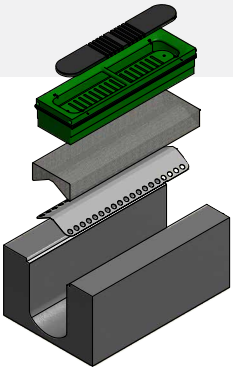
Treatment in this device occurs across multiple treatment components, including screening, hydrodynamic separation, media filtration & bioretention. With minimal maintenance requirements and high pollution removal efficacy, the SPELBasin is a novel approach to on-site treatment.

Available in a variety of configurations to suit a wide range of urban environments – including residential, industrial, and commercial scenarios.

Learn more

APPROVED 25 SEPT 2020

HYDROCHANNEL



The Hydrochannel is a stormwater system that can be inserted in 300mm wide channel drains, and provides gross pollutant, sediment, and nutrient capture.

Verified by the SQIDEP process in June 2021, the Hydrochannel provides at-source stormwater treatment for surface flows. A cost-effective, convenient, modular design philosophy - this innovative device is a streamlined stormwater treatment device that can be placed in on-site drainage runs.

Combining sediment chambers, filtration and baffle areas, this device is suitable for applications including car parks, high-traffic areas, and metal roofs.

Learn more

SQIDEP DATA TABLE - SPELBASIN

Total Suspended Solids (TSS)	86%
Total Phosphorus (TP)	65%
Total Nitrogen (TN)	50%
Gross Pollutants	99%

SQIDEP DATA TABLE - HYDROCHANNEL

Total Suspended Solids (TSS)	88%
Total Phosphorus (TP)	69%
Total Nitrogen (TN)	67%

COOMERA MEGAVAULT

3,000,000 LITRE DETENTION WITH STORMWATER HARVESTING & TREATMENT

A key upcoming development in Coomera, Queensland, will see a flagship extension to the local Westfield shopping centre – with the additional complex housing a large warehouse retailer, service station and 783-car parking lot.

Supporting local growth, the large-format site will complement nearby retail establishments and community infrastructure. Close to local creeks and surrounded by the scenic Gold Coast environment, SPEL designed and installed stormwater treatment assets to meet the unique requirements on the expansive 14,000 square-metre site.

Sustainability outcomes were a key consideration in meeting the development's environmental goals, with the site characterised by large impervious areas of hardstand and car parks.

High volumes of stormwater runoff are expected during rainfall events. Subsequently, stormwater assets had to be designed to accommodate these potential flow rates. Four main stormwater management specifications were defined for the multi-purpose site – hydrocarbon capture, tertiary filtration, detention, and stormwater harvesting.

The versatile stormwater assets supplied will ensure vital water quality, spill containment, flood mitigation and water storage capabilities across the site's multiple catchments.

UNDERGROUND STORMWATER TANKS: MAXIMISING USEABLE LAND

Large-scale detention systems were supplied to the site, including an impressive 3,000,000-litre cathedral-style Megavault system.

The Megavault's precast, modular design was a perfect fit – providing on-site efficiency, fast 12-day installation, and reduced open excavation times. This key OSD asset (on-site stormwater detention) will ensure that stormwater runoff from the large catchment is slowed, and flood mitigation capabilities are available during heavy rain events.

Across the site, stormwater assets were installed underground to maximise usable land. This ensured all detention and treatment assets were able to meet the available on-site footprint. Fully trafficable, they will support vehicle use & load ratings for heavy vehicles.

Stormwater reaching the Megavault will pass through two satellite filtration systems housing SPELFilters. These devices are designed to remove phosphorus, nitrogen, and total suspended solids to help reach the site's water quality objectives.

HYDROCARBON CAPTURE FOR SERVICE STATION CATCHMENTS

A secondary main catchment area was the service station and its surrounds. A SPEL Triceptor was installed to ensure capture capacity for on-site spills and oil separation – a legal requirement on high-risk sites.

Discharging into a 100,000-litre Megavault detention system with internal SPELFilter bays, the stormwater that passes through the service station's catchment will undergo tertiary treatment within this nearby OSD.

Protecting the local environment, a key benefit of the Triceptor is the ability to treat both high and low-risk areas of the surrounding catchment.

Hydrocarbon spill capture helps to protect local waterways and the surrounding environment – with these compounds eliminated from runoff prior to entering downstream devices or surrounding areas.

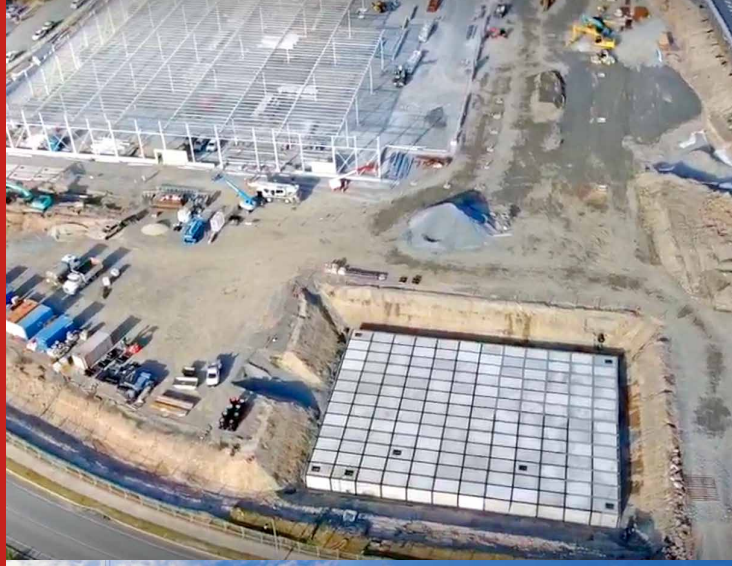
STORMWATER HARVESTING & SUSTAINABILITY GOALS

Capacity for local stormwater harvesting was also part of the long-term sustainability goals of the development. An 80,000-litre SPELVault system will allow this precious resource to be captured for reuse. Minimising cost and environmental impact, this green approach will help to alleviate water use and reliance on local water networks.

The rectangular precast SPELVault system was installed to complement on-site detention. Similar to other on-site assets, the SPELVault will be fully trafficable and will be located underneath key car park assets.

In addition to providing climate resilience, the dual systems in this modern development will mitigate the impacts of severe weather events such as flooding and droughts. Futureproofing the site to meet environmental demands, the result is a multi-pronged approach that provides comprehensive stormwater management infrastructure.

Scan to view our project video & blog.



SPELBASIN

INNOVATIVE PRECAST CONCRETE DESIGNS

Our first locally fabricated, precast concrete SPELBasins landed on the Sunshine Coast, Queensland in late 2022 with two devices placed to meet water quality and pollution removal objectives across one of the region's newest aged care developments. Supplementing our FRP SPELBasin designs, this precast concrete fabrication provides versatility when implementing and producing these assets. Manufactured at SPEL's Brisbane precast concrete facilities, off-site fabrication is beneficial for the delivery of these devices to meet key project timelines – and supports custom design to meet invert depth requirements and saturated media layers.

With waterfront views and situated close to key Sunshine Coast waterways, these tertiary treatment assets will help protect the area's iconic seaside.

Scan to view our project video & blog.

SQIDEP APPROVED: OUR SELF-CONTAINED TREATMENT TRAIN

SQIDEP-approved and WSUD-rated, the SPELBasin complies with environmental requirements and industry standards for effective stormwater treatment. Ideally suited for the urban environment, the multi-stage design ensures stormwater treatment can meet specifications on sites requiring compact, self-contained systems.

A modular bioretention system, these assets provide pollution removal capabilities for a range of contaminants, including gross pollutants, suspended solids (TSS), phosphorus (TP) & nitrogen (TN).

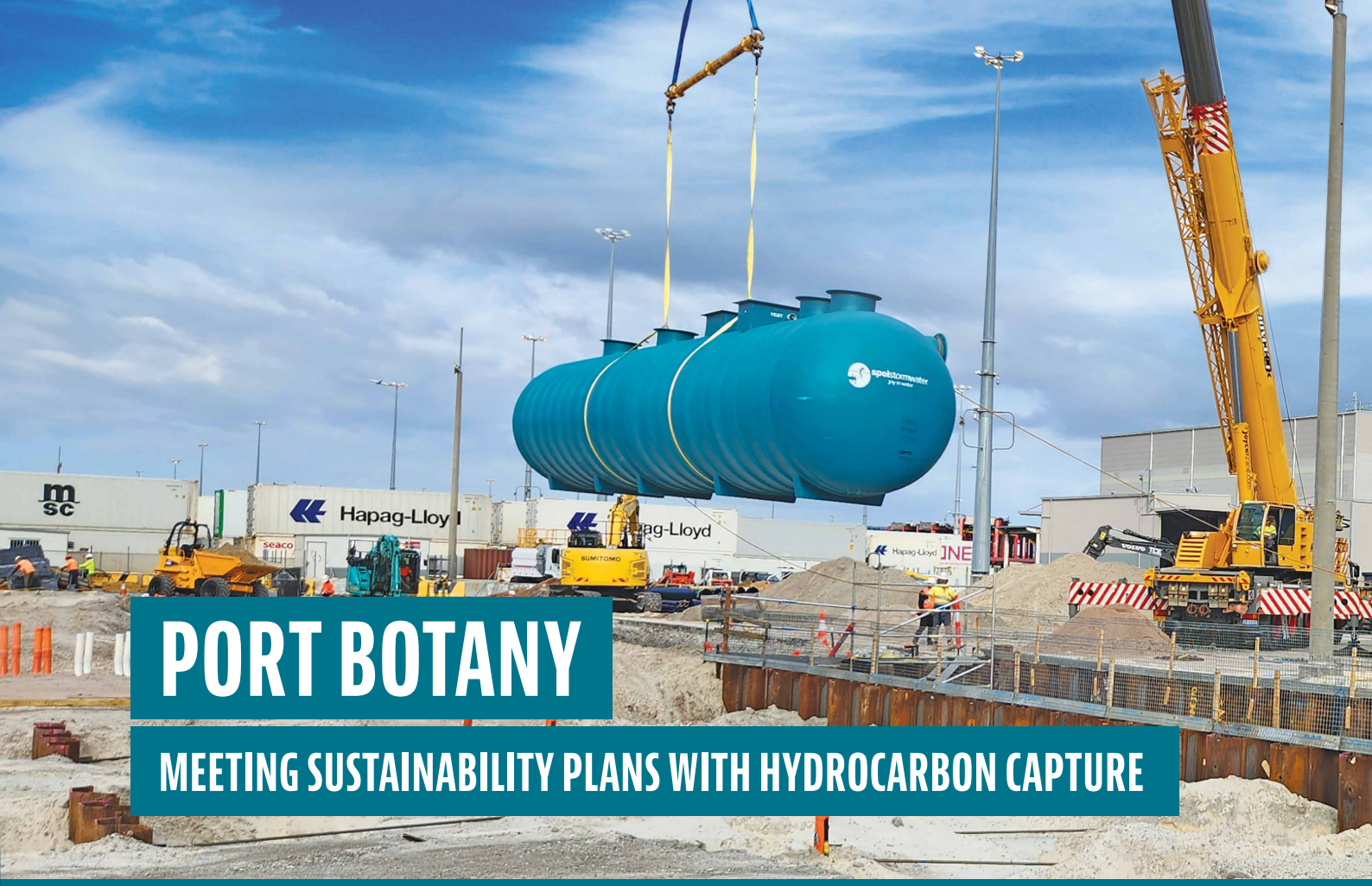
The innovative design of these systems helps meet constrained on-site footprints while retaining tertiary treatment capabilities and capture of gross pollutants. Often, they are designed in place of catch basin structures, rain gardens or bioretention cells.

Easy to install and maintain, the compact concrete design of the SPELBasin ensures minimal maintenance costs across the asset's service life - with less planted area to actively manage compared to traditional bioretention basins.

The SPELBasin's pre-treatment chamber is designed to capture sediment and noxious weed seeds before entering the biofiltration media, extending its service life over a traditional system. This preserves the health and quality of biofiltration and reduces the long-term impacts of sedimentation build-up and the establishment of weed species.

Requiring less maintenance than a traditional configuration, the access lids allow technicians to clean out the device efficiently. Sediment can be removed directly from the pre-treatment area, reducing its impact on established plants in the bioretention chamber, particularly following heavy rainfall events.

As the SPELBasin's plants flourish, the result is an aesthetic, green asset with high-performance pollution removal capabilities.



PORT BOTANY

MEETING SUSTAINABILITY PLANS WITH HYDROCARBON CAPTURE

Nestled 12 kilometres from Sydney's CBD, Port Botany is one of Australia's largest container ports, responsible for handling 99% of the state's container demand. Contributing $3.7 billion annually to the state's gross product, the port's development plan establishes a clear vision for the environmental frameworks that guide its sustainable growth.

SPEL has a long track record in Port Botany with over 30 devices installed across the waterfront. Water quality objectives are a high priority to reduce local pollutant loads in the port, and SPEL is a proud custodian of these outcomes.

Supplying infrastructure to new developments in the site's automated container handling facilities – SPEL designed hydrocarbon capture assets to meet environmental obligations on the site's refuelling areas.

Preventing light liquid pollutants from reaching downstream drainage, waterways, and treatment devices, the Puraceptor was suited for this task with its capacity to contain oil spills and separate hydrocarbons from stormwater runoff – complemented by its 100-year design life, sustainability gains, and cost-effective maintenance.

Following the implementation of this sustainable asset in December 2022, SPEL will continue its work in helping to improve water quality outcomes across the port.

LOCAL & SUSTAINABLE FRP STORMWATER DEVICES

Manufactured to meet a 10-week production window at our Sydney FRP facilities (Fibre-Reinforced Polymer) - the Puraceptor is a sustainable homegrown product that meets the vital environmental specifications of this local flagship project.

Protecting local drainage networks, waterways, and surrounding environments, the Puraceptor is a full-retention separator device with guaranteed performance in all flow conditions. Coalescing and capturing light liquids, the Puraceptor discharges water with hydrocarbon content reduced below 5mg per litre – and ensures light liquids are captured during spills and heavy downpours.

The SPEL Puraceptor is designed to provide emergency containment capacity for on-site spills, and its flameproofing and automatic closure capabilities meet necessary environmental requirements on high-risk sites.

In challenging conditions, the device was installed within the water table in a sandy excavation. Installation was quick, facilitated by the device's single-piece FRP design, prefabrication, and ready-for-installation delivery. This conveyed many benefits to the project timeline and minimised on-site costs & safety risks due to the open excavation.

Due to the Puraceptor's FRP composition and lightweight characteristics, carbon emissions attributed to fabrication and freight were also reduced compared to traditional concrete alternatives. Aligning with local objectives for sustainable development, this stormwater infrastructure ticks the boxes of the port's Sustainability Plan. It also supports a greener future for the area's surrounding waterways and seaside.

FEATURED PRODUCT

INLINE TREATMENT WITH THE SPEL VORTCEPTOR

The SPEL Vortceptor is a high-performance GPT (Gross Pollutant Trap) featuring a non-blocking hydrodynamic separator with a unique screen and low vortex treatment action. Manufactured in Sydney at our Penrith FRP (Fibre Reinforced Polymer) facility, this innovative device is now available in inline treatment configurations.

A practical fit for constrained sites, inline designs are advantageous in a variety of scenarios, including retrofits and existing drainage applications. This allows them to be placed 'inline' with incoming and outgoing flows. Inline Vortceptor models have a small diversion chamber integrated over the separation treatment chamber, providing a unit that is packaged into a compact footprint.

The Inline Vortceptor has a flexible pipe configuration with the outlet pipe being able to rotate in excess of 180° around the system. The Inline Vortceptor is available with or without internal bypass to suit installation on low-flow diversions.

A versatile approach to GPT design, the Vortceptor is available in a variety of sizes and flow rate specifications to match your on-site requirements and environmental objectives.

GENERATIONAL ASSETS & HIGH-PERFORMANCE POLLUTION REMOVAL

With excellent pollution removal capabilities, the Vortceptor is a primary treatment device – which is the cornerstone of stormwater treatment. Primary devices capture larger pollutants, and typical items such as litter, cigarette butts, plastic pollution, and floatable waste.

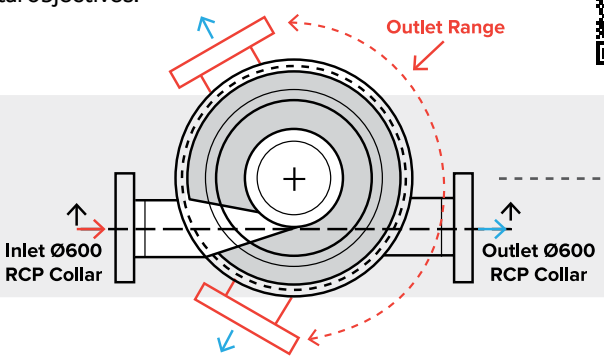
The Vortceptor's versatile treatment provides supplementary capabilities for the removal of sediment, silt, and total suspended solids (TSS).

With a 100-year design life, the Vortceptor's durable, lightweight FRP composition ensures efficient & cost-effective installation, freight, and on-site lifting. Long-term maintenance costs are also reduced via the non-blocking screen, and ease of access to the device's screens and sump areas – with maintenance typically performed by two operators with a vacuum truck.

The Vortceptor's treatment chamber features a single-piece design and is delivered ready-to-install. Supplying cost-benefits on-site, quick installation processes ensure open excavation times and on-site safety risks are minimised.

FRP design also conveys sustainability benefits during fabrication, freight, and installation – compared with traditional alternatives such as precast concrete GPT units. These devices can also be designed and installed for full-trafficability – ensuring that they are fit for a wide variety of applications in industrial, commercial, and residential scenarios.

Learn more about the SPEL Vortceptor.



The Inline Vortceptor can be configured to a wide range of variable outlet angles.

Q&A WITH ANDRÉ MAGAR

Head of SPEL's National Engineering Team, Andre Magar, and his team provide technical support, design advice and sustainable engineering outcomes across many of our flagship projects.

A consistent contributor to stormwater industry bodies such as UDIA, Stormwater Shepherds, Stormwater NSW & FRANC, Andre's work mediates growth and profitability through sustainable frameworks and environmental compliance. As an advocate for stormwater change, he helps guide our ongoing projects and relationships with consulting engineers, councils, and local authorities.

ENGINEERS AUSTRALIA

Learn more about our partnership with Engineers Australia.

Have a question for André?
0420 526 009
Andre.Magar@spel.com.au

WHAT IS YOUR ROLE IN THE ENGINEERING TEAM?

The national team has been operating for a year now. SPEL is growing at a fast pace, and we wanted to have a dedicated team that specialises in servicing consultants as well as high end engagement with councils and authorities.

We can give our clients the extra support they need... and provide conformity when it comes to the way our products & projects are designed, sized, modelled, and approved.

HOW DO YOU SUPPORT SPEL'S KEY CLIENTS AND PROJECTS?

We want to be able to offer consulting engineers options. There are always specific constraints and (industry) teams are under the pump when it comes to resources.

In our industry, people are often time-poor, and SPEL's engineering team helps relieve this stress - assisting with quick turn-around models within 24 to 48 hours. We help our clients meet important deadlines and project timelines.

HOW DOES YOUR WORK RELATE TO SUSTAINABILITY AND INNOVATION?

The fact SPEL currently has over 15 products means SPEL has versatile options for our clients. We can offer a full treatment train of devices, which optimises environmental and economic outcomes – while maintaining commercial viability.

MODERN ENGINEERING IS CONSTANTLY CHANGING - HOW DOES YOUR TEAM STAY AHEAD?

It all comes down to collaboration. Collaboration and partnership. One hand does not clap on its own - and we are highly active in partnering with academic partners and professional associations. We want to share our experiences and learn from others.

Growth happens when you collaborate and work together to reach great outcomes. The most recent of these is the development of our partnership with EA (Engineers Australia) with over 100,000 engineers as part of their membership helps us with webinar opportunities and digital collaboration. It joins our existing partnerships such as UDIA & Stormwater NSW.

WHAT IS IN THE PIPELINE FOR THE EA PARTNERSHIP IN 2023?

EA is a key step towards connecting with engineers from all different sectors. We are looking forward to creating valuable content that engages the wider engineering market and raises awareness of stormwater. Obviously, the advocacy part is important – stormwater is still considered 'a little forgotten' in the water sector. Our job as a company is to shine the bright light on stormwater and ensure we do what it takes to take the place it needs – and work with councils, politicians, and the public to secure better outcomes and thus protect our precious waterways.

AUSTRALIAN STORMWATER DESIGN

FABRICATING LOCAL STORMWATER ASSETS

Meeting a growing demand for stormwater assets across the region, SPEL's innovative approach to local supply & fabrication ensures high-quality devices - tailor-made for the Australian, New Zealand, and Oceanic markets.

Our production facilities include precast and FRP fabrication capacity with locations in Brisbane and Sydney. By locally producing performance-driven stormwater devices, we ensure your project is supplied with assets that match your on-site requirements and lead to best-practice stormwater outcomes.

Committed to finding effective stormwater outcomes for our clients, we custom fabricate many of our stormwater devices in-house and tailor them for your projects. We offer full-service 'cradle-to-grave' capabilities with supply, logistics, installation, and maintenance - all able to be managed by our in-house team.

Consistency, quality control and timely supply are key benchmarks that we look to uphold across our entire range. Our ability to locally fabricate, warehouse, and project accurate supply & delivery times helps to create better outcomes when it comes to supplying stormwater assets to local developments.

Off-site fabrication improves on-site efficiency and ensures that labour costs and installation requirements are lower than traditional in-situ approaches. Our modular solutions are produced to meet your site's scope and scale with logistics capabilities to suit your needs.

FRP MANUFACTURING: SYDNEY

Our 8,000 square metres of FRP production facilities are situated in Sydney's metro area – and provide production capabilities for rotomoulding and filament winding processes. These facilities allow breakthrough stormwater solutions that incorporate FRP composites – with robust performance in our challenging local environments.

With these materials used in aerospace engineering, military defence projects and civil infrastructure, SPEL brings this pioneering technology to the stormwater sector. FRP is used in many of our stormwater devices – including the Puraceptor, Stormceptor, Triceptor, Ecoceptor, Vortceptor, Hydrosystem, SPELBasin & Tankstor.

BENEFITS

- Improved physical characteristics, durability, and structural strength
- Long design life & resistance to challenging environments
- Fast production & installation times
- Sustainable – low carbon emission fabrication & freight
- Lightweight composition, easy to handle & lower lifting costs

WHAT IS FRP?

FRP (Fibre-Reinforced Polymer) is a composite material made of a polymer matrix reinforced with fibres to add strength and support. It is a chemically reinforced type of material that is composed of a thermoset resin matrix and engineered fibres to improve durability.

WHAT IS PRECAST CONCRETE?

Precast concrete technology involves formwork, moulds, and off-site customisation to produce high-quality concrete designs that are cured in a controlled environment. Fabricated off-site and delivered fit for installation, this modular design framework allows your products to arrive on-site ready to go in the ground.

PRECAST CONCRETE MANUFACTURING: BRISBANE

SPEL's precast concrete fabrication is split between dual locations in Brisbane and provides precast detention and treatment infrastructure to projects throughout Australia. Concrete pouring facilities include flatbed configurations for lids and bases, and precast moulds for a diverse range of concrete stormwater infrastructure.

Full capabilities are provided for our concrete assets, including design, fabrication, delivery & on-site installation. Precast concrete provides the structural basis for many of our products, including OSD tanks (SPEL Vault & Megavault), SPELBasin, Filter Tanks, Baffle Boxes, junction pits and diversion chambers.

BENEFITS

- Cost-efficient fabrication & fast installation times
- Improved risk management & reduced open excavation
- Off-site fabrication minimises on-site costs, production requirements, & administration
- Production efficiency during rain periods & wet weather
- Reduced requirements for on-site tradesmen, subcontractors, & third-party installers

50 YEAR CONCRETE - DESIGN LIFE

10 YEAR WARRANTY

AUSTRALIA'S PLASTIC FOOTPRINT:

PHASING OUT SINGLE-USE PLASTICS

With the world consuming 139 million tonnes of single-use plastics in 2019, our increasing plastic footprint has prompted local changes that seek to phase out single-use products.

The challenge of curbing plastic use has been a progressive one. A large milestone was achieved in 2018, with single-use plastic bags eliminated from supply at Australia's largest supermarket chains.

Subsequent developments have seen plastic straws, utensils, and takeaway packaging as key areas for change. The introduction of government guidelines, and community-wide bans, has seen a changing status quo for the use of single-use plastics.

There are current plans to ban many categories of single-use plastics across all Australian states and territories – particularly in the retail, hospitality, and consumer trade sectors. However, widespread support is needed to hit wider reduction targets – and to lower our environmental footprint in other industries.

Our relationship with these products is much deeper than our favourite takeaway. Many modern products contain these troublesome petrochemical compounds and an ever-growing array of plastic that finds its way into our homes, supermarket shelves, and workplaces.

Unfortunately, many single-use plastics still fall outside our current bans and guidelines. Key advocacy groups are asking us to consider strengthening these frameworks as part of our criteria for sustainability and green outcomes.

REMOVING PLASTIC POLLUTION AT THE SOURCE

SPEL Stormwater continually demonstrates its commitment to the removal of plastic from our waterways and oceans – from designing and implementing high-quality stormwater treatment devices to our support of local clean-up events & sponsorship of Stormwater Shepherds.

Treating stormwater with devices such as Gross Pollutant Traps (GPTs) can help stop the flow of plastics from our urban catchments to our waterways. Capturing these pollutants in our catchments stops their conveyance downstream – but these preventative tools need to be supported by community education and government policy.

Together, we need to choose eco-friendly alternatives and seek other options for single-use plastics. Environmentally friendly alternatives exist – and we can all try to incorporate biodegradable, recyclable, or natural alternatives into our daily lives.

Preserving Joy In Water for future generations is part of our responsibility to sustainably manage our waterways, and widespread awareness is the key to change.

As a building block, Australia's single-use plastic bans are a step in the right direction. Together we need to ensure their consistent adoption and continue to reduce our reliance on these materials.

A QUICK GUIDE TO AUSTRALIA'S COMMITMENTS TO SINGLE-USE PLASTICS

The following single-use plastic items are banned or being phased out across Australia:

PLASTIC BAGS

PLASTIC DRINKING STRAWS, BOWLS & PLATES

COTTON BUDS WITH PLASTIC STICKS

PLASTIC CUTLERY

EXPANDED POLYSTYRENE FOOD & DRINK CONTAINERS

PRODUCTS CONTAINING MICROBEADS

STORMWATER SHEPHERDS

CORPORATE SPONSOR SPOTLIGHT

PARTNERING TO IMPROVE OUR WATERWAYS: ESG WITH EJ

Reflecting on their business heritage on the banks of Lake Charlevoix, Michigan, and company values that encompass the protection of their community, environment, and waterways – the origins of EJ in the Asia Pacific region are apparent in their local approach to sustainability.

"The original foundry was started in 1883, surrounded by lakes, fishing, and natural forest. We have well-understood corporate values and two of them are environmental responsibility & community involvement. These strong values carried over into the Australian business," says Simon Bottomley, the Regional Director and General Manager for EJ in the Asia Pacific.

With the EJ grate systems providing a vital first line of defence for improving stormwater outcomes, their involvement in local Australian water projects extends back to 1985. EJ is a reputable leader in the design, manufacture, and distribution of access solutions for water, sewer, and drainage – with Australian production based in Brendale, Queensland.

Establishing a partnership with Stormwater Shepherds in 2022, Simon outlines that the relationship is based on a shared vision for a cleaner water future that incorporates EJ company values and provides valuable business-building opportunities.

"When we were approached by Stormwater Shepherds, we were impressed at the reputation of the group in the stormwater industry – and other sponsors like SPEL Stormwater. The passion (for the environment) is combined with a sensible and balanced approach to green initiatives that works for our business."

Involvement with Stormwater Shepherds has helped break the ice when it comes to community-based discussions outside the day-to-day business. Outlining a shift in the local business landscape, and the growing demand to show that businesses are investing in a sustainable future, Simon explains,

"What we are seeing around Australia is a lot more focus on ESG (environmental social governance), and businesses like to align themselves with businesses with similar values. Particularly in our industry, we are hearing about a number of councils, specification engineers, and contractors that are holding those values close."

"They like to work with businesses that demonstrate a care and concern for achieving real ESG outcomes – it's easy to say these things... but you really need to demonstrate that you are serious about it and doing something tangible."

Direct action has been a key outcome from the ongoing environmental efforts by EJ, with local clean-up events providing valuable opportunities for team building and a sense of achievement.

> *"We have found clean-ups to be a good team-building opportunity, allowing our team to work together, do something for the community - while helping out and contributing to a greater purpose. Everyone was proud of being involved."*

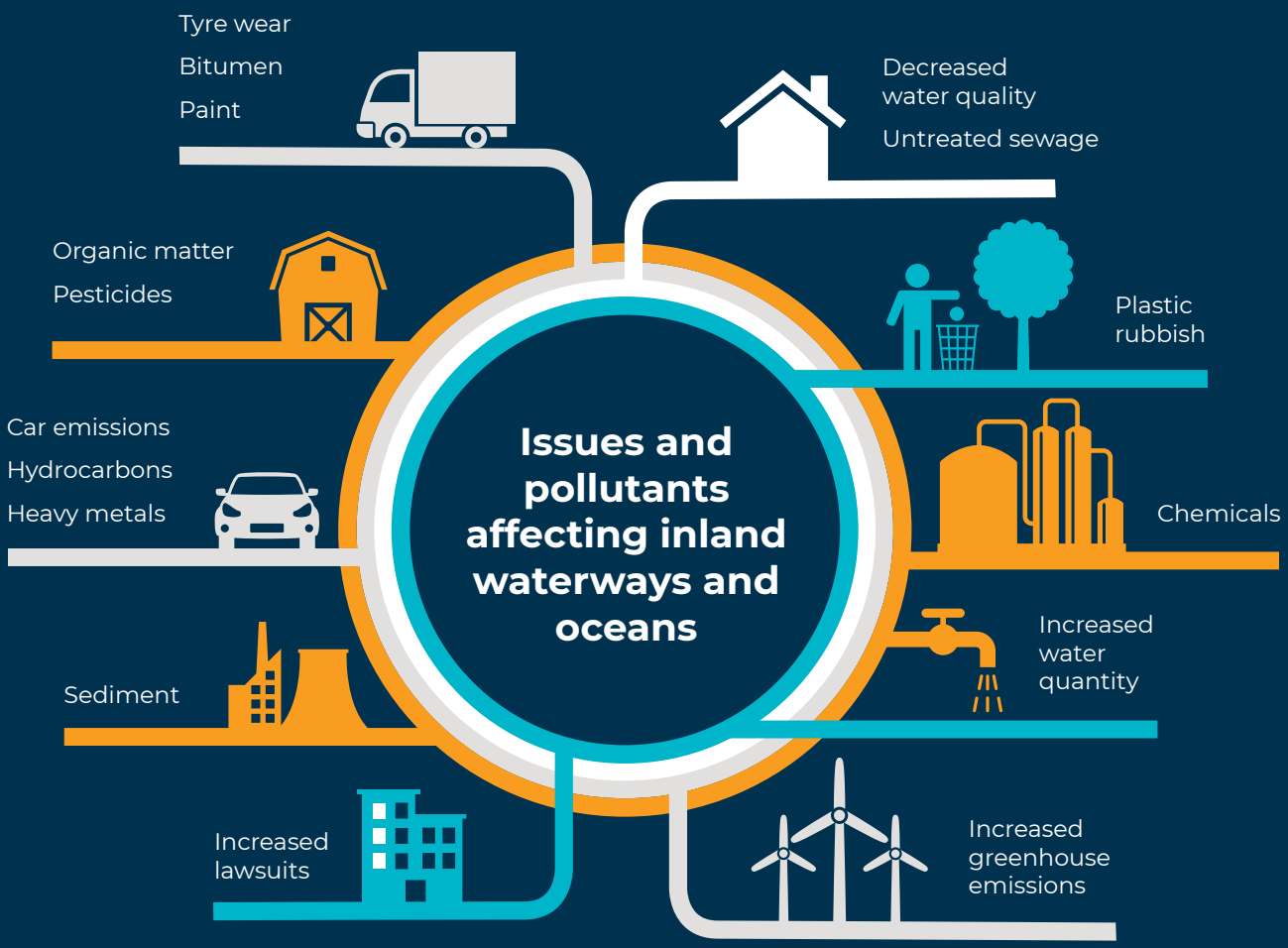
Reflecting their desire to communicate these commitments with their customers, the flexibility of Stormwater Shepherds' sponsorship has been beneficial – the ongoing partnership is showcased through product stickers, vehicle signage and brochures.

"It is about positioning the EJ brand in the Australian market as something reliable, and credible - and shows care for our local environment and communities. We see Stormwater Shepherds as a great way for us to be involved and demonstrate that we are doing a lot more than just talking about it. Actions, not words."

SPEL 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