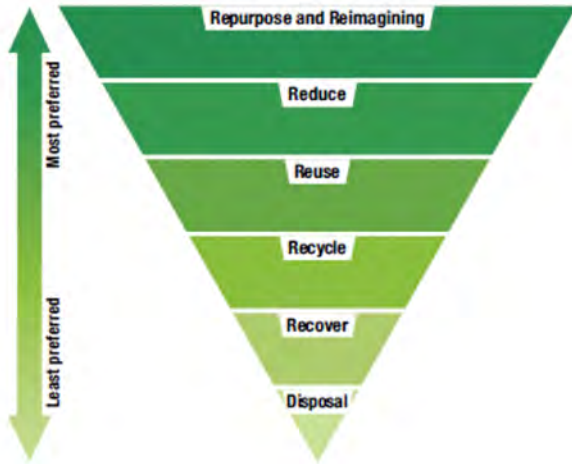




### MACKAY REGIONAL COUNCIL

## Plastic Garden Pots – Recycle, Reuse or Use Coir and Cardboard Alternatives?



Although in major urban centres such as Melbourne, Sydney and Brisbane, garden pot recycling of polypropylene pots with the number 5 and the recycling triangle on them is viable, the recycling of plastic garden pots in regional Australia is often out of freight costs.

Currently, firms such as GT Recycling in Geelong recycle flower crates, garden pots, wheelie bins, bumper bars and other items that would otherwise end up in landfill.

In 2011, Greenlife Industry Australia worked with Garden City Plastics and Sustainability Victoria to enable the recycling of plastic garden pots into one tonne bulker bag raw granular material that was processed back into new garden pots and other horticultural products at Garden City Plastics hi-tech moulding injection plant at Monbulk.

However, for regional council owned materials resource facilities, the shredding of plastic garden pots into raw material than can be used to make new garden pots is often not viable due to the process being labour-intensive with someone having to physically separate the pots from other PET, HDPE and LDPE plastic recyclables which are then fed into a shredder.

In 2017-18, Australians consumed some 3.4 million tonnes of plastics with just 9.4% - 320,000 tonnes - being recycled. Of that amount, 46% (145,700 tonnes) was reprocessed in Australia and 54% (174,300 tonnes) was exported for reprocessing.



Plastics are very much on the nose internationally. Plastic is made from crude oil which is in decline. It also is becoming problematic with regards to its waste disposal. Furthermore, microplastics in the ocean are threatening biodiversity and our food supply.

So to future-proof themselves against the rising costs of living in a plastic world, now is the time for nurseries to start looking at more sustainable plant pots.

Rubberised natural latex coir pots such as the Jiffy pot and the growing tube pots offered by Magic Soils Australia are sustainable pots which the nursery industry should be seriously considering using. Coir pots promote strong root systems by allowing roots to grow through the pot itself thus reducing transplant shock.

Coir pots are 100 percent biodegradable and have excellent water holding capacity. They also allow good air penetration simulating natural plant growing environments. Plastic growing stand trays for coir tubes are also available but in the future, moulded terracotta tray could also be used for this purpose due to its breathability. Coir has the added advantage of having a neutral pH.

Mackay Regional Council's Natural Environment Centre is one nursery which has embraced the coir tubes, using 18,000 tubes in 2020. This number forecast to increase as the Chinese Government's ban on imported plastic waste starts to impact Commonwealth and State



Government policymaking with regards to plastic consumption.

Retail nurseries might also need to look at integrating plants in coir pots into their inventory as the market demands a plastic free universe. This presents an opportunity to on-sell ceramic, glass and terracotta pots as well a hanging baskets made from coir string.

As market forces push us closer to the end of the plastic pot era, it's exciting to think what nurseries might look like ten years from now.



**ALSO IN THIS EDITION:**

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**RESOURCE HUB**

**Don't go BATTY over regulations and reporting**

Things got a bit BAT-ty at Townsville City Council a few years ago, when in preparation for the incoming Waste Levy, the team cleansed their data and identified an old button in the weighbridge system named "BATS". Apparently it was a remnant of the seasonal disposal of Fruit Bats at the Stuart Waste Management Facility....but is that just a likely story and was it actually Halloween related?! Perhaps we'll never know....

But since we're addressing Waste Levy data, we wanted to share our latest free resource with the LAWMAC community. Not everyone is as nerdy about waste levy as we are at Resource Hub, and that's why we've put together a QLD Waste Levy Fact Sheet. It covers the basics of the QLD regulations, requirements and reporting for anyone that needs to get a general understanding of Waste Levy reporting obligation in QLD and is ideal for



non-waste team members, councillors, new staff, or even just those who need a quick refresh.

And if you need a hand with anything more, do not hesitate to give us a call.

Download your QLD Waste Levy Fact Sheet at: [www.resourcehub.com.au/qld-waste-levy-fact-sheet](http://www.resourcehub.com.au/qld-waste-levy-fact-sheet)



Look forward to seeing you at the next LAWMAC meeting in November!

## **Baseline Waste Audits for FOGO Trial in Rockhampton**

[CQG Consulting](#) recently had the opportunity to take part in the baseline kerbside waste audit for the Food Organic and Garden Organic (FOGO) bin trial for Rockhampton Regional Council (RRC). Over three days, CQG's waste auditing team sorted through over six tonnes of kerbside waste, sorting it into multiple categories to accurately determine the makeup of bin contents.

The baseline audit determined the amount of FOGO waste being disposed of in household kerbside waste. The program is currently being run across three Rockhampton suburbs with 250 residences in each suburb selected, with each sub-sample group receiving a different service configuration. Sub-Sample One involves the addition of a 240L Garden Organics (GO) bins being collected fortnightly with a 240L general waste bin continuing to be collected weekly. Households participating in the sub-samples two

and three are provided with a 240L FOGO bin to be collected weekly with a 140L general waste bin collected fortnightly. Of the groups with FOGO bins, one will be supplied with a kitchen caddy with bags and the other a kitchen caddy without bags.

Additional audits will be conducted at 6 months and 12 months after implementation to determine if the public are using the bins at a rate that will be feasible enough to roll out throughout the Local Government Area. According to RRC estimates, the FOGO initiative will divert potentially 8000 tonnes per year from the Lakes Creek Road Landfill.



## CAIRNS REGIONAL COUNCIL

### 20/21 snapshot for Waste Reduction and Recycling Strategy

Cairns Regional Council has just finished analysing the 2020/21 waste and recycling data against Council's Waste Reduction and Recycling Strategy performance measures.

Council achieved an overall 63% MSW recovery rate, recording an increase of 3% from the previous year or equivalent to an extra 6,800t recycled. The Strategy has a target of 70% recovery by 2027.

Waste to landfill decreased 5% from the previous year with around 37,000t of material sent to landfill. However, waste generation increased slightly by 2% from the previous year or equivalent to 1.4t of waste generated per household.

The following is a snapshot of the three main waste streams:

#### Kerbside Recycling (MRF)



In November 2020 the construction of a new upgraded MRF was completed. The facility now achieves an 80%+ recycling rate (up from 50% with the previous facility). In addition, a Regional Glass Processing Facility also went operational in early 2021.

The kerbside recycling contamination rate is currently sitting at 12%.

#### Self-Haul Waste (Transfer Stations)



Through improved processes, layouts and improved contractor management the transfer station network achieved a 72% recycling rate. In 2020/21 the transfer station network handled over 40,000 tonnes of self-hauled waste.

#### Kerbside Waste (Bedminster Composting Facility)



The Bedminster composting facility achieved a 53% recycling rate, an increase of 2% from the previous year.

The kerbside waste bin currently contains 63% organics and 18% compliant recycling.

#### Education and awareness

To further improve these recovery rates, Council re-launched the refreshed Recycle Right 'Keep it Simple' campaign, starting in October 2021 and extending over the

Christmas and New Year period until February 2022.

The Recycle Right campaign features, television, on-demand, YouTube, social media and radio as part of the marketing mix. Council has also increased its participation of waste education tours, presentation and activities for school students, early learning and community members, averaging over 4,000 annually.

Major focus areas in the future will target reducing contamination in the kerbside recycling bins and reducing recycling in the kerbside waste bins.



## LAUGH OF THE DAY

What do you see? A floating bin?



If so, you have been inside too long.  
It's simply a bin behind a puddle.

## DPT OF ENVIRONMENT & SCIENCE

### Tricks and Treats to help save food this Halloween

#### Scary food waste facts

Bin audits recently conducted by the [Fight Food Waste Cooperative Research Centre](#) found that Australian households throw away 1.78kg of food in the bin per week!

Of this, fresh vegetables were the most wasted edible food group thrown out in Queensland.

The Queensland Department of Environment and Science is working towards changing this and is seeking currently feedback on the [draft Queensland Organics Strategy 2022-2032](#).

*What can you do to start to minimise your food waste this spooky season?.. Practice pumpkin power!*

Seeing all the jack-o-lantern pictures this time of year may have you reaching for a delicious pumpkin for your favourite sweet and savoury pumpkin dishes. Did you know though just how much you can do with this versatile vegetable?

Remove all the seeds and turn them into a [smoky pumpkin seek snack](#) in five simple steps.

Save the pumpkin skin and roast them with a little oil and salt to create delicious chips.

Roast or mash the flesh before freezing in an airtight container or bag to store it for longer and use it up when future meal inspiration strikes.

~ Kylie Hughes



## **WSP and Golder Combine Resource Recovery and Waste Management Services**



Since combining forces this year WSP and Golder have created the largest dedicated Resource Recovery and Waste Management Services team across Queensland.

We are now able to offer a broad range of integrated, sustainable solutions directly to our local government clients throughout regional Queensland, from concept through to implementation across the entire waste avoidance and management hierarchy.

We are committed to delivering outcomes that continuously improve the way existing wastes are managed, transitioning to a circular economy use of resources, resulting in reduced carbon emissions and environmental impacts, whilst protecting human health and the environment.

### **Our Services**

The key resource recovery and waste management services offered by WSP and Golder include:

- Preparation and delivery of resource recovery, recycling and waste reduction strategies
- Transition to Net Zero Carbon Waste Management Operations
- Resource recovery infrastructure planning, approvals and design
- Organics processing and waste to energy facility planning, feasibility assessments, planning, approvals and design
- Whole of life landfill planning, approvals, design, operation and rehabilitation
- Infrastructure development within operational and legacy waste disposal facilities
- Environmental monitoring and compliance support
- Occupational health and safety support

### **Our Projects**

WSP and Golder have already joined forces to deliver services to the City of Gold Coast Council. We are part of a panel contract to review and improve the operation of their resource recovery and landfill facilities to help them achieve the objectives of their Solid Waste Strategy 2024. We also continue to work with many regional Queensland local government clients stretching from Douglas Shire Council in the north to Gympie Regional Council in the south.

### **Our People**

Our resource recovery and waste management services are offered through offices in Cairns, Townsville, Sunshine Coast, Brisbane, and the Gold Coast. Our team is made up of technical experts with the experience and a wealth of local knowledge to work with our clients and deliver the best outcomes for them as well as for the environment.

If you would like to find out more about our combined capabilities, and how we can help you, please contact:

Hayley Trevor  
Resource Recovery Engineer  
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07 3854 6261

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**Landfill fire shows the wrong waste can put people at risk**



It took three fire trucks, two water trucks, and an excavator to put out a fire at the Lakes Creek Road Waste Management Facility (LCRMF) in late September.

Councillor for Waste and Recycling, Shane Latcham, said that while we were lucky this time and no one was injured, it's a reminder to residents that putting the wrong thing in your kerbside bin or disposing the wrong thing at a Transfer Station or Landfill can put people at risk.

“If you ever tossed an old mobile phone or even a battery in your general waste and thought ‘what could be the harm?’, well incidents like this are the answer,” Councillor Latcham said.

“As rubbish is being compacted in a truck or at the landfill it only takes one spark to set off a fire that can really put our staff and the community in danger.

“Just a couple of months ago we had a truck that had to dump its load of recyclables on the street in Bouldercombe because something caught fire in its load. Luckily the driver reacted quickly, but it still cost us thousands in clean up and repairs.

“And, of course, in November last year the entire Materials Recovery Facility (MRF) burned down

after a fire started, which means we're still having to truck recycling to Mackay and Brisbane for processing while a new MRF is built.

“It's always hard to tell precisely what starts these fires, but it's a growing trend here and across the world that we're seeing more and more fires in trucks and at waste facilities as a result of people chucking out lithium-ion batteries – like those in your laptop or smart phone – in their kerbside bins or at a waste facility.

“If you're disposing of electronics we ask that you please do it properly. E-Waste can be dropped off for free at the recycling area at the LCRMF or any of our waste transfer facilities.

“Household chemicals as well as paints, batteries and gas canisters can all be flammable as well, and all of these items should be disposed of correctly.

“We're really urging residents to be aware of the damage that these materials can do if you throw them in your kerbside bins, and to make sure they're not creating an unnecessary risk.”





## Expanded Polystyrene Recycling in Rockhampton

A new resource recovery opportunity has commenced in Rockhampton following the receipt of Queensland State Government funding support. Rockhampton Regional Council has purchased a GreenMax EPS machine Supplied by WastePro which is capable of processing Expanded Polystyrene (EPS) and Expanded Polyethylene (EPE).



This means Council can now effectively divert these valuable resources away from landfill and ensure they are re-purposed into a product that has a further use like picture frames, architraves and engineered wood products just to name a few.



The unit arrived on site at our Lakes Creek Road Waste Management Facilities on the 27 September and has now been assembled and commenced its trial period, where, in the short

time the unit has been operational, it has already processed 230m<sup>3</sup> of raw EPS reducing it to just 2.3m<sup>3</sup> of product. This initiative will also save valuable landfill airspace as these products are notoriously difficult to compact. Through this trial valuable data will be gathered in order to provide learnings and recommendations to support similar projects across Queensland.



## Behaviours, They Are A'Changin'

You don't have to look too far right now to find trade articles and reports espousing our sector's latest buzz phrase. But what precisely is Behaviour Change? What resources and expertise do we need? How much will it really cost? What are the measures of success? On all this, the pithy trade articles and glossy strategies remain largely silent.



So using the context of kerbside recycling, here is a very brief primer on the approach being promoted by behavioural psychologist Dr McKenzie-Mohr's, and a behaviour change framework called Community Based Social Marketing.

### Step 1: Selecting behaviours

Firstly you need to understand and segment your target audience, not simply by standard socio-economic criteria, but by their typical behaviours e.g. in the case of kerbside recycling it might large families, retirees, shift workers, renters, etc. Then you need to identify the desired end-state and non-divisible behaviours. It is not sufficient to simply identify source separation of recyclables as a behaviour. This has many sub-

behaviours built into it, which will likely be different for each target group. For example, it might consist of one-off behaviours of setting up the kitchen bins, teaching the whole family what to do, and will certainly include a series of repetitive behaviours such as identifying recycling symbol, washing out the container, removing soft plastic wrapping.

### Step 2: Uncover barriers and benefits.

So here is the rub. In order to change current behaviours, you need to understand the barriers to change, and the key motivational factors that will encourage positive change. This can only be done if you have identified the relevant end state behaviours in step 1. So for example, informing people that contamination of the commingled bin is a huge financial waste for our community will have almost no impact because in the household, the barrier is not money, there is no financial

incentive to change. The barriers are perceived lack of time, a lack of interest in the cause, misunderstanding of recycling symbols or allowable materials, etc. Understanding these barriers is however a very complex piece of work. Surveys are generally unreliable, when asked, most people rate themselves as excellent at recycling. Observation would be better, but is costly and difficult. So this stage requires considerable investment of time and resources in order to understand, review, test and evaluate the most important barriers and benefits that need our focused attention.

### Step 3: Develop Strategies.

Once you understand the habits and behaviours you are seeking to change, then you can

implement and test strategies. One off behaviours such as kitchen bin set up might be something that you target to new home owners, new tenants, etc. For repetitive behaviours you might seek to push more frequently e.g. via social media posts on bin day etc. There might be tactics you can use to attaching new behaviours to existing ones e.g. wash the plastic recyclable containers in the dirty dishwasher with the dog bowl after dinner. Motivating factors might be driven via public commitment with “I support FOGO” sticker on bins or car bumpers, or through social norming and social diffusion e.g. clean bins at the kerbside will set a standard, overflowing bins will beget poor behaviours.

#### **Step 4: Pilot Strategies.**

Not all strategies you develop will work, in fact, some will have unforeseen negative impacts. It is critical therefore that we pilot and test interventions before we roll out our well informed but flawed assumptions across the whole community.

So far be it for me to insult the work of our greatest living Nobel laureate, but what the hell, all together now:

*Come councillors, managers, please heed the call*

*Don't withhold the money, or do bugger all  
For contaminated bins come to those who do stall*

*The battle kerbside ragin'  
Will soon foul your windrows and make us all bawl*

*For behaviours, they need a'changin'.*

~ George Meacham Strategy and Education

## REMONDIS

### Energy from Waste at Swanbank



REMONDIS currently has an application before the Queensland Government to build a \$400 million Energy from Waste facility at Swanbank near Ipswich, which would be the centerpiece of a \$700 million Clean Energy and Resource Recovery Precinct. This precinct aims to implement circular economy ideals by integrating resource recovery and recycling activities together in a complimentary fashion, allowing the processes to benefit from the offtake and energy creation benefits of the individual activities.

If approved, 70 new full-time operational jobs and 200 full-time construction jobs would be created and the project would allow a diversion from landfill of up to 95% while producing power for 50,000 homes.



With the Energy from Waste proposal having been given Coordinated Project status by the

Coordinator General in June last year, REMONDIS has since been awaiting the release of the Draft Terms of Reference for public comment, which is the next key step in the assessment process.

The Draft Terms of Reference are a critical pathway to informing social, environmental and other matters that must be addressed in the project's Environmental Impact Statement (EIS). They are also a framework to add clarity around design, with an onus on REMONDIS to address specific questions from the government, in turn enabling the government to set down early project parameters.

Ms. Collins said community engagement and consultation was a vital part of the approvals process.

"The more we talk with people in the community, the more they grasp the benefits," Ms. Collins said. "It's about having open conversations and dealing with facts."

REMONDIS are actively engaging with the community to encourage nearby residents and

community groups to ask questions and raise concerns about the proposal so that we can gauge the real community sentiment and their expectations for the project.

To prepare for the release of these Terms of Reference REMONDIS Australia has signed a multi-million dollar contract with leading solutions provider Jacobs to support design and environmental aspects of the proposal. Jacobs will commence with preliminary engineering studies and design work, which will inform the EIS and enable REMONDIS to provide the public with technical specifics of the project in due course.

[www.energyfromwaste.com.au](http://www.energyfromwaste.com.au)



## LAWMAC

### July meeting and workshop - Barcaldine

LAWMAC's July 2021 Workshop and Meeting hosted by Barcaldine Regional Council was another successful event with 40+ delegates in attendance each day.

Barcaldine Regional Council Mayor Sean Dillon extended a very warm welcome to LAWMAC delegates and encouraged everyone to stay a little longer visiting the local region and its popular tourist spots.

LAWMAC Chair Cr Neil Fisher (Rockhampton RC) thanked Mayor Dillon and Barcaldine Regional Council for its generous welcoming hospitality and opened proceedings outlining Covid-Safe Plans and Registration plus personal hygiene procedures required.

The weather was definitely a little cool registering minus 1 degree the night before the Event. Three LAWMAC members must have been feeling the cold a bit more than others as Crs Logan & Burns from Cook SC and Jeff Delgado from Cleanaway left the meeting briefly to purchase knitted beanies locally in town. The rest of us may have chuckled but were certainly a little envious of their innovative approach.

#### Workshop Topics included -

- Zoom Remote Presentation by the Solar Recovery Corporation presented by Dylan Nichols, Director of Strategic Development at SRC.



- Zoom Remote Presentation on the E-Waste Action Plan jointly presented by Rose Read and John Gerstakis at the E-Waste Institute
- Attending Special Guest Speaker, Professor Ross Garnaut AC plus Zoom Remote Guest Speaker Renergi Pty Ltd CEO, Mr Chun-Zhu-Li presenting on "Using Wastes and Biomass for Economic Development in Rural and Provincial Queensland"
- Zoom Remote Presentation by DES Qld jointly presented by Kylie Hughes, Dylan Walker & Justine Severin.
- Panel Discussion facilitated by Jason Grandcourt (Mackay RC) and comprising Karl Murdoch (Isaac RC), Kirstin Byrne (Central Highlands RC) and via Zoom Remote Access David DeJager (Whitsunday RC) addressing the issues of Operating Waste Transfer Stations and Managing Waste in Smaller Remote Council Regions.



**A Big Thank You extended for the successful  
LAWMAC Event Coordination**

L-R: LAWMAC Chair Cr Neil Fisher (Rockhampton Regional Council), LAWMAC Secretary Ms Mary Field, Ms Angela Waugh (Community Engagement Coordinator at Barcaldine Regional Council & LAWMAC Executive Member Cr Andrea Friend (Livingstone Shire Council)





**Barcaldine Beanie Bogans**

L-R: LAWMAC Council Members Crs Ross Logan & Peter Burns (Cook Shire Council) and Associate Member Mr Jeff Delgado from Cleanaway





L-R: Barcaldine Regional Council Mayor Sean Dillon, Professor Ross Garnaut AC, LAWMAC Chair Cr Neil Fisher (Rockhampton Regional Council), LAWMAC Deputy Chair Cr Brett Moller (Cairns Regional Council) and LAWMAC Executive Member Cr Russ Cook (Townsville Regional Council) at the LAWMAC meeting in Barcaldine.

## Meeting Dates & Host Councils

- **18-19 November 2021**  
Whitsunday Regional Council
- **17- 18 February 2022**  
Isaac Regional Council
- **19-20 May 2022**  
Livingstone Shire Council
- **TBC Aug or Sept 2022**  
Townsville City Council as a joint venture with LGAQ Waste Forum
- **17-18 November 2022**  
TBC Cassowary Coast RC
- **16-17 February 2023**  
Mackay Regional Council
- **18-19 May 2023**  
Cook Shire Council



All previous newsletters are online here: <https://lawmac.org.au/newsletters>