



# K'GARI (FRASER ISLAND) WASTE MANAGEMENT AND RESOURCE RECOVERY STRATEGY 2023-2029

ARTWORK BY CONWAY BURNS

Building better communities together.



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# FOREWORD

K'gari (Fraser Island) is located within the Fraser Coast Region and is the largest sand island in the world. It was inscribed on the World Heritage List in recognition of its outstanding natural universal values in 1992 and features complex dune systems, and an array of rare and unique features, including dune lakes and tall rainforests. The conservation of this unique environment has been identified as a priority by key stakeholders during the K'gari (Fraser Island) Waste Management and Resource Recovery Strategy development and imbedded through a shared vision.

This project received grant funding from the Australian Government through the Australian Heritage Grants Program.

## VISION STATEMENT

Our vision is to provide sustainable and evolving waste solutions that protect and enhance the valuable natural environment of our World Heritage area, K'gari (Fraser Island). Guided by the first Butchulla lore “what is good for the land must come first”, we aim to achieve zero avoidable waste to landfill by 2029.

## ACKNOWLEDGEMENT OF COUNTRY

Fraser Coast Regional Council acknowledges to the east, the Butchulla (Badtjala) and to the west, the Kabi Kabi (Gubbi Gubbi/ Kabbi Kabbi) people, their connection to Country (land, sea and sky) and recognises the many places of cultural, spiritual, social and economic significance in the community. We pay respects to their Elders – past, present and emerging.

The Fraser Coast Regional Council also acknowledges other Aboriginals, Torres Strait Islander people and Australia South Sea Islanders the who reside in the Fraser Coast Region.

# WORKING WITH TRADITIONAL CUSTODIANS

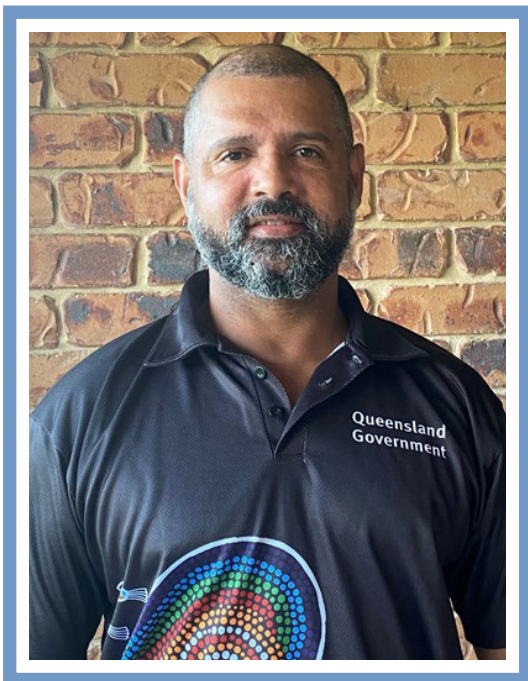
Fraser Coast Regional Council has developed this strategy with the Butchulla Aboriginal Corporation (BAC) and the Butchulla Native Title Aboriginal Corporation (BNTAC) as key stakeholders, applying the first Butchulla Lore 'What is good for the land must come first' as a guiding principle during the process.

## ARTWORK EXPLANATION

Conway Burns is a Butchulla man, who is passionate about caring for the country and teaching the next generation. Conway has been painting for 25 years, and is well known for producing Indigenous artwork pieces for various projects within the Fraser Coast and surrounding regions.

Conway has created this artwork to tell a story of the connection between the Butchulla People and the bond they have with land and sea country. The three distinct areas in the painting represent the three Butchulla Lores. The people are represented by the Red Ochre. The sea country is represented by the Black Ochre and how it should be protected from pollution. The Yellow Ochre represents the land country, the tree communities and the life within. Conway has expressed how deeply the Butchulla people care for K'gari (Fraser Island) and the importance of caring for her.

The piece demonstrates the relationships formed between stakeholders involved in developing the Strategy, guided by the first Butchulla Lore 'What is good for the land must come first'.



Artist: Conway Burns





# INTRODUCTION

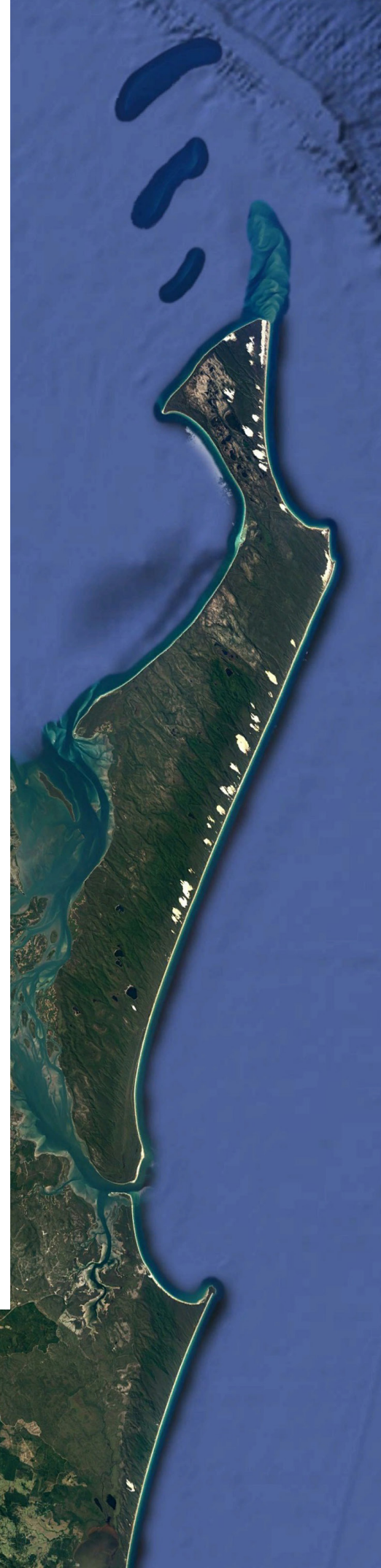
In January 2021, Fraser Coast Regional Council were granted funding under the Australian Heritage Grants Program 2020-21, to support the development and implementation of a Waste Management and Resource Recovery Strategy for K'gari (Fraser Island).

The opportunity to develop a coordinated strategy has fostered positive relationships and formulated partnerships with the Butchulla community and key stakeholders. Together, the Strategy has been developed with the underlying objective to prevent environmental harm and conserve the natural and cultural values of K'gari (Fraser Island) through a sustainable approach to waste management.

Upgrades and changes to waste infrastructure and management processes have been outlined in this strategy to address the poor waste management and resource recovery outcomes of current practices, environmental and human health risks, and growth in demand. The proposed services ensure that waste management practices are commensurate of the World Heritage status of K'gari (Fraser Island). The improvements in waste management processes, to allow for increased resource recovery opportunities and risk mitigation, have been identified and scheduled into deliverable actions for implementation.

## SCOPE

This strategy will guide the future of Fraser Coast Regional Council's waste management and resource recovery services on K'gari (Fraser Island). The identified upgrades to Council's waste management infrastructure and processes will improve the service received by residents and ratepayers of K'gari (Fraser Island). During the strategy development, recommendations were formed in consultation with key stakeholders including QPWS, to align other waste management practices on K'gari (Fraser Island) with the strategy outcomes. This promotes a coordinated and consistent approach to waste management on K'gari (Fraser Island).





# STRATEGIC ALIGNMENT

This strategy is aligned to the Fraser Coast Waste Strategy 2019-2029 (FCWS) with the actions directly linked to the targets of the FCWS.

The strategy also aligns with the targets and values of the following:

- United Nations Educational, Scientific and Cultural Organisation's (UNESCO) World Heritage status – Outstanding Universal Values.
- *Queensland's Waste Management and Resource Recovery Strategy* – Continued landfill diversion initiatives to achieve the aspirational resource recovery targets.
- Australia's National Waste Policy 2018 – Improvements to waste collection, recycling services, operation of waste sites, education and awareness delivery and litter infrastructure.
- *Great Sandy Region Management Plan – revised version 2005* – Solid waste disposal



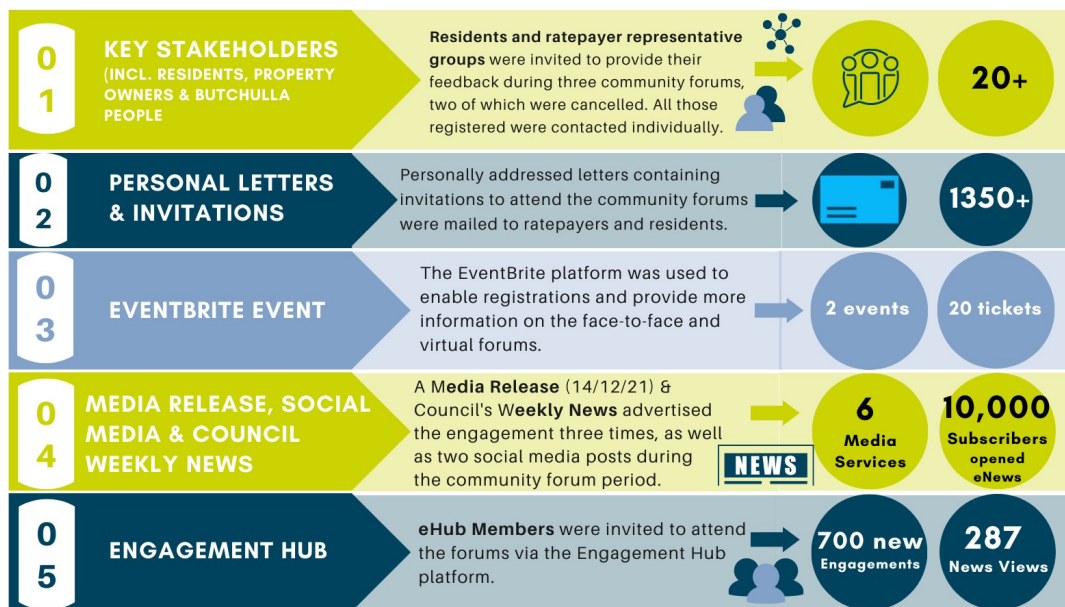
# STRATEGY DEVELOPMENT PROCESS



## STAKEHOLDER IDENTIFICATION AND COMMUNITY ENGAGEMENT

With the underlying objective to develop sustainable waste management and resource recovery practices on K'gari (Fraser Island), in partnership with the traditional custodians of the land, Department of Environment and Science, Queensland Parks and Wildlife Service, businesses, and residents and ratepayers of K'gari (Fraser Island), the strategy development was driven by purposeful and constructive connections with all stakeholders. Engagement activities, including the formation of a Stakeholder Consultation Group (SCG), guided the outcomes of the strategy through the identification of community expectations, key concerns and priority actions. Recurrent themes of 'caring for country', conserving K'gari's (Fraser Island) unique environmental values and providing opportunity for recycling and resource recovery have been embedded in the strategy and formed the basis of the actions for delivery.

## COMMUNICATION CHANNELS DURING THE COMMUNITY FORUMS



## OPTIONS ASSESSMENT

The Options Assessment Report, summarised in Appendix A, was undertaken by the FCRC project team and endorsed by the SCG. The preferred scenario for waste management on K'gari (Fraser Island) is aligned to the FCWS and addresses the expectations and key concerns raised through the community engagement.

# TARGETS, ALIGNMENT AND ACTIONS

The actions set out in this strategy are to be implemented by the Fraser Coast Regional Council, as per the scope of this strategy. Waste management and resource recovery actions recommended for other stakeholders have not been included in this strategy, but addressed through recommendation reports to the relevant organisation, to align waste management and resource recovery practices on K'gari (Fraser Island).

Target	Action	Detail	FCWS Alignment
<b>Provide compliant and sustainable waste infrastructure to residents and ratepayers on K'gari (Fraser Island)</b>	Upgrade of Eurong Waste Transfer Station	<ul style="list-style-type: none"> <li>Capping of the site to mitigate risk associated with legacy waste issues</li> <li>Installation of new bays for bulk and steel waste</li> <li>New bulk bin pads for general waste and co-mingle recycling bulk bins</li> <li>Upgraded area for the safe burning of green waste</li> <li>Installation of gatehouse for staff personnel during opening hours (40hrs per week)</li> <li>Installation of a 24/7 accessible bin compound section.</li> <li>Installation of waste storage infrastructure to ensure safe handling – bunded oil collection system, gas bottle storage etc.</li> </ul>	<ul style="list-style-type: none"> <li>Theme 4 – Nil material harm events at Council Waste facilities.</li> <li>Theme 4 – Improved customer experience and transaction throughput at Council waste facilities.</li> <li>Theme 5 – Upgraded transfer station at Eurong, Happy Valley and Orchid Beach.</li> </ul>
	Bin Compound Installation in Happy Valley and Orchid Beach	<ul style="list-style-type: none"> <li>Installation of up to three (3) bin compounds in each of the Happy Valley and Orchid Beach townships, consisting of Wongari fences and gate as well as bin pads for general waste and co-mingle recycling bulk bins.</li> <li>Accessible to the public 24/7</li> </ul>	<ul style="list-style-type: none"> <li>Theme 4 – Nil material harm events at Council Waste facilities</li> <li>Theme 4 – Improved customer experience and transaction throughput at Council waste facilities.</li> <li>Theme 5 – Upgraded transfer station at Eurong, Happy Valley and Orchid Beach.</li> </ul>
<b>Increased awareness of accepted waste streams and location of waste facilities</b>	Signage Upgrade	<ul style="list-style-type: none"> <li>New signage to include updated waste stream practices, directive images, artwork and various languages to capture first nations people and the international community.</li> </ul>	<ul style="list-style-type: none"> <li>Theme 5 – Action 5.4 – Waste education: including improved signage to support resource recovery and recycling on K'gari (Fraser Island).</li> </ul>
<b>Continued servicing of K'gari's (Fraser Island) waste facilities</b>	K'gari (Fraser Island) Waste Contract Renewal	<ul style="list-style-type: none"> <li>Issue the K'gari (Fraser Island) Waste Services tender with an outcomes-based approach, incorporating the recommended changes to waste services throughout the implementation of this strategy.</li> </ul>	<ul style="list-style-type: none"> <li>Theme 5 – Action 5.5 – Issue the K'gari (Fraser Island) waste contract tender to market for waste collection and other resource recovery initiatives by 2024.</li> </ul>

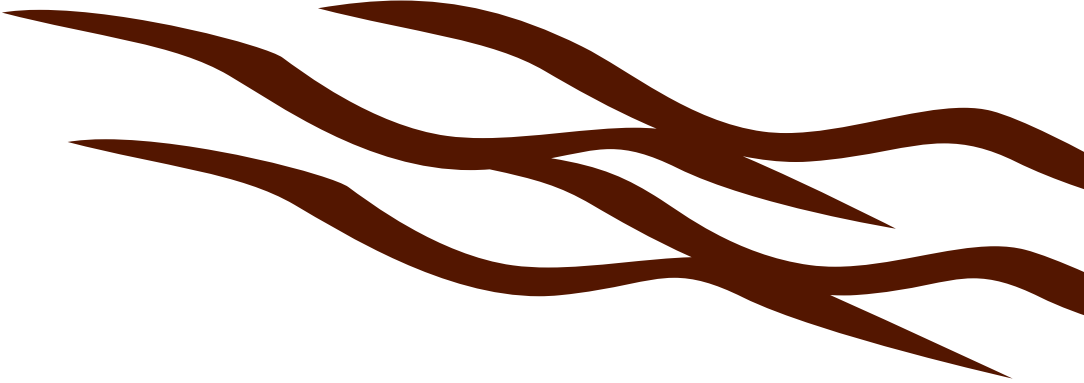




<p><b>Increased education to promote resource recovery and accepted waste practices on K’gari (Fraser Island)</b></p>	<p>Targeted Education Campaign</p>	<ul style="list-style-type: none"> <li>• Develop and implement a targeted waste education campaign, focussing on the implementation of co-mingle recycling services and other changes to current waste practices throughout the implementation of this strategy</li> <li>• Develop education resources and material in partnership with BAC, BNTAC, DES and tourism operators to maximise reach and effectiveness.</li> </ul>	<ul style="list-style-type: none"> <li>• <u>Theme 5</u> – Action 5.4 Waste education: including educational material to support resource recovery and recycling on K’gari (Fraser Island).</li> <li>• <u>Theme 6</u> – working in partnership with the State Government to educate and promote waste education on K’gari (Fraser Island).</li> </ul>
<p><b>Increase resource recovery on K’gari (Fraser Island)</b></p>	<p>Introduction of Co-Mingle Recycling Service</p>	<ul style="list-style-type: none"> <li>• Introduce co-mingle recycling services in bulk bins at the Eurong Waste Transfer Station, and bin compounds at Happy Valley and Orchid Beach.</li> <li>• Ensure an effective roll-out approach is taken to reduce the likelihood of contamination, through a staggered approach with targeted signage, education and monitoring.</li> </ul>	<ul style="list-style-type: none"> <li>• <u>Theme 3</u> – Improved the recovery of recyclables and reusable materials from Council operations.</li> <li>• <u>Theme 3</u> – Identified and prioritised waste streams that are recoverable, with a focus on local solutions.</li> <li>• <u>Theme 5</u> – Investigated a recycling service for residents and businesses living and working on K’gari (Fraser Island).</li> <li>• <u>Theme 5</u> – Consulted with QNP to implement improved recycling practices for campers.</li> </ul>
	<p>Bulk and Steel Waste Collection for Happy Valley and Orchid Beach</p>	<ul style="list-style-type: none"> <li>• Provision of Roll-on Roll-off bins in the Happy Valley and Orchid Beach townships for residents to dispose of bulk waste and steel waste, four (4) times per year.</li> </ul>	<ul style="list-style-type: none"> <li>• <u>Theme 3</u> – Improved the recovery of recyclables and reusable materials from Council operations</li> <li>• <u>Theme 3</u> – Identified and prioritised waste streams that are recoverable, with a focus on local solutions.</li> </ul>
	<p>Investigate options for Food Organics and/or Green Organics (FOGO) collection/ treatment</p>	<ul style="list-style-type: none"> <li>• Investigate the feasibility of FOGO collection and treatment options to increase landfill diversion.</li> </ul>	<ul style="list-style-type: none"> <li>• <u>Theme 3</u> – Improved the recovery of recyclables and reusable materials from Council operations</li> <li>• <u>Theme 3</u> – Identified and prioritised waste streams that are recoverable, with a focus on local solutions.</li> </ul>
<p><b>Remediation of previously used sites</b></p>	<p>Remediation of the Happy Valley and Orchid Beach Waste Transfer Stations</p>	<ul style="list-style-type: none"> <li>• Continue communication with the relevant government departments to ensure Happy Valley and Orchid Beach Waste Transfer Station sites are be suitably rehabilitated, meeting the requirements of legislation.</li> </ul>	<ul style="list-style-type: none"> <li>• <u>Theme 1</u> – Action 1.5 - Develop rehabilitation programs for all “non-active” waste facilities.</li> </ul>
<p><b>Decrease the amount of waste to be managed on K’gari (Fraser Island)</b></p>	<p>Investigate Pack-in Pack-out of suitable waste streams</p>	<ul style="list-style-type: none"> <li>• Investigate existing models and suitable waste streams generated by residents and ratepayers, to promote the transport of waste materials off K’gari (Fraser Island) directly to mainland facilities by the generator</li> <li>• In consultation with other stakeholders, develop an education program with consistent messaging.</li> </ul>	<ul style="list-style-type: none"> <li>• <u>Theme 4</u> – Improve operational practices at all waste facility sites.</li> </ul>

# IMPLEMENTATION PLANNING

Strategic Actions		Delivery Timeframe Financial Year Ending						
		2023	2024	2025	2026	2027	2028	2029
<b>K'gari (Fraser Island) Waste Management</b>								
1	Upgraded Eurong Transfer Station							
2	Bin Compound Installation							
3	Signage Upgrade							
4	Waste Contract Renewal							
5	Education Campaign							
6	Co-Mingle Recycling Rollout							
7	Bulk and Steel Waste Collection							
8	FOGO Investigation							
9	Rehabilitation							
10	Investigate Pack-in Pack-out of suitable waste streams							
11	Assessment and Review of the strategy							







# CONCLUSION

Extensive stakeholder engagement has ensured that future waste management practices on K'gari (Fraser Island) meet the community's expectations and desired outcomes, whilst reducing the risk of environmental harm. The identified actions will be implemented to achieve targets as per the delivery timeframe, with continued consultation of stakeholders throughout this process. Partnerships forged with the Butchulla Aboriginal Corporation (BAC) and the Butchulla Native Title Aboriginal Corporation (BNTAC) throughout the development of this strategy will continue to evolve throughout the implementation of actions and operation of waste facilities on K'gari (Fraser Island). The deliverable actions identified will establish sustainable waste management practices with increased resource recovery and recycling opportunities, to ensure K'gari's (Fraser Island) unique natural environment is conserved.

# APPENDIX

## APPENDIX A – SUMMARY OF OPTIONS ASSESSMENT REPORT

An Options Assessment was undertaken to identify potential waste management solutions to achieve the intended outcomes of the strategy.

There is a consensus with all identified stakeholders of K’gari (Fraser Island), including FCRC, that the current waste management practices on K’gari (Fraser Island) are not at an acceptable standard. Contamination of the current Waste Transfer Station (WTS) sites associated with historic landfilling, and current WTS operations is impacting the natural environmental and cultural values of K’gari (Fraser Island), with the potential to impact human health. Unsuitable land tenure at two (2) of the current WTSs at Orchid Beach and Happy Valley concludes that the practices are not meeting legislative requirements. The Butchulla (First Nations) people have expressed their deep concern for the above-mentioned issues in conjunction with cultural and Native Title impacts.

Suggested solutions and community requests from the stakeholder engagement have been considered in the determination of possible waste management solutions on K’gari (Fraser Island). Through a preliminary filtering process there have been several waste treatments that have been deemed unsuitable for use on K’gari (Fraser Island). These include landfilling, waste to energy thermal, anaerobic digestion, composting, and chipping. These have all been ruled out due to environmental, social and economic factors. This has left ten (10) preferred available treatments for different waste streams that have been further detailed, scored, weighted and ranked, as per the table below:

Preference	Available Treatment
1	Used Oil Solution
2	Old Battery Solution
3	Steel Waste Solution
4	Used Gas Cylinder Solution
5	Bulk Waste
6	CRBB
7	MRF
8	GWBB
9	BGW
10	Kerbside Collection

Through the consultation process the need for an education campaign was highlighted as well as promoting of a Pack in – Pack out campaign for streams such as tyres, mattresses, appliances and construction/demolition waste.

The different treatments are mostly applied to individual waste streams and have been bundled to form potential scenarios covering all accepted waste streams. Out of five (5) assessed scenarios, along with the current practices, the preferred Scenario 1 addresses the current compliance issues, increases resource recovery and provides opportunity for business partnerships.





Key aspects of Scenario 1 include the upgrade of the Eurong Transfer Station, enabling the acceptance of additional waste streams. The Eurong WTS is proposed to open five (5) days a week, for eight (8) hours a day, with access outside of these hours restricted to contractors for servicing. Site supervision will assist in maintaining compliance, managing contamination of co-mingle recycling and the provision for tip fees and charges to be collected. There will also be a small section of the Eurong WTS used for a bin compound for general waste and co-mingle recycling. This bin compound will be open at all times.

Under Scenario 1, the current facilities at Happy Valley and Orchid Beach would be replaced with bin compounds for general waste and co-mingle recycling. Bulk bins or RORO bins will be provided for a two (2) week period, four (4) times a year, for residents to deposit bulk waste and steel waste. Outside of these collections bulk waste and steel waste can be deposited of at the Eurong WTS.

Waste streams managed under Scenario 1 are detailed below:

- **General Waste** - Deposited by the user into bulk bins within the staffed Eurong WTS with reduced opening hours and bin compounds of up to six (6) bulk bins within Happy Valley and Orchid Beach townships. The bulk bins are then serviced at least weekly and transported to Maryborough landfill for disposal.
- **Food Waste** – Deposited by the user into bulk bins with the General Waste.
- **Co-Mingle Recycling** - Deposited by the user into recycling bulk bins located at the Eurong WTS and the bin compounds at Happy Valley and Orchid Beach. The recycling bulk bins are then serviced at least weekly and transported to the Material Recovery Facility (MRF) on the mainland. Contamination at Eurong WTSs will be managed through site supervision. Increased education campaigns, signage and monitoring (camera surveillance etc.) will assist in reducing contamination of co-mingle bins at Happy Valley and Orchid Beach.
- **Container Refund Scheme** - Containers eligible for the scheme will be collected with the co-mingle recycling stream and processed at the mainland MRF facility. Private enterprises are welcome to create collection points on K'gari (Fraser Island).
- **Green Waste** - Deposited by the user at designated areas before being burned off at Eurong WTS and designated sites at Happy Valley and Orchid Beach.
- **Steel Waste** - Deposited by the user at a designated area at Eurong WTS and collected during the quarterly bulk waste collection at Happy Valley and Orchid Beach in supplied bulk or RORO bins. The steel waste is then transported to the Maryborough Landfill facility for further sorting before being transported for recycling.
- **Bulk Waste** - Deposited by the user at a designated area at Eurong WTS and collected during the quarterly bulk waste collection at Happy Valley and Orchid Beach in supplied bulk or RORO bins. The bulk waste is then transported to the Maryborough landfill facility awaiting sorting, processing, recovery and/or final disposal.
- **Used Oils** - Deposited by the user at the Eurong WTS into an appropriately banded collection container and removed by the contractor as required. It is transported to the mainland for a resource recovery process.
- **Old Batteries** - Deposited at the Eurong WTS into appropriate collection infrastructure and transported as required to the Maryborough landfill facility for further processing.
- **Used Gas Cylinders** - Deposited at the Eurong WTS into appropriate collection infrastructure and transported as required to the Maryborough landfill facility for further processing.
- **Other** – All other waste streams have to be returned to a mainland waste facility.



