



## RE.GROUP

### Mt Piper Energy Recovery Project Update

Re.Group, in collaboration with EnergyAustralia, is developing a \$250 million project to supplement the current electricity output of Mt Piper Power Station with additional energy created from refuse derived fuel (RDF) made from non-recyclable household and commercial waste. The Mt Piper Energy Recovery Project (ERP) is the most advanced Energy from Waste undertaking in New South Wales, with community consultation, public exhibition of the EIS and the Response to Submissions process completed in 2020. Development Approval is anticipated in the first half of 2021.

The Mt Piper ERP specifically creates a resource recovery pathway for material which cannot be recycled and cannot be made into compost; this proposed facility was the first in Australia to gain the support of the Federal Government's renewable energy agency (ARENA), and is expected to be the first Energy from Waste facility on Australia's east coast. There are currently two EfW facilities under construction in Western Australia.

The Mt Piper ERP is located near Lithgow, to the west of Sydney. It will involve the construction and operation of a dedicated boiler and RDF receipt infrastructure connected to the existing coal-fired Mt Piper power station, as well as a dedicated flue gas (exhaust) treatment plant. An Ash Placement Facility will be constructed adjacent to the existing ash repository to store the ash by-products that would be produced from the energy recovery process.

RDF will be thermally processed in the specifically designed grate-fired boiler to create steam. This steam is then added to the existing unit 2 turbine to



generate electricity, making Mt Piper Power Station the first hybrid coal/RDF power station in Australia. Energy produced by the Mt Piper ERP will be sufficient to power approximately 40,000 NSW homes – equal to Lithgow and Blue Mountains Local Government Areas combined.

The Mt Piper ERP will utilise proven systems and approaches; Re.Group is working with one of the world's leading technology providers in Steinmueller Babcock Environment (SBE).

As most operators in the waste sector would be aware, EfW plays a key role in many advanced economies, with hundreds of reference facilities across Europe, the US and Japan. Many of these are in the heart of major global cities, operating safely despite being in close proximity to large population centres.

There is no doubt the technology is proven, however in Australia a key challenge is developing and maintaining a 'Social License' to operate this sort of facility. Re.Group and EnergyAustralia have been deeply engaged with the local community for more than 3 years prior to submission of our EIS for the Mt Piper ERP. Consolation and engagement around major projects must not be a 'token' effort at the end of the process, but rather an integral part of development.

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## LAUGH OF THE DAY



@DumpDaze

## RESOURCE HUB

### Single-use plastic items ban



As part of Queensland's plan to tackle plastic pollution (PDF, 4 MB) and following support from the community, retailers and industry organisations, the supply of the following single-use plastic items will be banned in Queensland:

- straws: regular straws, flexible straws, straws with a scoop, cocktail straws and bubble tea straws
- cutlery: knives, forks, spoons, teaspoons, sample tasting spoons, soup spoons, chopsticks, splayds and sporks
- bowls and plates
- stirrers: hot or cold drink stirrers, swizzle sticks and hot or cold food stirrers
- expanded polystyrene takeaway food containers and cups, for example 'clamshell' style containers.

The ban will start on 1 September 2021.

While single-use plastic straws and cutlery are banned, they can continue to be attached to shelf-ready, pre-packaged products. Examples include a juice box with an attached single-use plastic straw or a yoghurt with an attached single-use plastic spoon.

**CHEMCLEAR**

**Chemical Collection for Queensland Scheduled**

Queensland agvet chemical users will have an opportunity to safely dispose of their unwanted or obsolete chemicals with a ChemClear collection scheduled for July-August this year.

The program requires all product to be registered prior to the collection, and June 13 is the registration cut-off date. The schedule for pickup will be determined following the close of registrations.

To date Queenslanders have delivered over 234,000 litres of unwanted chemicals to the program. Collections have been every two years, so everyone is encouraged to have a look in the shed and register any unwanted product now.

Registrations can be completed on the Chemclear website under "Register Your Chemical".

Further information is available from: Colin Hoey, Qld Regional Consultant for drumMUSTER/ChemClear. Ph: 0428 964 576.



**Tip Shop visit inspires exciting community project**



WHEN Clancy Morgan spotted an old, worn piano at the Incredible Tip Shop it proved to be the catalyst for an exciting community project.

Ms Morgan said the piano at the Tip Shop was missing a few keys, but it still worked good enough for her to sit down and play a few tunes.

"Many customers stopped to listen and really enjoyed the entertainment; some even came to compliment me on how nice it was to hear someone play the piano," she said.

"This got me thinking about how lovely it would be to place a reconditioned piano somewhere in the Mackay community.

"It is well known that people who love music like to stop and listen; some like to join in by singing, or even playing the piano themselves. I propose that this piano would be a piece of public art that can be enjoyed by the entire community."

The project has won the support of council, which approved Ms Morgan's \$1990 Regional Arts Development Fund (RADF) grant application today.

RADF Committee chair Cr Fran Mann said Ms Morgan had approached the MECC about the

project and management had agreed to donate and transport a disused upright piano for this project.

“This project will include a local artist who will help with designing and painting the piano, a piano tuner and a fabricator to create a frame to transport the piano to various locations,” Cr Mann said.

“Once painted, the piano will become a community asset and the MECC will be the custodians and responsible for transporting it to different locations around the region.”

Ms Morgan’s was one of 17 RADF applications to be approved today for a total amount of \$86,248.

Each year RADF showcases the extraordinary innovation of the arts and cultural sector in regional communities, delivers rich arts experiences and provides important professional opportunities for artists and arts workers.

The Regional Arts Development Fund is a partnership between the Queensland Government and Mackay Regional Council to support local arts and culture in regional Queensland.



## Reducing food waste with bush foods



Bruce Thompson Working as a bush regenerator for Mackay Regional Council; I constantly come across things in natural areas that have been illegally disposed of – tyres, television sets, garden waste, styrofoam boxes. Sadly, these objects are usually dumped around the mangroves in Mackay. Mangroves are the filters for the Great Barrier Reef as well as important fish breeding grounds so keeping plastic out of these areas is an imperative.

Several species of plants growing on the mangrove margins are bush foods enjoyed by First Nations people for tens of thousands of years and by Settlers to Australia during the early days of Colonial Australia when food was in short supply. *Suaeda*, *Salicornia* and *Myoporum* species – salty yummy plants are there for the nibbling but so few of us can appreciate these Aussie wonders. For me, bush foods connect both the minds and stomachs of Australians.

So how does this relate to waste management? Food waste in Australia costs the economy \$20 billion every year with 7.3 million tonnes of food being disposed of annually. In terms of water consumption in Australia, as the driest

inhabited continent on Earth, with Australia continuing to grow water needy foods that haven't evolved in Australia's harsh conditions, our Murray-Darling River system is a tinderbox of conflict when it comes to water licences. Cotton, oranges and rice are not native to Australia and require vast amounts of water to make growing them here viable. And it's in this field of endeavour where I hope to make a difference.

As just one example, manna is a gum exuded from several species of Eucalyptus trees that Indigenous ate and early Colonials put in their tea as a sugar substitute – where would the British have been without their tea! White Correa is once again being grown for use as a tea; when the whalers on Cape Barren ran out of tea, they turned to White Correa which tastes like jasmine tea.

If Australian farmers stopped growing exotic fruit and veg and started growing bush foods, it would reduce our water consumption, heal our river systems, regenerate Australian landscapes, provided habitat for endemic fauna and help mend a troubled history with our First Nations people.

Many bush foods can be easily grown at home which means there's no need to buy them as plastic-wrapped imports from the supermarket and hide them in the back of the fridge where they get forgotten about and turn mouldy. *Dianella caerulea* grows readily from seed, producing a bounty of blue berries which are good eating and higher in antioxidants than blueberries. Midgen Berry (*Ausutromyrtis dulcis*) grows in part shade in sandy soil with a berry so yummy you will be foraging at your bush for ages, zenned out in the meditative mind-slowning practice of foraging – which, of course, reconnects all people with the story of the evolution of mankind.

Mackay Regional Council's Natural Environment Centre grows many bush foods that people can easily grow at home – *Myoporum*, *Dianella*, *Podocarpus*, *Sterculia*, *Glycosmis*, *Micromelum*, *Elaeagnus*, *Planchonia*, *Breynia*, *Hibiscus*, *Prostanthera*, *Alpinea*...there is a plant for every garden situation, be it a large block of land or just a tiny apartment windowsill.

Bush foods and waste management share a common thread –education. To ensure Australia's sustainability, growing bush foods and educating Australians about how to reduce their ecological footprint to ensure Australia remains the jewel in Earth's crown for many years to come.

## TOWNSVILLE REGIONAL COUNCIL

### Bin health checks to educate on recycling



A new awareness program is aiming to improve recycling across the city.

The bin health checks involve visual assessments of 1000 randomly selected households general waste and recycling bins.

This will be followed by feedback provided on the contents of each bin in the form of a tag detailing how households can recycle more and waste less.

Townsville Water and Waste Committee chairperson Russ Cook said the health checks are a good way to directly address the confusion around what is and isn't recyclable and provide feedback on how households can improve their recycling habits.

"Contamination of our recycling bins does impact the quality of recycling in the city and can cause problems during the sorting process," Cr Cook said.

"We have an enthusiastic community that has a great attitude towards recycling and being sustainable, so we're hoping to tap into that enthusiasm and build knowledge among residents.

"The health checks will give our staff an opportunity to provide individualised feedback via a tag on the contents of each of these randomly selected household bins.

"Our staff will also provide tips on how residents can make sure they're recycling correctly and how they can reduce their waste.

"This information will then assist us in developing a targeted waste and recycling education program based on the trends identified during the health checks."

Cr Cook said the most common contaminants in Townsville's recycling bins include soft plastic such as plastic bags, food and garden waste, medical waste, and scrap metal.

"It is important that we aren't putting contaminants in our recycling bins, as not only can they impact the quality of our recycling, but they can also be hazardous to staff," he said.

"There are six materials that can make it into our yellow lid recycling bins – these are paper, cardboard, hard plastic food and drink containers, glass jars and bottles, steel tins and aluminium cans. We should also always rinse any recyclable food containers before putting them into the recycling bin.

"I'd also like to remind residents that it is free to take recyclables and green waste to our waste facilities year-round."



## CAIRNS REGIONAL COUNCIL

### CRC Glass Processing Facility



#### The new CRC Glass processing facility

While the spotlight on Resource Recovery in Far North Queensland has been on Cairns Regional Council's new Materials Recovery Facility, an impressive soon to be commissioned Glass Processing Plant is sure to also attract a great deal of interest from across the region.

The \$1.5M, state of the art CRC glass crushing facility, capable of processing up to 20,000 tonnes of recovered glass per year, now offers Local Governments, State Government agencies and Industry operators access to the high-quality recovered glass sand substitute.

The process where glass bottles and jars are converted into a sand replacement product is state of the art, with screening, magnets, eddy currents a rotary drier which uses heat to remove the organics from the glass and a vertical shaft impact crusher all playing their part. The glass product is then ready to be further refined using vibration screens and 'lights out' fraction technology (removing labels & plastic), before being crushed in a vertical shaft impactor which outputs the quality product in a variety of sizes (predominantly <4.75mm).

CRC's Resource Recovery Manager, Steve Cosatto is extremely impressed with the output the new facility is capable of. "The quality of product we've seen so far has been excellent, now being able to produce glass aggregate to DTMR specs, this will offer the region a genuine replacement for virgin sand materials for a multitude of civil work applications".

Cairns Regional Council's internal use of crushed glass across construction works only continues to grow with 7,500 tonnes used across multiple projects since 2014. Most notably, the Cairns Performing Art Centre construction project incorporated over 1000 tonnes of crushed glass, mixed with sand, used as a backfill site stabilising material.

Council has incorporated TMR specifications into the civil construction procurement process. It is anticipated this amendment will create demand for the product for years to come.

Steve went on to say "The potential for the 9000 tonnes of annually recovered glass aggregate is endless, investigations into new markets, in addition to construction applications are also underway, including sand-blasting, pool filtration and more"

Local civil construction have commenced utilising the product and discussions have commenced with TMR contractors for the use of the product in completing over 20 kilometres of new bike/footpaths.

With the completion of the CRC Glass Processing Facility the first steps towards achieving circularity over the recycling and reuse of post-consumer glass has well and truly arrived for the Cairns region.



**The new 'MRTS36' specification Glass Aggregate product & it's use in construction works.**

## **The Introduction of Waste Transfer Smart Stations**



Named after a large bullock called Banana in the 19th century, the Banana Shire is resource rich and steeped in agricultural and mining heritage. Situated in Central Queensland, the Banana Shire is sparsely populated, with 15,000 people spread over a 28,550-kilometre squared landmass.

Banana Shire Council maintains eight remote Waste Transfer Stations (WTS) and three landfills – two of which will be shortly closed and transformed into Waste Transfer Stations. Of these 11 sites, 7 will remain unmanned, creating significant illegal dumping and regulatory reporting problem for Council. Historically, the Shire has also had limited access to recycling, which in turn has placed considerable stress on its existing landfill operations. Council believes approximately 40% of waste that is deposited at these unmanned Transfer Stations is illegally dumped commercial waste from both inside and from outside of the Shire due to constant and unconstrained access.

Over the past 16 months, Council has set on developing a Strategic Plan for Waste Management including a series of proactive measures involving a suite of new initiatives set to transform waste management and resource recovery in the region. In an attempt to make waste more “financially and environmentally attractive”, these initiatives include the likes of bio solid and green waste processing systems, regulated waste treatment and reuse, tyre recycling and the introduction of paper and cardboard kerbside collection. Nevertheless, the problem of the unmanned Transfer Stations remained. Recognising a problem, Council undertook an assessment of its significant risks associated with its current control processes pertaining to its waste deposition sites and regulatory reporting obligations. Through those assessments Council identified that its existing management processes were insufficient, particularly in regard to the management of illegal dumping and regulatory reporting. It was decided to engage Mandalay Technologies to assist Council develop a solution to the problem.

After a series of workshops and meetings, a solution was agreed to in the form of an authenticated site access service. The service, which operates through Mandalay’s Resident Access Control program, is designed to deliver automated and approved entry to unmanned facilities using unique resident codes, as well as reporting tools to analyse collected data. This utilises a system that secures the site but still allow easy access by rate payers. The use of this software, assisted in managing the access to the sites while capturing and processing vehicle movements. This enables Council to keep waste sites secure and provide unmanned access permissions to customers from pre-allocated geographic areas, which in



turn works to prevent unauthorised illegal dumping on site.

In addition to the security benefits of the Resident Access Control program, is the system's ability to segregate and track waste per person, household, street, suburb and township. That allows Council to get more meaningful information on the behaviours of residents and how we can change those behaviours through education as well as ensure the segregation of domestic and commercial waste streams.

This means Council can also more effectively enforce laws by limiting the amount of commercial dumping onsite and ensuring people aren't abusing the system, which is facilitated through security mechanisms in the program. This allows for clean and tidy sites which are designed and built purely for the rate payer.

Mandalay Video Link: [Resident Access Control at Wowan Transfer Station](#)

## ROCKHAMPTON REGIONAL COUNCIL

### Good riddance to bad rubbish



On Clean Up Australia Day this year residents took up the call to look after our Region and make sure that rubbish makes it to the right place.

Waste and Waste to Resource Implementation Councillor Shane Latcham said it was fantastic to see how many community groups organised a site, and how many people stepped up to clean up.

“On Sunday 7 March I had the opportunity to visit a few different sites and pitch in,” Cr Latcham said.

“This was my first Clean Up Australia Day as a Councillor, and I felt grateful and proud to be able to support this wonderful community event.

“It struck me that so many people were willing to roll up their sleeves on a Sunday morning and do something really positive for our Region.

“While this event might only take place once a year, I know that it's the same passion that drives our community to make responsible decisions about waste every day, which is something I really want to take this opportunity to highlight and celebrate. Thank you to all of the schools, organisations, and individuals who got involved.

“Of course the goal for our community is to reach a point where there's no longer any litter to clean up, and at Council we're currently looking at ways to reduce littering and illegal dumping in our Region. This project is proudly supported by the Queensland Government.

“The vision for Council's Waste Strategy is to become a zero waste community by 2050, and events like this are a wonderful reminder that we can achieve some pretty incredible results.

So, let's all work together to make sure that our Region remains stunning.

“If you're looking for some ways that you can make good decisions about waste every day I suggest heading over to our website and exploring some practical tips for recycling right, reducing food waste and composting.”

## JJ RICHARD & SONS

### j-TRACK®



The waste industry is ever changing which is why keeping up to date with the latest in waste management technology is vital. To ensure we achieve this, JJ's Waste & Recycling have an internal IT department of over 30 software developers and support technicians providing our customers with access to a number of in-house developed systems allowing customisation to suit individual business requirements.

JJ's Waste were pivotal in establishing the first waste collection monitoring system which has now become a standard requirement in waste collection contracts. j-Track® in-vehicle monitoring system

was established after challenges were faced with existing systems such as RFID and assists in providing much of the information required for household waste collection service

contracts. j-Track® is installed in over 500 collection vehicles throughout Australia and New Zealand providing our customers with:

- a consistent, timely collection service by providing run navigation to the driver;
- peace of mind knowing chain of responsibility requirements are being met via j-Track® monitoring driver rest breaks and vehicle performance;
- an accurate record of waste collection information showing bin collection locations and times;
- detailed information on collection issues, including photographs and videos for issues such as contaminated and damaged bins.

The j-Track® system works in conjunction with our Black Moth camera hardware installed on all new collection vehicles. Four cameras are located on the exterior of the body providing a 360° view around the collection vehicle including a Top Down View giving drivers unparalleled vision when reversing or navigating difficult locations on new collection contracts. A fifth camera located in the hopper monitors bin contents as they are emptied into the vehicle. Camera vision is viewable on one of two monitors mounted in the cab of the vehicle, with the other monitor used for j-Track®.



**Black Moth Top-Down View**

If a collection issue occurs, the driver will use the j-Track® touchscreen monitor to record information including type of collection issue and confirmation of the location. Upon registering the issue, a photo is automatically taken by the Black Moth cameras and instantly matched to the collection issue recorded in j-Track®.



**Track® and Black Moth monitors in collection vehicle cab**

To make all recorded information available and easily accessible to our Councils, we developed the

j-Track® Council Portal. The Council Portal provides real-time updates of collection information so that Council is aware of every waste activity in their region as it happens. The recently enhanced Council Portal has all existing functionality such as viewing collection services and collection issues, with the addition of a number of exciting new features including:

- collection vehicle movements in real-time

- video and image retrieval to assist with service issue calls
- live status of service requests placed by Council
- generation of letters for issue to residents and customised reports.

These exciting developments in waste management technology allow Councils to have greater insight and transparency into their waste management services, allowing for targeted education, waste management initiatives and ensures all collections are conducted to the highest level of safety, in line with legislation, and to the standards expected.



@DumpDaze



## LAWMAC

### 2021 Meeting Dates & Host Councils

- **20-21 May 2021**  
Cairns Regional Council
- **22-23 July 2021**  
Barcaldine Regional Council
- **18-19 November 2021**  
Whitsunday Regional Council

