

21
PAGES
OF SPEL
NEWS

APR
2020

the flow

ISSUE #1 Q2 2020

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Open Mike
Under maintenance

Buckle up
Looking post-covid

In depth
Lai Adolfo

Hydrogen
just add Oxygen

we're
BUILDING
CLEAN.





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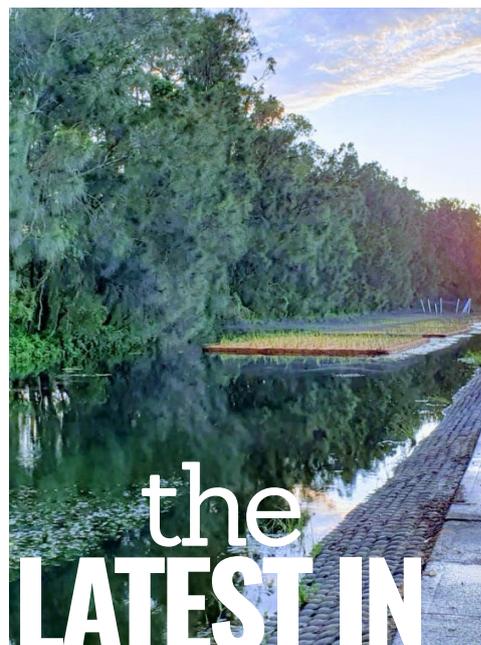
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Introducing our not-for-profit initiative, Stormwater Shepherds.

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**JUST ANOTHER
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We send you into the sunset with the best of wishes. Stay healthy, Stormies.



the
**LATEST IN
WSUD**

In this issue we're bringing you twice the water-sensitive urban design goodness with case studies on Parklakes 2 and our recent installation in Banora Point, New South Wales.

featured projects



Andy Hornbuckle
General Manager



Buckle Up

It's positive, or it's pointless. That's my mantra I try to bring to each and every interaction, every single day. There are people out there really doing it tough and as a business leader I feel the responsibility to step up and provide stability and vision in uncertain times.

I have been absolutely blown away by the response of my staff in delivering a wide range of community initiatives for SPEL, from our donations to the Rapid Relief Team circa \$250,000, to reaching out to their network and identifying any one who might benefit from a food box, or a reference or an open set of ears. There's no textbook on how to do this, just that we do it together.

Andy Hornbuckle
General Manager



Case Study

SPEL Stormwater has worked collaboratively with Tilt Renewables to deliver a Puraceptor at the Blue Gums Substation Dundonnell at Dundonnell Wind Farm in Victoria, Australia. SPEL has also executed a 10-year maintenance contract to provide a visual inspection for hydrocarbon and silt depth, supply a vacuum truck and labour to vacuum and maintain the system and review the coalescer for a potential replacement.



PROJECT ENERGISED MARCH 2020

Intergenerational Clean Energy

D

SPEL Puraceptor Class 1 stormwater treatment separators cater to potential hazards to the environment including sites where there is a risk of oil and fuel spills. Oils and all petroleum hydrocarbons are treated to the highest discharge quality exceeding EPA standards ensuring it safe for stormwater discharge. Major oil spills from a petrol tanker or a transformer rupture are captured and contained preventing any stormwater discharge.

Features

- Independently tested (laboratory) and certified to discharge < 1.86ppm or less petroleum hydrocarbons (TPH), from 5,000ppm ingress
- Independently field tested to discharge 'no detection' from >33,000.0ppm

The inspiration for the \$560 million Dundonnell Wind Farm came from a group of local landholders who were keen to host a Wind Farm on their properties. SPEL Stormwater was privileged to play its role in delivering a clean energy experience.

About Dundonnell Wind Farm

The Dundonnell Wind Farm project is located approximately 23km north-east of Mortlake, in the Western District of Victoria, Australia. Once completed the project will be connected to the National Electricity Market (NEM) via a 38km 220kV transmission line to the Mortlake Gas-Fired Power Station (MOPS).

The project will be installed with 80 V152-4.2MW Vestas turbines, which are the highest producing onshore low wind production turbine. The blades of the turbines are 73.7m-long, while the rotor diameter is 150m and the swept area is 17,671m². rated power of each turbine is 4,000kW, cut-in wind speed is 3m/s and cutout wind speed is 22.5m/s.



thinking bigger

modern design

The project was successful as part of the Victorian Renewable Energy Auction Scheme (VREAS) and has been awarded a Support Agreement by the State designed to try and ensure the state meets its targets of 40 percent renewables by 2025 and 50 percent by 2030.

Tilt Renewables is a significant and established developer, owner, and manager of renewable energy generation assets, with an operational capacity of 636MW and a pipeline exceeding 3500MW of wind and solar projects across Australia and NZ.

Tilt spent \$80 million on a 500kV substation and 38kms of 220kV overhead transmission line – built by Ausnet – to link into the state's main 500kV transmission backbone. Once operational 80 wind turbines will produce 336MW of electricity – enough clean energy to power approximately 245,000 homes and save roughly 1.3 million tonnes of carbon emissions each year. In addition to its State agreement Tilt Renewables is assisting organisations to reduce their footprint, having directly signed retailing giant Aldi Foods to purchase 6% on a 10-year power purchase agreement.

Open Mike

Mike Maguire talks long-term relationships and managing cogs in SPEL's new maintenance engine.

Written By : Michael Maguire



under maintenance today

If it's a SPEL product, we'll service it. If it's a competitor product, we'll service it. Our priority is a safe worksite and clean water outcomes. If you're in any doubt reach out to Michael Maguire and his team today through michael.maguire@spel.com.au.

FIRST STEPS FOR FAST-GROWING SPEL DIVISION.



Michael Maguire

MAINTENANCE BUSINESS MANAGER

SPEL introduced a dedicated maintenance division to the business as a key part of our client-support structure. It is critical to us that we're giving the client the comfort that the business that is selling them the best products backed up by industry-leading warranty and a highly trained maintenance team.

A SPEL maintenance agreement ensures our products are performing to a high standard and meeting all council guidelines. Being proactive in the maintenance space allows for the detection of a potential breakdown or equipment failure giving the client notice that additional work will be required.



covid safe



Our maintenance teams are operating throughout the COVID-19 crisis using best practice and following the guidance of the World Health Organisation and Australian Government. Should you have any questions about our on-site practices please don't hesitate to reach out.

THE DAWN OF A NEW SPEL ERA



ABOUT ME

RECENT CLIENTS



WELCOME 7ELEVEN!



I have worked in maintenance teams for the past 12 years. I worked with Key account managers performing audits and inspections for Coles, & Kmart Tyre Auto & Woolworths.



SPEL have recently secured ongoing work with industry leaders Liberty & 7 Eleven on a National maintenance schedule.

Treated stormwater can be used for a variety of purposes, including irrigating gardens and parks. In the SA Murray-Darling Basin region, reuse schemes are applied in Karoonda, Lameroo, Loxton, Murray Bridge and Pinnaroo.

IMAGERY : MURRAY DARLING

a water issue

The Murray-Darling Basin is the largest and most complex river system in Australia.

It covers one million square kilometres of south-eastern Australia, across New South Wales, Queensland, South Australia, Victoria and the Australian Capital Territory.

Lai Adolfo

Leading

W

I have worked for SPEL for almost 5 years, following completion of my Bachelor of Business. It has been nothing but amazing. Everyone I work with is humble, driven, supportive, patient and willing to mentor. My role in SPEL has varied over the years through research analyst and team leading roles. As we have offices across states and countries, I always enjoy travelling to meet different teams and putting faces to names.

I'm enjoying making this arrangement work because it allows me to stay at home and be with my family. I work well because I know that my personal life and my family is, in a way, safeguarded by the fact that I am at home and readily available for the family as needed.

talking teamwork

Our postponed team get-together with the estimating team is still on hold indefinitely to ensure the safety of our team members. But once the lockdown is lifted and everyone's work life is back to normal, we will definitely go through with our Samgyupsal (Korean BBQ) plans.

BY LAI ADOLFO



Dealing With COVID-19 Challenges

Thankfully, owing to the nature of our team's work environment we have seamlessly transitioned to working from home. There are no disruptions with our ability to work (editors note: Lai, I seem to recall a vocal rooster?). We are fortunate enough to still be working when everybody else is on lockdown.

As they say, this too shall pass.



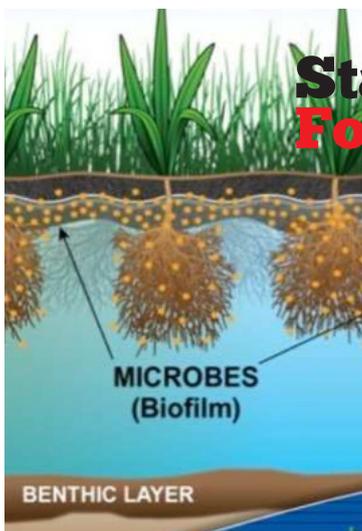
Wsu^d

WATER SENSITIVE URBAN DESIGN



Innovative Floating Wetland treatment creates new resident water experiences and increases developer yield.

ONLINE VISIT
SPEL.COM.AU



Parklakes 2 is the shining new residential estate on the Sunshine Coast in Queensland, Australia. Runoff from the development was originally planned to be treated by a 2.6 ha constructed wetland with significant

estimated costs. In addition, any potential water quality improvements would not be realised until approximately 60% of the estate was completed. In collaboration with the University of the Sunshine Coast and the local Council, SPEL Stormwater developed a novel approach where the constructed wetland would be replaced by a 2,100 m² floating wetland treatment system (FWTS). A construction cost comparison of the two treat-

ment approaches was conducted and it was found that the FWTS approach yielded savings of almost \$1 million compared to the constructed wetland. In addition to the cost savings, the FWTS will be operational by the first stage of the development, which provides greater water quality benefits, as well as better clean water experience for residents. Increased open water areas are known to translate to higher property values and social benefits for the whole development which could potentially lead to further increased sales and property values. The development is also the subject of an on-going

Parklakes 2

WATER SENSITIVE URBAN DESIGN

continued



stormwater quality evaluation study.

In adopting the FWTS as the stormwater management approach, a savings of approximately \$1M in upfront construction costs was realised, when compared to the constructed wetland approach. In addition to the significant construction cost savings, the FWTS has been incorporated into the first stage of the development, which will ultimately provide an immediate water experience for residents much earlier in the development, and it is anticipated that this will also benefit sales and property values. Furthermore, increased open water areas translate to higher property values and social benefits for the whole development. FWTS offer a more flexible (and potentially more

effective) approach to stormwater management that may boost development yield and property values while offering a more sustainable and aesthetically pleasing means of treating stormwater runoff. Being able to install FWTS at the beginning of the construction phase also offers multiple benefits including immediate stormwater treatment and increased amenity for residents.

The costs associated with the original constructed wetland option were estimated to be in excess of NOVATECH 2016 4 \$2.7 M, with a significant portion of this cost being attributed to the drainage structures associated with bypassing 4 EY events. The civil drainage infrastructure was estimated to cost \$1.8 M, which was more than 65% of the total overall cost for this option. In addition, planting



costs estimated at \$550,000 were also expected with the 2.6 ha constructed wetland option.



About SPEL

SPEL is the world's premier stormwater infrastructure firm. We partner with you to solve the most complex challenges and build legacies. We have designed projects for councils, consulting engineers and a wide array of global influencers. SPEL developed the Floating Wetlands to bring its design excellence to the water experiences created by developers.

You can reach out to discuss all things Floating Wetlands on 1 300 773 500.

The efficacy of treatment versus flow rate can now be assessed. The reduction in planting area from 2.6 ha to 2100 m² also yielded a significant cost saving to the project, as plant numbers decreased significantly from over 80,000 for the constructed wetland to only approximately 18,000 due to the reduced treatment footprint of the FWTS.



Case Study Lakeland Storage



The storage decade

Against a backdrop of accelerating climate change and its impacts, decarbonisation continues to drive increased penetration into the grid of wind, solar, and battery storage.

SPEL Stormwater has worked collaboratively with ARENA/Conergy to deliver a Puraceptor at the Lakeland Solar and Storage Project in Queensland, Australia.

SPEL Puraceptor Class 1 stormwater treatment separators cater to potential hazards to the environment including sites where there is a risk of oil and fuel spills. Oils and all petroleum hydrocarbons are treated to the highest discharge quality exceeding EPA standards ensuring it safe for stormwater discharge. Major oil spills from a petrol tanker or a transformer rupture

are captured and contained preventing any stormwater discharge.

This unit was installed to treat stormwater and firewater from the deluge system simultaneously. The unit caters for a 40 LPS flow rate, and has the capacity to capture a 70,000L transformer spillage and remain operational. SPEL units are designed and built to BS EN 858.1. 2006.

WRITTEN BY : JEREMY LAMBERTON



Project

The Lakeland Solar and Storage Project involves the construction of a large-scale solar plant with battery storage in the Lakeland region of North Queensland. The integration of big solar and battery storage has the potential to revolutionise power supply for fringe-of-grid locations.

Covering approximately 45 hectares of agricultural land is a 13MW Solar Array with 41,440 solar Panels, and a co-located 1.4MW / 5.34MWh Battery Storage System. The site is a world first in engineering design and technology for renewable energy providing for future energy demand on a 25 year + project lifespan.

Client

Conergy is a multinational renewable energy company headquartered in Singapore. It was founded in Hamburg, Germany in 2000 by former CEO Hans-Martin Rüter, and specializes in the development, operation and maintenance of photovoltaic power plants and plant components.





WORLD

DOMESTIC

REGULATORY

EVENTS

PEOPLE



Stormwater News

Each edition we'll select several stories from around the globe that are leading the stormwater discussion. As our understanding grows around the need for stormwater infrastructure maintenance, we're buoyed by the approaches by Councils and Municipalities to prevent further degradation and pollution into our riparian zones.

QPRC levy delay

Residents in the Queanbeyan-Palerang Shire in the ACT will be able to defer rate instalments and extend regular rate payments over two years as part of a range of strategies to assist residents, businesses and community organisations overcome the financial impacts of the COVID-19 pandemic.

Central to this strategy is a temporary deferral of the proposed Bungendore and Braidedwood stormwater levy (\$20 per year) and associated works by a year. Council is

also setting up a COVID Kindness support service, which is being run by its community development team. Coordinator Kyla Harvey said anyone struggling with stress, food relief, finances or may just be worried about a neighbour can call the council's on their regular number on 1300 735 025 until a dedicated hotline is operational.

An app a day keeps...

Numbers of coral-eating crown-of-thorns starfish surge well past their natural concentration in the Great Barrier Reef ecosystem when stormwater runoff carries fertilizer pollutants into the ocean. In an attempt to address the issue at its source, the Commonwealth Scientific and Industrial Research Organization (CSIRO) has developed a new app to help farmers better understand their specific contributions to nutrients in local waterways.

WATER SENSITIVE URBAN DESIGN



Banora

Point

W W W . S P E L . C O M . A U

B. Tweed Shire Council tendered the Banora Point Western Drainage Scheme Floating Treatment Wetland, in September 2019, to which SPEL Stormwater was awarded in November 2019. The project led to the design of a 598m² Floating Wetlands system, sprawled across seven idyllic islands, and maintained for twelve months from practical completion.

Circular thinking is intrinsic to Floating Wetland design. The mattresses are innovatively manufactured from recycled PET Bottles to avoid end-of-life landfill.

SPEL commenced building on 3rd February 2020, with possession of the site and delivery of the site container. For a Floating Wetlands project of this scale, two weeks are allocated to allow for installation and site closure. The completion of the project was achieved on the 28th of February 2020. The delay was caused by the extreme weather events of February which flooded the site and delayed access. Thinking positive, this allowed an early demonstration of the robust Floating Wetland design.

Delivered by Troy Mansinger

The final result for the project was the installation of seven islands to achieve 598m² of fully planted Floating Wetlands with five site-appropriate species of plants to each mattress components consisting of eighty holes and two plants per hole. The islands are covered with bird netting for the first three months to ensure plant survival against wildlife attacks. After that, projects typically demonstrate a symbiotic relationship between the two.

The plants are monitored to ensure growth, as intended. SPEL's maintenance for the project is over twelve months after which Council will maintain the site. The product has huge benefits to the channel, treating water as it passes through the plant roots, and, once bloomed, providing a new habitat for bird and aquatic life alike.

ABOUT FLOATING WETLANDS.

Installation photos from the Banora Point Floating Wetlands, New South Wales.



01. SPEL's Floating Wetlands eliminate the need for chemical dosing, for further high-impact concrete and steel' construction. No energy is used in the operation process and low energy in the manufacture process.

02. The plant species suitable for floating wetlands are selected according to the reserve buoyancy required for the application. Generally, terrestrial species such as wetland sedges, rushes and grasses are the best option as they develop superior root structures within the water to provide for an increased surface area. However, many other planting types are also used.

Floating Wetlands

SPEL Stormwater's floating treatment wetlands offer clear benefits to any organisation or individual requiring wastewater treatment including local authorities, private companies, and landowners.

03. The floating wetlands provide a lush and fertile base for plants and vegetation to grow. As the roots spread down through the fibrous structure of the media, an extraordinarily vast activated surface area is created for microbes and bacteria to take on their role of bio-remediation - the use of micro-organisms to remove pollutants. The microbes and bacteria, which do not swim, and are UV sensitive, adhere to the roots and microscopic root hairs of the plants, and within the fibrous structure of the media themselves, secreting sticky extracellular proteins and exist in the environs of biofilms. It is within these biofilms which microbes and bacteria trap and digest odours and nutrients in wastewater.

Troy Mansinger • 1st
Business Development Manager at SPEL Stormwater
1w • Edited •

I wish to share my thoughts about working with #SPEL Stormwater and how the company is committed to their Employees and their Clients. To the following Clients, #JasonGauld & #BenCrawford, I hope things cr ...see more

My SPEL Stormwater Experience

I wanted to take a moment to highlight a few positive wins here at SPEL Stormwater.

I have been working with SPEL Stormwater now, for around 1 year, and have learned plenty about how it operates and what sort of future it is made of. Besides being civil industry leaders and a major supplier of stormwater treatment and oily water separator products, the company has a strong culture displaying a genuine commitment to their people and their clients.

Most people are aware of donations made by everyday people and businesses during the recent fires and floods. What has blown me away as an employee is that SPEL has donated \$250,000 to the RRT (Rapid Relief Team) - <https://www.linkedin.com/company/rapid-relief-team-36117/> who have been assisting farmers with drought relief, feeding frontline firefighters during the wildfires and now supplying food boxes to families in isolation or in need, due to COVID19. <https://www.linkedin.com/company/rapid-relief-team-36117-rt-rt-corporation-115004066-activity-66466432674332756-6624>

I was fortunate enough to deliver two of these boxes to valued clients that have been affected by the COVID19 issues and have subsequently lost their positions or employment. These are times that we have not experienced in our lifetimes, and, hopefully, won't again once it has passed. We must remember that all are impacted. This virus does not choose race, religion, or gender, but affects us all in some way.

These acts are not usually published, but I believe this is worthy for others to understand just what SPEL's culture is like. For me to deliver the food boxes and see real smiles on real people's faces - well, that's a SPEL story worth telling.

Kudos to SPEL Stormwater and how they work with their employees and client base. Business is about making money yes, but to give back is something I am proud to be part of.




Ben Crawford
Troy Mansinger
Business Development Manager
SPEL STORMWATER

39 • 2 Comments

Like Comment Share Most Relevant

social LIVING IN ISO

We're creating more webinar content, more internal and external communications, more video, more team check ins than ever before to remind each other how much we are valued.

UPCOMING WEBINARS

Vortceptor: Product introduction & regulatory updates (22nd May)

A complete library of SPEL Stormwater and Stormwater Shepherds webinars is coming soon.



SPEL Marketing
APRIL 2020

Hydrogen (Just add Oxygen)

Pasta . BBQ's . Salad . Cheese . Curries

Desserts . Drinks

F

Food is important to us here at SPEL Stormwater. Therefore in each edition expect a few serious, and not so serious, recipes from the team to give you an insight into what's hot on the grill.

This light-hearted section is subject to strict editorial review processes, so best go in with high expectations.

Belgian Waffles

01.

Flour, sugar, butter, milk, and eggs/egg substitute. Things we all have. Once you whisk the batter together check the thickness or viscosity. If it's too thick, add in a splash of milk.

Cook the waffles in a buttered hot waffle iron. Don't use cooking spray, use melted butter and generously brush the iron. It makes a difference! Also, check the manufacturer's recommended settings for cooking times. Serve with delicious toppings. Fruit, whipped cream, powdered sugar, maple syrup, butter, ya know, the good stuff.



Spaghetti Aglio E Olio



02.

45 ml / 3 tbsp extra virgin olive oil | 3 garlic cloves, grated finely
200 g / 14 oz spaghetti (GF if needed) | salt, chilli flakes & black pepper, to taste | chopped fresh parsley, to garnish | optional: cheese of choice

Put 3 tbsp of olive oil and 3 garlic cloves in a small bowl. Set aside to infuse. Cook the pasta al dente per the packet. Heat up a heavy bottom frying pan on low heat again. Once hot, add in the garlic-infused oil and a pinch of chilli. Cook the garlic (until lightly golden), stirring the whole time, but do not allow it to brown as it will make your pasta taste bitter. Toss the drained pasta in the garlicky oil. Season generously with salt and divide between two plates. Season with ground black pepper and garnish with chopped parsley.

Gluten-Free Vegan Water



03.

A favourite of our resident vegan. Take a few sprigs of your favourite herb (pronounced 'erb'). Add a slice of lime to the water with some ice cubes then place several unnecessary limes and herbs around the outside of the glass to improve the aesthetic of the inevitable instagram shot. This will ensure the experience costs as much as possible.

The Gluten Free Vegan Water is keto-friendly and bound to impress when paired with the thirst-quenching desire for survival. Should you be somewhat unimpressed by the water quality, well, I believe you know who to call.

know
joy
through
clean
water

Across the nation, many are taking their first steps back towards our cherished open spaces. These steps, much like our first steps as children, were towards the water. Whether it was oceans, rivers, creeks, or the closest puddle - these were moments of pure joy. We're galvanised by the events of COVID-19 and feeling deep resolve to protect our riparian zones, in the coming months.

Stay safe, and see you soon, Shepherds.

stormwater SHEPHERDS



About us

OUR MISSION

Stormwater Shepherds are a not-for-profit initiative targeting plastic pollution in riparian environments. Urban generated pollution accounts for a staggering 80% of ocean plastic, and we have made it our mission to stop it at the source. Our 2020 strategic goals in stormwater management and pollution prevention directly address the issue through education, riparian cleanups, and advocating, to improve the quality of our urban waterways.

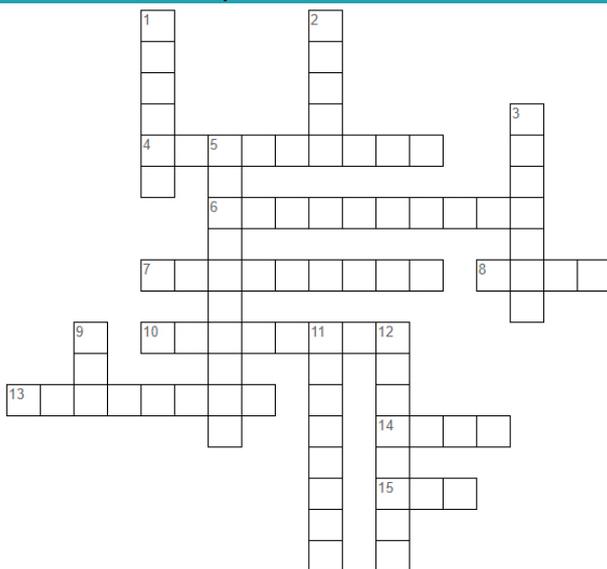
SPEL Stormwater is proudly powering Stormwater Shepherds by contributing 5% of its revenue to ensure a cleaner water experience for all.



**TEST YOUR
STORMWATER KNOWLEDGE**

Test your stormwater knowledge in our first Crossword ever. Stay tuned to the next edition (yes, we expect to be allowed a 2nd edition) for the answers.

Crossword Puzzle (Stormwater)



Across

- 4 River or stream flowing into a larger river or lake
- 6 Atmospheric deposition, lawn fertilisers cause this nutrient runoff
- 7 Liquids can easily pass through this material
- 8 Has feathers, can fly
- 10 Like to play in clean water spaces
- 13 Flap from Blinky Bill is which river-dwelling semiaquatic egg-laying mammal
- 14 A source of stormwater
- 15 Device that captures urban-generated pollution

Down

- 1 A living organism that synthesises nutrients in its leaves by photosynthesis
- 2 Small arm of the sea, a lake, or a river
- 3 Synthetic material made organic polymers causing mass pollution
- 5 Area calculated for stormwater levies
- 9 Long, narrow inlet formed by the partial submergence of a river valley
- 11 Related to wetlands adjacent to rivers and streams
- 12 Stormwater runoff is a leading cause of this nutrients transport to water bodies

+ Thank
o you.

until next time

GO WITH THE FLOW

WRITTEN AND EDITED BY JEREMY LAMBERTON.

WWW.SPEL.COM.AU