



# Office of the Mayor

City of Gold Coast

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Dear Senators

## **SENATE STANDING COMMITTEE ON ENVIRONMENT AND COMMUNICATIONS INQUIRY – WASTE REDUCTION AND RECYCLING POLICIES**

On behalf of the City of Gold Coast (City), I am pleased to make a submission to the Senate's inquiry into waste reduction and recycling policies.

As the second largest local government in Australia, servicing the sixth largest city in the nation, we are committed to being a leader in waste reduction, recycling and circular economy initiatives.

We believe that local government has a key role to play in helping the Australian Government achieve its objectives in this space and have unique insights and capabilities that we are keen to share with you.

In particular, we are making a significant investment in "future-proofing" our city's growing waste management and energy needs through a new Advanced Resource Recovery Centre (ARRC). This facility will include an energy-from-waste facility to process residual waste that cannot be recovered through resource recovery services and remove the City's reliance on landfills. This investment will not only service the Gold Coast but also have the capacity to benefit residents and businesses across our region.

Given the technical nature of the subject matter and the time available for submissions, we provide below a summary of our services, policies, initiatives and future plans as they relate to waste reduction, recycling and the circular economy.

We have three requests for the Australian Government to support our work towards achieving a circular economy here on the Gold Coast, which we outline at the end of this submission. These requests relate to the Australian Government's product stewardship, policy and targets and economic investment and returns.

We would be pleased to meet with you and further discuss our initiatives and future plans, particularly focussing on how we can enhance collaboration with the Australian Government to advance the delivery of a circular economy for Australia.

### **About our city**

The population of the Gold Coast exceeds 670,000 and is projected to grow to one million by 2046, making it Australia's fastest growing major city. Additionally, the city welcomes over 12 million tourists annually, a figure notable in comparison to our resident population.

Our city boasts a unique density, with 46 per cent of Gold Coasters living in multi-dwelling housing. This trend is anticipated to continue for new residents coming to our city, the majority of whom will opt for medium to high density housing. Population growth, the trend towards higher density living, and the substantial influx of visitors poses challenges in managing the Gold Coast's waste effectively.

Currently, the City provides waste services to over 248,000 properties. These services include weekly kerbside general waste collection, fortnightly kerbside recycling collection with compulsory green organics for single dwellings, an on-demand bulk waste collection service and commercial-industrial waste services.

In 2022-2023, the City managed over 476,800 tonnes of waste, with 65% disposed of in City landfills and the remaining 35% recovered into the circular economy.

The City owns two operational landfills, Reedy Creek and Stapylton, both of which are expected to reach capacity within the next decade. This presents a significant issue for the City, prompting us to position ourselves as leaders in waste processing by investing in new and innovative technologies and solutions.

Committed to reducing waste to landfill and recycling resources, the City aligns its objectives with the targets outlined in the *National Waste Policy Action Plan* and the *National Food Waste Strategy* through our *Solid Waste Strategy 2024* and *Climate Resilience and Sustainability Strategy* (copies of which are attached).

We aim to achieve sustainable waste management outcomes including active waste avoidance and positive waste behaviours, maximising waste re-use, recycling and recovery opportunities before landfill disposal, securing our capacity to manage future waste and minimising the negative environment and public health impacts of solid waste management.

Outlined below are our waste reduction and recycling initiatives, developed to achieve these outcomes through various services and infrastructure. However, additional support from the Australian Government is vital to ensure we meet national targets despite the escalating costs of waste management globally.

### **Our waste reduction and recycling initiatives**

#### Organics (food and green waste) recycling

The City offers a kerbside green organics service to 128,000 customers across the Gold Coast. Expanding the service in 2023 has allowed the City to recover up to 27 per cent of material from the general waste bin. Diverting organics from landfill is a priority for the Gold Coast and we will be investing in further expansions of the service for our residents.



Organic waste in the Commercial and Industrial (C&I) sector comprises 48 per cent of waste collected in the general waste bin. A commercial food organics service is now available to the C&I sector. This service is offered to commercial customers in high-density commercial areas from Southport to Broadbeach, with the City aiming to expand this service citywide over time.

The City also provides green organics Drop-and-Go sites at select Waste and Recycling Centres across the Gold Coast. This makes the recycling of green organics fast and easy. Residents can drive in and drop green organics directly off the back of vehicles and trailers onto a designated ground level area. This eliminates the need for lifting and loading into bins, resulting in reduced wait times and faster trips. This material is then bulk hauled to local composting companies for recycling.

We are undertaking trials to understand the challenges and opportunities in providing food recycling services to customers in medium-density and high-rise buildings. From April 2024, the City will commence a six-month trial with 10 high-rise buildings located between Southport and Broadbeach to capture and recycle food organics. Lessons learned from the trial will inform future City services.

## **Recycling Services**

### 'Recycle Street' at Waste Recycling Centres

Recycle Street simplifies recycling making it faster and more convenient. This initiative offers a one-stop facility to recycle unwanted items when customers visit a Waste and Recycling Centre. Recycle Street operates as a self-service "street", featuring a colour-coded shopfront for each type of recycled waste material. Customers using Recycle Street can quickly identify where to place their recycled goods as each bin is clearly colour-coded according to the type of material, such as paint, motor oil, car batteries and hazardous chemicals. Recycle Street allows customers to recycle up to 30 different types of products.

### Fit-for-purpose recycling

As part of our investigations into fit-for-purpose recycling solutions for high-rise buildings, which often face challenges with waste management utility areas, we are trialling bottle crushing devices in two multi-unit dwellings. These buildings cannot currently be serviced via traditional comingled recycling or glass recycling collection services. Additionally, investigations are underway at two locations to assess the readiness of selected commercial customers to participate in shared waste/recyclables management services.

### Bulky Kerbside Service

The City also offers an on-demand bulky kerbside collection model via FLEXiSKIP for 166,508 eligible properties. This model enables customers to order a skip bag annually at a time that best meets their needs, and a City contractor collects a contained volume of waste within 30 days of skip delivery at a time requested by the individual customer. The skip bag is subsequently sorted, with recyclable materials recovered.

## **Innovative waste and recycling infrastructure and initiatives we are investing in for our future**

### Landfill gas capture

The City has partnered with LMS Energy to capture methane gas produced by landfills, converting it into renewable energy. Landfill gas to energy plants have been installed in our



City waste facilities. Together, they generate enough energy to power up to 7,000 average homes. Greenhouse gases from City landfills, including methane gas, are captured before they enter the atmosphere. Subsequently, they are then converted to carbon dioxide, which is about 28 times less harmful to the environment. Capturing the gas also decreases the risk of landfill fires and odour emissions but also mitigates its environmental impact. The energy created is delivered to the National Energy Market.

#### Pimpama Resource Recovery Centre

We are currently planning a northern Premium Waste and Recycling Centre in Pimpama. Once completed, this facility will serve as a modern waste recovery and resources recycling centre, providing extended opportunities for reusing household items in our fast growing northern suburbs. Components of the facility include Recycle Street, a construction and demolition waste area, a green waste Drop and Go pad and residual waste push pit. Additionally, the facility will incorporate a community sustainability hub, allowing not-for-profit groups to repurpose items for alternative uses, as well as a recycling shop.

#### Sustainability Hubs

The establishment of Community Recycling Hubs emerged as the second most sought-after initiative in a recent community engagement exercise. Community Recycling Hubs present an opportunity to improve resource recovery and reduce waste to landfill. Such facilities can be made available for use by co-located community groups and stakeholders to host workshops, events and training in areas that promote resources reuse, repurposing and associated waste reduction.

#### Centralised Bulk Haul Waste Recovery Station

The City is currently in the planning stages of a centralised Bulk Haul Waste Recovery Station. These stations will eliminate approximately 40,000 garbage truck trips from the M1 Pacific Motorway annually. Currently, the fleet of garbage trucks travel to City landfills multiple times each day to dispose of waste. With a centralised model, garbage trucks will dispose of waste at one central facility, where waste from multiple collection vehicles will be consolidated and transported in large high-volume transfer vehicles for more economical shipment to disposal sites such as landfill and the planned ARRC.

#### **Advanced Resource Recovery Centre (ARRC) and Yatala-Stapylton Recycling Enterprise Precinct**

As mentioned above, the City's landfills are forecast to reach capacity within 10 years. To address this challenge sustainably, the City is currently undertaking a feasibility study for the development of an ARRC which will co-locate resource recovery activities within a planned Yatala-Stapylton Recycling Enterprise Precinct. This precinct is a significant undertaking for the City and will require collaboration across industry and government.

The primary objective of the ARRC is to maximise material recycling, creating new products from recyclable materials and converting residual waste into energy. This approach aims to achieve a landfill diversion rate of approximately 97 per cent. The ARRC will comprise the following major facilities, supported by ongoing community education and waste minimisation and resource recovery strategies:

#### Materials Recycling Facility (MRF)

This facility will apply the latest commercialised technologies to sort recyclable materials from the yellow topped bin, thereby reducing contamination and increasing the types of



materials processed. These materials will be made into new products, including paper, glass, cardboard and remanufactured plastic products ranging from traffic bollards to drink bottles. This initiative will create economic growth by increasing demand for recycled goods and attracting new businesses to co-locate with the ARRC.

#### Construction and Demolition (C&D) Processing Facility

C&D waste is the most significant waste stream in Australia in terms of tonnage. The new C&D processing facility will recover materials from the Gold Coast's rapidly growing construction industry, providing processed metals, concrete, asphalt, timber and soils for infrastructure projects along the Gold Coast-Brisbane growth corridor.

#### Organics Processing Facility

The largest proportion of the domestic waste stream is organic. Developing a local processing solution is therefore critical to realising the Gold Coast and regional circular economy. This facility will process organics in an enclosed, controlled environment, adhering to the latest requirements to minimise nuisance and produce compost and mulch. These products can be used on parks and gardens, in agriculture or to rejuvenate soils.

#### Energy from Waste (EfW) Facility

An EfW facility will be established to process residual waste not recovered through resource recovery services, thereby removing the City's reliance on landfills. The facility will be developed in accordance with the Queensland Government's Energy from Waste Policy and is projected to generate approximately 50 MW of green energy. This amount is enough to power the entirety of the City operation's direct electricity usage.

Emissions from the facility will be treated in line with the European Union standards, ensuring a significant environmental improvement over landfill practices and significantly reducing the net carbon emissions of the City's waste disposal services. Bottom ash from the EfW process will be collected, with the metals extracted and the remaining aggregate processed for use in roads and pavement construction, including road base aggregate and concrete.

#### Green Hydrogen Electrolysis Plant

The electrolysis plant will be powered by electricity from the EfW facility and supplied with recycled water from the City's new Sewage Treatment Plant to be developed within this precinct. The production of hydrogen and oxygen will support industrial uses, energy production and enable the transition of the City's waste collection fleet away from traditional fossil fuels. The hydrogen refuelling station will be designed for heavy transport vehicles and is envisaged to become part of a future national network of such facilities.

#### Sustainable Industry Attraction

The ARRC is located within the proposed Yatala-Staplyton Recycling Enterprise Precinct, earmarked by the Queensland Government for resource recovery and re-manufacturing activities in Shaping SEQ 2023. The ARRC is a major environmental and economic investment by the City and will be an anchor project for the precinct, enabling its rapid activation over the next 10 years. The City's objective is to attract and support sustainable industries and foster our local circular economy utilising recyclable materials collected across the city. Businesses and industries capable of utilising the recovered materials will be encouraged to co-locate with the ARRC to use these recovered materials in remanufacturing or in construction processes, thus establishing a circular economy.



It is envisaged that the ARRC and the Yatala-Staplyton Recycling Enterprise Precinct will not only service the Gold Coast, but will benefit around three million residents and businesses across South East Queensland.

## **New recycling streams**

### e-Waste and small appliances

The City, in partnership with the Endeavour Foundation, recycles electronic waste and small appliances. We are currently exploring the expansion of this service to meet the community's demand.

### Mattress Recycling

The City receives approximately 60,000 mattresses annually, which end up in the City's landfills. This practice causes operational issues at the landfills, including creating voids, lowering compaction rates and taking valuable air space. Spring, foam and ensemble mattresses can all be recycled effectively. The mattresses are either mechanically or manually stripped and components are separated for recycling. The City recently purchased a property that will enable us to partner with a commercial business or a social enterprise that specialises in mattress deconstruction. It is anticipated this service will commence in 2025.

### Organics (food organics garden organics)

The City's residential organics journey is well underway. The expansion of the Green Organics Service to a Food Organics Green Organics (FOGO) service is planned for 2028. The staggered approach to the implementation of this service is primarily due to insufficient FOGO processing capacity in South East Queensland. If implemented, this initiative has the potential to divert approximately 58,000 tonnes of waste from landfill and reduce landfill carbon emissions by 55,000 tCO<sub>2</sub> per year, which equates to approximately 7% of total City emissions.

### Solar panels / batteries

Queensland has the highest number of small-scale solar installations in Australia with approximately 1,015,982 installed as of 29 February 2024<sup>1</sup> and over 15,000 tonnes of panels coming to end-of-life per annum. Between 2027 and 2032, the City alone expects to replace over 12,000 solar panels from our facilities and the Gold Coast generates about 7000 tonnes of solar panel waste per annum. The City is currently engaging with solar panel recycling companies to find a solution for diverting this waste stream from landfill.

## **Australian Government support**

There are three key areas where the City needs support from the Australian Government to deliver a circular economy:

- **Product stewardship** – Strengthening product stewardship is essential to further reduce waste generation and enable high value material recovery in the circular economy. This involves strengthening existing schemes that are not delivering their

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<sup>1</sup> According to the Clean Energy Regulator's small-scale installation postcode data, available at: <https://cer.gov.au/markets/reports-and-data/small-scale-installation-postcode-data>



intended benefits, such as soft plastics and implementing schemes for emerging markets such as EV batteries, household solar storage batteries and solar panels.

- **Policy and targets** – Current Federal resource recovery targets are unachievable due to a lack of suitable processing and end-market solutions in Australia. We look to the Australian Government to provide leadership by making amendments to various related policies, including town planning, waste management and energy from waste, to provide a consistent approach conducive to a circular economy.
- **Economic investment and returns** – To fast-track processing and end-market solutions, the City requires economic support and investment from the Australian Government in services and facilities. If the circular economy was adopted nationally, public and private investment in that sector is estimated to generate a GRP of \$6.1b by 2047 from the Gold Coast\*.

\*Gold Coast Circular Economy Gap Analysis - A Submission to the City of Gold Coast, MRA Consulting Group (MRA).

Delivering a circular economy for our city and our nation requires collaboration between all levels of government. This collaboration is crucial for establishing policy frameworks that optimise the impact of our investments in new technologies and for providing co-funding for new infrastructure and solutions, thus bringing our planned waste and recycling initiatives to fruition.

As noted above, I would be happy to arrange for senior City officers to meet with you. We would be pleased to discuss our submission, including current policy constraints, in more detail and explore opportunities for collaboration in advancing circular economy deliverables.

Should you wish to discuss any of the information set out above, please contact my Chief of Staff, Luke Wallace, who can be reached at \_\_\_\_\_ or via email at \_\_\_\_\_

Yours sincerely

**TOM TATE  
MAYOR**

**Attachments:**

*City of Gold Coast Solid Waste Strategy 2024*

*City of Gold Coast Climate Resilience and Sustainability Strategy*

