



Waste Strategy 2024 - 2034

Report



Prepared for Shire of Capel

16 April 2024

Project Number: TW24012

DOCUMENT CONTROL

Version	Description	Date	Author	Reviewer	Approver
1.0	Draft Released for Client Comment	9/04/2024	AB/MM	BC	BC
2.0	First Approved Release	12/04/2024	AB/MM	BC	BC
3.0	Second Approved Release	16/04/2024	AB/MM	BC	BC

Approval for Release

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Signature



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APPENDIX A Waste Data Assumptions

1 Introduction

The Shire of Capel (the Shire) is located in the Southwest region of Western Australia, between Bunbury and Busselton, covering an area of 557km²⁽¹⁾. It is home to over 18,500 people and includes vast stretches of pristine coastland, high quality urban and leafy rural areas, historic country towns and natural forests².

The Shire has a diverse population made up of young families, professionals, and older couples, which is growing rapidly. This growth will have significant implications on the Shire's waste volumes and consequently the resources, services and infrastructure required for effective waste management. Accordingly, the Shire needs to plan well for the future and is taking a proactive approach. Establishing a clear direction in relation to the management of waste that is cognisant of this will ensure that the Shire is progressive, innovative and can manage the increased waste managed through the Shire's collection system and within the community's expectations. Talis has therefore been engaged to review and update the Shire's Waste Strategy.

This Waste Strategy considers the current strategic framework, the Shire's current waste management practices, community feedback and the policies of the State and National Governments. This informs the key actions that have been included in this Waste Strategy.

1.1 Purpose

To provide a framework for the effective, efficient, and sustainable management of waste within the Shire over the next ten-year period through to 2034.

1.2 Objective

To guide decision-making to support the minimisation of waste, increase resource recovery and recycling, deliver community education for sustainable behaviour change and deliver a cost-effective waste service to Shire residents.

1.3 Targets

- Deliver effective waste education which fosters an informed community who encompass and encourage sustainable waste practices;
- Reduce waste generation per household in line with the Waste Strategy;
- Improve material recovery in line with the Waste Strategy; and
- Reduce contamination in the general waste, recycling, and FOGO streams.

¹ Shire of Capel. 2024. Discover About the Shire. <https://www.capel.wa.gov.au/discover>

² Shire of Capel. 2023. Plan for the Future. <https://www.capel.wa.gov.au/council/strategic-corporate-planning/plan-for-the-future.aspx>

2 Legislative Framework and Policy Drivers

This Section contains a brief overview of the current legislative and policy context surrounding Local Government waste management in WA that may impact the Shire, currently, or in the future.

2.1 International

Many nations, Australia included, previously relied on China to process and re-manufacture their waste. Since 2017 China has been enacting a policy centred on reducing its importation of foreign recycling broadly call China Sword. This policy has since been adopted by many Southeast Asian Countries. These policies left exporters of recycling in turmoil and has spurred recycling exporting nations, like Australia, to refine their own waste policies. It has highlighted the need for more local infrastructure and opportunities to improve waste practices, reduce waste to landfill and promote circular economy thinking. As a result, the waste industry of Australia is in a stage of transition which will impact the Shire over the term of this Waste Strategy.

2.2 National

The Commonwealth Government has limited constitutional powers to engage directly in domestic waste management issues. This responsibility largely rests with state and territory governments, and Local Government Authorities (LGAs). However, the policy shift by China has resulted in the Federal Government taking a much more active strategic role which affects all levels of Government in Australia including but not limited to the following:

- Release of the *Environmental Protection and Biodiversity Conservation Act 1999* – A legal framework to protect and manage unique plants, animals, habitats, and places.
- Release of the National Waste Policy – *Less Waste, More Resources (2018)* – The policy asserts that a move towards a circular economy and away from a “take, make, use and dispose” system will allow us to preserve the value of our resources. It identifies five overarching principles underpinning waste management in a circular economy, including:
 - Avoid waste;
 - Improve resource recovery;
 - Increase use of recycled material and build demand and markets for recycled products;
 - Better manage material flows to benefit human health, the environment, and the economy; and
 - Improve information to support innovation, guide investment and enable informed consumer decisions.
- Council of Australian Governments (COAG) proposed export ban (2019) – The agreement set out a timeframe for banning the export of unprocessed plastic, paper, glass, and tyres; and
- Passing of the *Recycling and Waste Reduction Act 2020* – The Federal Government has passed legislation to enforce the COAG ban of exported waste materials.

2.3 State

The Western Australian State framework consists of legislation, policies, strategies and plans which steer waste management practices as summarised in Table 2-1. The main legislative documents describe the requirements for transporting, storing, processing, managing, recovering, and disposing

of waste and recyclable material. This provides direction for WA’s waste industry on its responsibilities, as well as the outcomes and performance standards to be met.

Table 2-1: State Waste Framework

Legislation	Plans & Strategies
<i>Waste Avoidance and Resource Recovery Act 2007</i>	Waste Avoidance and Resource Recovery Strategy 2030 (State Waste Strategy)
<i>Waste Avoidance and Resource Recovery Amendment (Container Deposit) Act 2019</i>	Waste Avoidance and Resource Recovery Action Plan 2030
<i>Waste Avoidance and Resource Recovery Levy Act 2007</i>	Department of Water and Environmental Regulation Western Australia’s Plan for Plastics 2020

2.3.1 Waste Avoidance and Resource Recovery Act 2007

The *Waste Avoidance and Resource Recovery Act 2007* (the WARR Act) is a WA State Law that came into effect in June 2008. The primary objective of the WARR Act is “to contribute to sustainability and the protection of human health and the environment, in Western Australia and the move towards a waste free society by:

- *Promoting* the most efficient use of resources, including resource recovery and waste avoidance;
- Reducing environmental harm, including pollution through waste;
- The consideration of resource management options against the following hierarchy:
 - Avoidance of unnecessary resource consumption;
 - Resource recovery (including reuse, reprocessing, recycling, and energy recovery);
 - Disposal.”

The Act also establishes the Waste Authority and its duty to “advise and make recommendations of the regulations of waste services,” which includes the avoidance of waste generation and increased resource recovery. To carry out this duty, the Waste Authority is required to prepare a waste strategy.

2.3.2 Waste Avoidance and Resource Recovery Levy Act 2007

The *Waste Avoidance and Resource Recovery Levy Act 2007* is a WA State Law aimed at promoting waste avoidance, resource recovery, and recycling initiatives within the state. The Act establishes the Waste Avoidance and Resource Recovery Levy (Waste Levy), which imposes a charge on waste disposed of at landfill sites in the metropolitan area. The Metropolitan Area is defined as the Perth and Peel Regions of WA. It is important to note though the Waste Levy currently only applies to waste disposed of to landfill, it can be applied to other waste streams such as Waste to Energy. The primary objectives of the Act include:

- i) Waste Minimisation: Encouraging businesses and individuals to minimise waste generation through recycling, reuse, and waste reduction practices;
- ii) Resource Recovery: Promoting the recovery and recycling of valuable resources from waste streams, such as metals, glass, plastics, and organic materials, to reduce the reliance on landfill disposal;

- iii) Funding for Waste Management Programs: Generating revenue from the levy to fund waste management programs, infrastructure development, and initiatives aimed at improving waste management practices across the state;
- iv) Environmental Protection: Supporting initiatives that contribute to environmental protection and sustainability by reducing the environmental impact of waste disposal and promoting the conservation of natural resources; and
- v) Compliance and Enforcement: Establishing mechanisms for compliance monitoring and enforcement to ensure that waste generators, waste management facilities, and other stakeholders comply with the requirements of the Act and relevant regulations.

Overall, the *Waste Avoidance and Resource Recovery Levy Act 2007* plays a crucial role in driving waste management and resource recovery efforts in Western Australia, aligning with broader environmental objectives and sustainable development goals.

Twenty five percent of the Waste Levy collected is used to fund waste reduction initiatives and construction or expansion of recycling facilities. The other seventy five percent is used to operate the Department of Water and Environmental Regulation (DWER) and other government functions. The imminent start of two large scale waste to energy facilities in Kwinana and East Rockingham will significantly reduce the quantity of waste being landfilled. This will in turn reduce the funding available to the DWER significantly.

There are a variety of options for the State to adjust the Waste Levy to counteract the loss of income resulting from waste to energy, this could include:

- Increasing the Waste Levy rate;
- Expansion of the Waste Levy to include other facilities such as waste to energy; and
- Expansion of Waste Levy area to outside of the metropolitan area.

The Shire of Capel is currently outside of the applicable area of the Waste Levy, however, should the Waste Levy area be expanded, it is likely to include the greater Bunbury area which would include the Shire of Capel (or parts of it). Talis estimates that the impact of the Waste Levy being applied to the Shire's waste would be approximately \$500,000 per year based on an \$85 Waste Levy applying from 1 July 2024. The State may decide to introduce a new rate which may be lower than the metropolitan area rate. For instance, if the rate is set at half the metropolitan area rate, the total impact will be halved.

2.3.3 Waste Avoidance and Resource Recovery Strategy 2030

The State Waste Strategy was published in February 2019 and outlines a vision for WA to “*become a sustainable, low-waste, circular economy in which human health and the environment are protected from the impacts of waste*”.

The State Waste Strategy 2030 has three guiding concepts:

- a) Waste hierarchy;
- b) Circular economy; and
- c) Behaviour change.

The Waste Hierarchy (Figure 2-1) is an internationally accepted principle used to guide decision making surrounding waste management. It identifies waste management options in order of preference, with the most preferred options located at the top of the hierarchy. Avoiding the generation of waste is the highest priority, followed by various methods of recovery or reprocessing before waste is disposed.

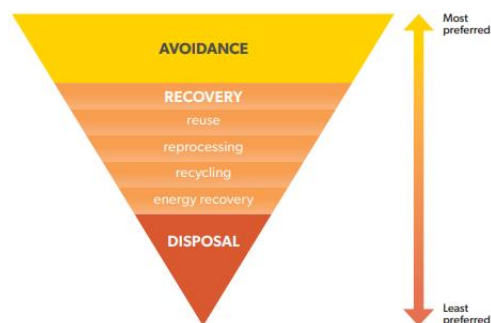


Figure 2-1: Waste Hierarchy

A circular economy (Figure 2-2) is an alternative to a traditional linear economy that aims to retain materials in the economy for as long as possible. This is achieved by recovering and reusing materials as set out in the waste hierarchy.



Figure 2-2: Circular Economy

The State Waste Strategy 2030 aims to change waste management behaviours through a combination of knowledge, infrastructure, and incentives. It states that knowledge is important for starting behaviour change but must be complemented with incentives to ensure that the decision to change behaviours can be acted upon.

It also asserts that it is critical to have the appropriate infrastructure to facilitate behaviour changes. This includes having the facilities necessary to manage and process the different categories of waste that result from behaviour changes.

Table 2-2: WARR Strategy 2030 State Waste Objectives and Targets

Objective	Target
AVOID	2025 – 10% reduction in waste generation per capita. 2030 – 20% reduction in waste generation per capita.
RECOVER	2025 – Increase material recovery to 70% 2030 – Increase material recovery to 75% From 2020 – Recover energy only from residual waste.
PROTECT	2030 – No more than 15% of waste generated in Perth and Peel regions is landfilled. 2030 – All waste is managed and/or disposed to better practice facilities.

The State Waste Strategy 2030 has used these three guiding concepts to develop overarching targets for Western Australia under three objectives, “Avoid”, “Recover” and “Protect” (Table 2-2). Two key targets included in the State Waste Strategy 2030 are ‘increase material recovery to 75% by 2030’ and ‘recover energy only from residual waste by 2020’. It states that a 3-bin kerbside collection system, including the separation of food organics and garden organics (FOGO) from other waste categories, should be provided by all Local Governments in the Perth and Peel region by 2025.

The State Waste Strategy undergoes a review every 5 years. It is important to note that the State Waste Strategy is currently under review and this Strategy considers the published information to date.

2.4 Local

The *Local Government Act 1995* sets out the legal framework, governance, powers, and responsibilities of Councils in Western Australia. The Act sets out the functions of Councils, including its service functions such as providing community health, recreation, education & information services, environmental protection and waste removal and disposal.

The Shire has also released its Plan for the Future, which incorporates the Strategic Community Plan (2023 – 2033) and the Corporate Business Plan (2023 – 2027) and outlines six future directions for the Shire to focus actions and resources. One of the directions within the Plan is “Manage and protect our environment,” where community members would like a focus on conservation and environmental management, adoption of sustainable practices and the reduction of waste generated³.

³ Shire of Capel. 2023. Plan for the Future. <https://www.capel.wa.gov.au/council/strategic-corporate-planning/plan-for-the-future.aspx>

3 Waste Strategy 2014

The Shire previously undertook a review of Waste Management Services in November 2014. The review examined the waste services at the time to determine any areas where the Shire could implement cost saving or efficiency measures while fulfilling compliance requirements and maintaining responsible service provision to the community.

The report included a series of recommendations for Council's consideration:

1. Revise the structure of waste services charges on rates notices to combine services into one Annual Waste Service Charge for either the three-bin service or the two-bin service;
2. Maintain in 2015 – 16 the current combined fees for three bin and two bin kerbside collection services at \$349 and \$272 respectively, which incorporates the kerbside wheely bin collection service, green waste and hard waste verge collections, and annual Waste Transfer Station (WTS) Charge;
3. In 2015 – 16 reduce the charge for an additional general waste bin for three bin properties from \$155 to \$66;
4. In 2015 – 16 increase the charge for an additional general waste collection service (nappy service) for 3 bin properties from \$42 to \$66;
5. Survey residents in designated areas to determine whether the vergeside green and hard waste collection services be retained in their area, with the view that the green waste collection service will be discontinued in 2015 – 16 when a third bin service is provided;
6. Take various steps to reduce costs of operating the Capel WTS including reducing opening hours;
7. Offer for public sale the unconstructed steel frame shed and waste compactor located at the Capel WTS; and
8. Increase existing fees and introduce new fees for residents to drop off certain wastes at the Capel WTS; and
9. Take steps to ensure the Capel WTS meets the DWER licence requirements.

Since this report was developed the Shire has actioned numerous recommendations in relation to waste service charges, a vergeside collection service survey, reduction of the Capel WTS opening hours, and ensuring the Capel WTS meets the DWER licence requirements.

Building on the achievements of actioning numerous recommendations from the previous Waste Strategy 2014, this Strategy will identify future requirements and provide a framework for the effective, efficient, and sustainable management of waste within the Shire over the next ten-year period through to 2034.

4 Shire of Capel - Today

4.1 Demographics

The most recent Australian Bureau of Statistics (ABS) Census in 2021 reported a population of 18,175 among 7,105 households⁴. Which equates to a population density of 31.49 persons per km². Since the previous Census in 2016 the Shire’s population has increased by 6.14%, which is an average increase of 1.23% per year. Similarly, since 2016 the Shire’s number of households has increased by 6.84%, which is an average increase of 1.37% per year. As mentioned, this growth will have implications on the Shire’s waste management services, resources, and infrastructure, requiring effective planning for the future.

Currently, the Shire’s age demographic leans towards a younger population, with 65.7% of people under the age of 50. The largest population group is 35 – 49-year old’s who make up 20.9% of the total population, with the median age being 38. A population decline occurs after primary school age and does not increase again until the mid-30s to late 40s age group, as shown in Figure 4-1.

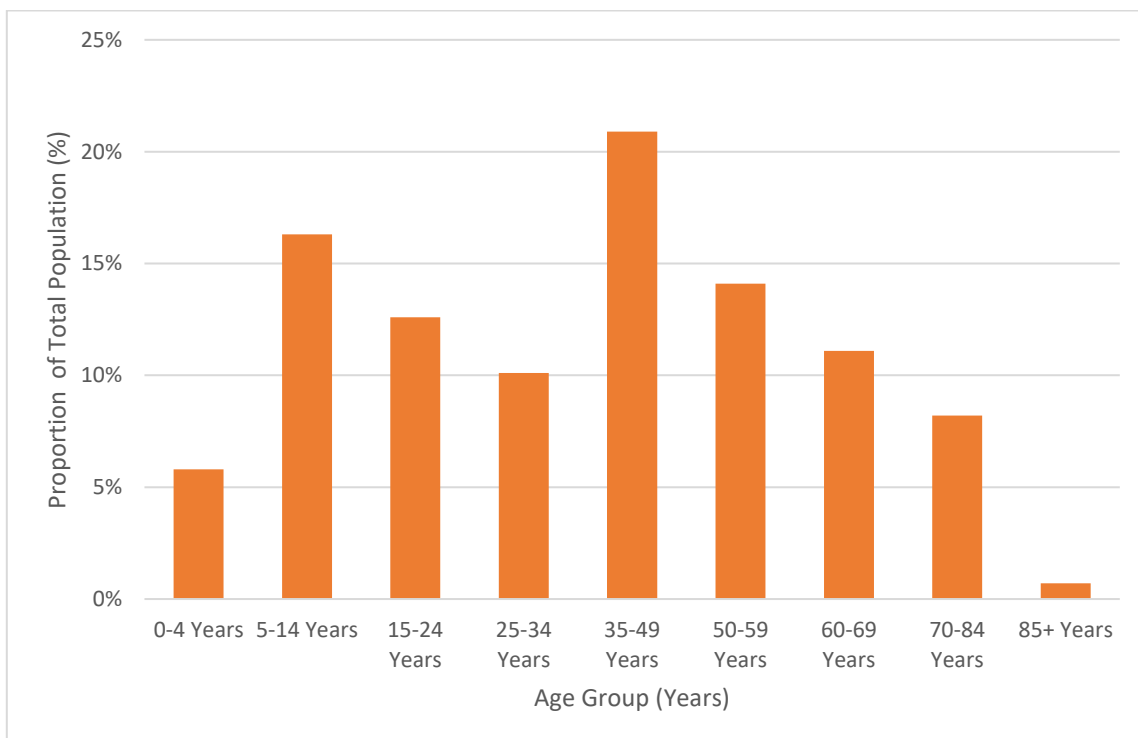


Figure 4-1: Current Population Structure 2021

Most residents speak English proficiently, with 86.4% of people using only English at home⁵. The Shire has good socio-economic status with median weekly household income at \$1,949, above the Western Australian average of \$1,815, and an unemployment rate of 3.8%, which is below the Western

⁴ Australian Bureau of Statistics. 2021. Capel 2021 Census All Persons QuickStats. <https://abs.gov.au/census/find-census-data/quickstats/2021/LGA51400>

Australian average of 5.1%⁵. Although the Shire’s status is above average, the waste management costs to residents and commercial entities should be kept to a minimum and continue to reflect good value for services.

4.2 Waste Services

The Shire currently provides a variety of waste management services to its ratepayers including:

- Kerbside general waste collection;
- Kerbside recycling collection;
- Kerbside FOGO collection;
- Vergeside bulk hard waste;
- Vergeside bulk green waste; and
- Tip passes.

In addition to the above domestic services, the Shire provides a broad range of complementary services including providing and servicing public litter bins, removing litter and illegal dumping from public areas, providing waste services at Shire events, and managing the Shire’s corporate waste.

The Shire’s waste management services, current waste quantities, and current performance are discussed in the following sections.

4.2.1 Kerbside Collection Service

The Shire currently offers two kerbside collection services for its residents:

- Two-bin – General Waste and Recycling; and
- Three-bin – FOGO General Waste and Recycling.

The Shire’s kerbside waste collection service is summarised in Table 4-1. Residents also have the option to pay for additional bins if required. The majority of the bins in service are 240L however some remnant 140L and 360L bins remain in service. These non-240L bins are being progressively phased out as they need repairs or replacement.

Table 4-1: Kerbside Services Summary

Service	Standard Bin Size	Bin Lid Colour	Collection Frequency
FOGO	240L	Lime green	Weekly
General Waste	240L	Red	Weekly*/Fortnightly
Recycling	240L	Yellow	Fortnightly (alternate)

**Two-bin collection service.*

The distribution of the three-bin system is limited to larger townsite areas where the density of properties is the greatest (approximately 83% of households). Outside of these areas, only the two-bin system is offered, as shown in Figure 4-2 below.

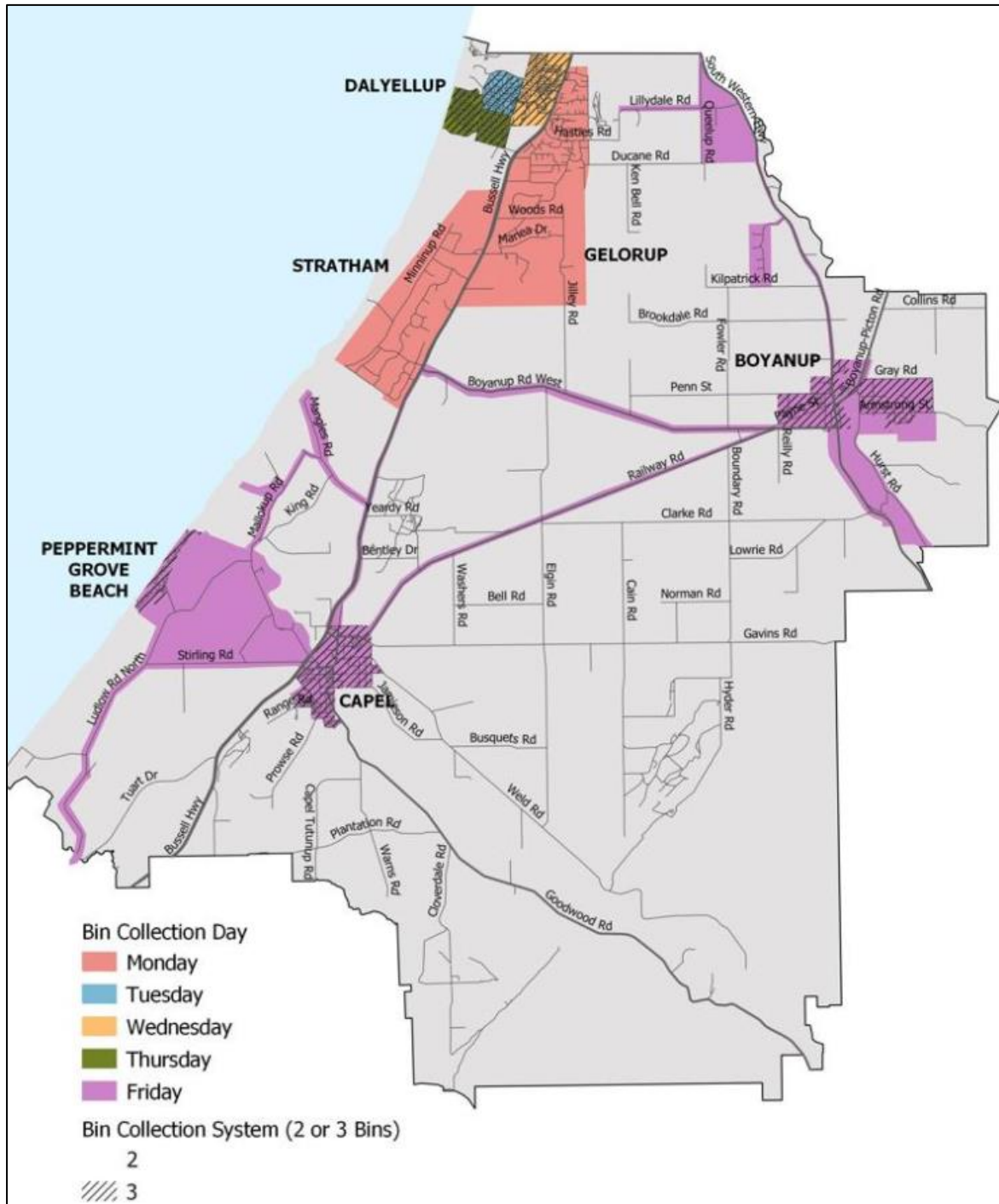


Figure 4-2: Kerbside Collection Area Map

4.2.2 Vergeside Collection Service

Households in areas that receive a standard kerbside waste collection service are also provided a vergeside collection service, including two green waste and one hard waste collections per annum. The vergeside collections are an additional service requiring a supplementary financial contribution from only those residents that receive the service. The cost of the vergeside collection service is included within the annual rates notice.

The current vergeside services offered by the Shire each year are summarised in Table 4-2.

Table 4-2: Current Vergeside Bulk Hard Waste Services Summary

Service	Frequency	Service Description	Additional Information
Hard Waste	Scheduled once each year	<ul style="list-style-type: none"> Includes white goods (fridge doors removed), general junk, lounges, furniture, and material less than 1.5m in length. 	<ul style="list-style-type: none"> Waste can be placed on the verge up to 7 days prior to the collection date. Does not include bricks and rubble, household waste, flammable liquids, hazardous chemicals, cars and parts, tyres, batteries, asbestos, oil, paints, TVs, and electronic equipment.
Green waste	Scheduled twice each year	<ul style="list-style-type: none"> Includes trimmed trees or shrubs to a maximum length of 1.5 metres (5 feet) and a maximum width of 10cm (4 inches). 	<ul style="list-style-type: none"> Waste can be placed on the verge up to 7 days prior to the collection date. Residents are also able to dispose of green waste in their 240L FOGO bin, collected weekly.

4.2.3 Capel Waste Transfer Station

Households that pay for waste services are also provided with tip passes to access the Capel WTS. Residents can dispose of refuse, green waste, scrap metal, rubble, recycling, white goods, cardboard, e-waste, tyres, waste oil and household hazardous wastes utilising their allocated tip passes or by paying a gate fee.

Capel WTS is licenced (L6993/197/12) by the DWER as a Category 62 Solid Waste Depot with an annual throughput of 2,500 tonnes per annum. The Licence details the conditions in which the site must be operated including the types of waste that can be accepted, monitoring, recording and notification.

4.3 Waste Treatment and Disposal

The Shire utilises private waste contractors for the collection, processing, and disposal of waste.

The Shire uses a number of facilities to process waste including comingled recycling at a Materials Recovery Facility and FOGO at an Organics Processing Facility. General waste and residual waste from these facilities is disposed to landfill in Dardanup, refer Table 4-3 for further details.

Table 4-3: Waste Treatment and Disposal

Waste Collection Service	Waste Stream	Collection Contractor	Treatment/ Disposal	Facility
Kerbside	General Waste	Cleanaway	Landfill	Cleanaway Dardanup Landfill (Lot 2 Banksia Rd, Dardanup, WA, 6236)
	Recycling	Cleanaway	Material Recovery Facility	Cleanaway Perth Material Recovery Facility (72 Hyne Road, South Guildford, WA, 6055)
	FOGO	Cleanaway	Organics Processing Facility	Bunbury Harvey Regional Council (BHRC) Banksia Road Compost Facility (Banksia Rd, Crooked Brook, WA, 6236)
Vergeside	Hard Waste	Steann Pty Ltd	Landfill	Cleanaway Dardanup Landfill (Lot 2 Banksia Rd, Dardanup, WA, 6236)
	Mattresses	Steann Pty Ltd	Material Recovery Facility	Soft Landing Mattress Recycling (26 Achievement Way, Wangara, WA, 6065)
	Steel	Steann Pty Ltd	Material Recovery Facility	J&P Group Metals Recycling Facility (Short Street, Picton, WA 6229)
	Green Waste	Steann Pty Ltd	Waste Transfer Station	Capel Waste Transfer Station (79 Range Road, Capel, WA, 6271)

4.4 Current Waste Performance

The Shire’s current waste generation, recovery rate and overall performance of each collection service is detailed in the following Section.

The Shire's performance is based on the 2023-24 collection and processing rates. The kerbside and vergeside waste generation is based on the most recent complete year of waste data (2022-23). The Capel WTS waste generation is based on an average of the most recent two complete years of waste data (2021-22 and 2022-23). All waste data has been projected using the Shire’s population growth rate. A full list of assumptions has been provided in Appendix A.

4.4.1 Waste Generation

In 2022–23 the Shire generated 10,510 tonnes of waste. Figure 4-3 shows that 70% of waste generated in 2022–23 within the Shire was collected via kerbside general waste (37%), comingled recycling (12%), and FOGO bin collections (21%) from residential and commercial properties. The remaining waste generated is collected via the Capel WTS (21%), vergeside hard waste and green waste collections (6%) and public place bins (3%).

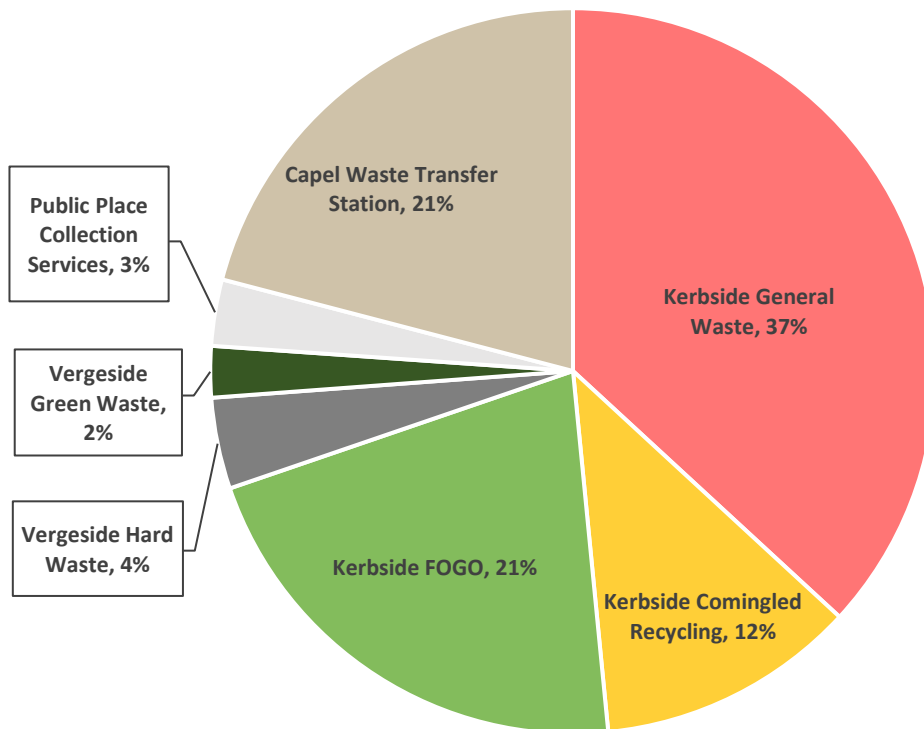


Figure 4-3: Proportion of Tonnages per Waste Collection Service

4.4.2 Recovery Rate

As discussed in Section 2.3 one of the main objectives of the State Waste Strategy 2030 is to recover more value and resources from waste. More specifically, the State Strategy has the target to increase material recovery from waste to 70% by 2025.

Of the waste generated within Shire in 2022-23, 44% was recovered (Figure 4-4). The waste recovered was derived from the kerbside FOGO, recycling, green waste vergeside collections, and the recyclable materials delivered to the Capel WTS. The remaining 56% of waste generated was disposed to landfill.

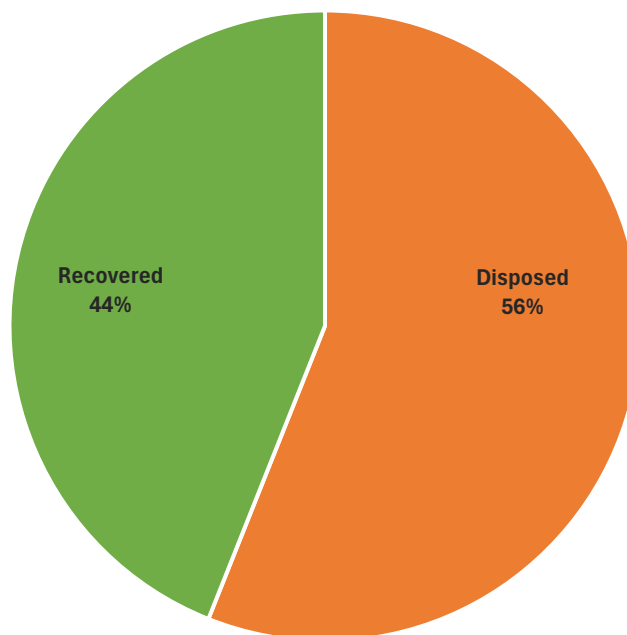


Figure 4-4: Material Recovery Rates 2022-23

4.4.3 Kerbside Collection Service Performance

The performance of the kerbside collection service is detailed in the Table 4-4 below. The kerbside service accounts for 29% of the Shire’s overall recovery rate and 78% of the total cost, equating to approximately \$2 million of the total anticipated cost for 2023-24.

Table 4-4: Kerbside Collection Service Performance 2023-24

Stream	Recovery Rate	Tonnes per Annum (tpa)	Cost per Annum (\$/Annum)	Proportion (%) of Total Cost
General Waste	0%	4,236	\$777,903	30%
Comingled Recycling	9%	1,233	\$526,710	21%
FOGO	20%	2,267	\$562,228	22%
Waste Education	-	-	\$59,280	2%
Bin Management Services	-	-	\$67,997	3%
Customer Service	-	-	\$19,181	1%
Total	29%	7,735	\$2,013,299	78%

4.4.4 Vergeside Collection Service Performance

The performance of the vergeside collection service is detailed in the Table 4-5 below. The vergeside service accounts for 3% of the Shire’s overall recovery rate and 7% of the total cost, equating to approximately \$190,000 of the total anticipated cost for 2023-24.

Table 4-5: Vergeside Collection Service Performance 2023-24

Stream	Recovery Rate	Tonnes per Annum (tpa)	Cost per Annum (\$/Annum)	% of Total Cost
Hard Waste	1%	433	\$143,809	6%
Green Waste	2%	243	\$46,187	2%
Total	3%	676	\$189,996	7%

4.4.5 Capel Waste Transfer Station Performance

The performance of the Capel WTS is detailed in the Table 4-6 below. The Capel WTS accounts for 12% of the Shire’s overall recovery rate and 14% of the total cost, equating to approximately \$362,000 of the total anticipated cost for 2023-24.

Table 4-6: Capel Waste Transfer Station Performance 2023-24

Stream	Recovery Rate	Tonnes per Annum (tpa)	Cost per Annum (\$/Annum)	% of Total Cost
General Waste	0%	910	\$141,279	6%
Green Waste	7%	752	\$149,319	6%
Steel including Whitegoods	1%	168	\$11,799	0%
Rubble	1%	151	\$11,079	0%
Other Recycling	2%	246	\$48,076	2%
Total	12%	2,227	\$361,552	14%

4.5 Benchmarking

A comparison between the Shire and similar nearby Local Governments on waste performance, services provided, and charges has been included in Table 4-7 below. Data has been sourced from the most recent 2021 ABS Census, the Waste Authority Domestic Waste and Recycling Dashboard, and the various Local Government 2023-24 Fees and Charges published on their websites.

The Shire offers a similar level of service when compared to similar Local Governments, achieving a recovery rate that is slightly above the average of 40%. The majority of the LGAs benchmarked that

have implemented third-bin FOGO service have a higher recovery rate than those that only offer a two-bin service.

It was noted that the LGAs with a lower waste charge also have a landfill for the disposal of general waste located within the LGA, or access to a landfill through its membership in a Regional Council, such as the City of Bunbury. This may contribute to lower waste charges due to the reduction in transportation costs to nearby landfills. The exception to this is the Shire of Nannup, which has the highest waste charge of \$562. This high cost may be due to the Shire of Nannup being the most regional LGA benchmarked with the lowest population.

It should be noted that it is difficult to directly compare waste service charges between various Local Governments as they provide differing waste services and may utilise different resources to carry them out, i.e. in house or contractor collections. For each waste service charge it is assumed to include the entirety of the standard waste services provided (to the majority of households) as well as any infrastructure charges.

Table 4-7: Comparison of Waste Services with Nearby Local Governments

	Shire of Capel	City of Busselton	City of Bunbury	Shire of Harvey	Shire of Dardanup	Shire of Collie	Shire of Donnybrook-Balingup	Shire of Nannup	Shire of Bridgetown-Greenbushes
Area (m ²)	557km ²	1,455km ²	66km ²	1,728km ²	527km ²	1,711km ²	1,560km ²	2,935km ²	1,340km ²
Population	18,175	40,640	32,987	28,567	14,686	8,812	6,155	1,538	5,238
Kerbside General Waste	240L	120L/140L	140L	240L	140L	240L	240L	240L	140L
Kerbside Recycling	240L	240L	240L	240L	240L	240L	240L	240L	240L
Kerbside FOGO	240L	x	240L	240L	240L	240L	240L	x	x
Verge Green Waste	2	x	2	x	2	x	x	x	x
Verge Hard Waste	1	x	2	x	1	x	x	x	1
Landfill within LGA	x	✓	✓*	✓	✓	✓	✓	✓	✓
Transfer Station	✓	✓	✓	✓	✓	✓	✓	✓	✓
Tip Passes	4	4 (non-rural) 8 (rural)	x	4 (non-rural) 26 (rural)	x	16 (non-rural) 52 (rural)	16 (non-rural) 52 (rural)	2	20 (non-rural) 72 (rural)
Waste Charge	\$481	\$360	\$393	\$390	\$261	\$405	\$375	\$562**	\$468
Overall Recovery Rate 2021 – 22	44%***	34%	54%	55%	44%	26%	44%	11%	50%

*Utilises Stanley Road Landfill as a Member of BHRC **Includes a weekly 240L refuse bin, a fortnightly 240L recycling bin and two tip passes. Rural properties typically only pay for unlimited tip access for \$148. ***From 2022/23 Data.

4.6 Community Engagement Outcomes

The Shire recently carried out an online survey regarding current waste services satisfaction and future options, which received a total of 450 responses, a response rate of 2.47% of total residents.

Of the questions relating to kerbside bin size, residents were mostly satisfied with the FOGO, general waste, and recycling bin sizes. Of those unsatisfied, there were concerns around the size of the general waste bin not meeting the demands of larger households or those with specific waste generation patterns, such as nappies or higher waste generation during holiday periods. Additionally, there is a desire for more flexibility in terms of bin sizes and collection frequency.

Overall, 71.93% of respondents think that they are receiving the value that equates to the cost of receiving their bin services, 80.31% of respondents are satisfied with the waste services currently provided, and 97.48% think that the waste service is reliable (average or above). In terms of future improvements to waste services, 45% of respondents would be willing to pay more, depending on what the improvements are.

In terms of waste education, most respondents think that using the correct bin is important and are confident about which bin to use. The majority (80.32%) of respondents also don't find waste education information confusing, and of those that do find it confusing, this was largely relating to plastic packaging. 73.66% of respondents believe there is a need for more waste education in the community, with some ideas including bin stickers, information packs for new residents, fridge magnets, bin inspections, social media posts and education in schools.

Of the questions relating to the Capel WTS, 66.51% of respondents utilise the transfer station to dispose of waste, and of these respondents 74.31% utilise the Shire issued tip passes. Several comment responses mentioned that there could be more tip passes, especially for properties not receiving verge collections. Additionally, some comments mentioned that the tip opening hours were limited.

The survey also included questions around the green waste and hard waste verge collection service, where 86.10% of respondents receive the service. Of these respondents, 33.69% responded that the annual green waste service is extremely important and 38.03% responded that the annual hard waste collection is extremely important. When asked if they would utilise tip passes instead, 67.65% and 63.10% responded that they would not be prepared to use tip passes to dispose of their green waste and hard waste respectively. Many comments highlighted the importance of verge collections for those without utes and trailers who are unable to do their own tip runs. However, when asked how crucial each service is considering the continual increase in costs to deliver waste services, green waste was the least crucial with 53.23% of respondent votes. Additionally, 70.97% of respondents voted that to lower costs they would be prepared to lose the green waste service.

Lastly, a few respondents cited concerns over the timing of the vergeside hard waste collections, that scheduling the collection in winter meant waste was becoming wet and windblown, and effort should be made to schedule the collection outside of this season. The Shire has sought to move the timing of the hard waste collections to best suit the community although it remains subject to collection contractor availability.

This recent survey highlights that the Shire has an engaged, waste conscious community, with the survey receiving 450 responses and most respondents supporting sustainable waste management behaviours. This feedback has been considered in the improvement options included in Section 7 of this report.

4.7 Stakeholder Engagement Outcomes

It is also recognised as important to engage with Stakeholders on their current and future direction and determine the possible implications for the Shire over the next 10 years. The current key Stakeholders for the Shire are:

- Bunbury Harvey Regional Council (BHRC) – FOGO Processing Contractor; and
- Cleanaway – Kerbside Collection, Recycling and General Waste Processing Contractor.

4.7.1 Bunbury Harvey Regional Council

BHRC is currently engaged by the Shire on a month-by-month fee for service basis to process materials from the kerbside FOGO bins. The Shire's FOGO is currently processed at BHRC's Banksia Road Compost Facility, Banksia Road, Crooked Brook, WA, 6236. Going forward, BHRC is building a new facility at 51 Stanley Road, Wellesley, WA, 6233, and are due to transfer their operations there in 2025–26. This facility is approximately 28km further than the current Dardanup facility which may have transport implications to the Shire.

The Shire and BHRC are also working together on reducing contamination in the kerbside FOGO bins, as the facility is only able to process materials with up to 5% contamination. If loads present a higher contamination level than this, they are unfortunately directed to landfill for disposal. BHRC are looking to provide longer term agreements once operating from their new facility at Stanley Road, which will likely contain provisions for collaborative education efforts between BHRC and Local Governments receiving their services. Additionally, BHRC are in the process of preparing a strategic document that provides their plan for the future and will guide their operations over the next years.

In summary, over the next 10 years, BHRC is looking at operating out of a new facility on Stanley Road, establishing longer term contracts with Local Governments, and including provisions to work collaboratively on education to reduce contamination of FOGO materials.

4.7.2 Cleanaway

Cleanaway is currently engaged by the Shire to collect and dispose of/process materials from the kerbside general waste, FOGO (collection only) and recycling bins for a term of seven years until 2030. Part of the contract includes the provision of side-lift trucks with Cleanaview technology which is a system that provides real time data on truck routes and collection services. Each collection vehicle is also fitted with cameras with video recording capabilities to monitor bin presentation and contamination once bins are being emptied into the hopper which will assist in providing targeted education to households. These vehicles are currently being procured and will be utilised for Shire collections once available, which is anticipated to be within the 2024-25 financial year.

The contract also includes the provision to work with the Shire on a Community Waste Education Plan to outline the educational programs that will be implemented prior to and during the provision of the kerbside services under the contract. The Plan will be developed to target contamination recording and subsequent communication measures to minimise instances of contamination, as well as a program for public education including presentations to schools, community groups and other stakeholders.

5 Cost Drivers

Effective waste management is a critical responsibility for regional Local Governments in Western Australia, ensuring the protection of public health, the environment, and the sustainability of communities. As Local Governments strive to deliver efficient and sustainable waste management services, understanding and managing cost drivers plays a pivotal role in achieving financial viability and operational effectiveness.

Cost drivers are factors or variables that significantly influence the costs associated with waste collection, processing, and disposal. These drivers encompass a range of elements, including:

- Changes to markets;
- Transportation logistics;
- On-shore processing initiatives;
- Waste levy and gate fees; and
- Regulatory compliance.

Each of these drivers exerts varying degrees of impact on the overall cost of waste management activities, requiring careful analysis and strategic management.

Recognising the importance of carefully addressing cost drivers, this section aims to provide a detailed examination of key factors influencing waste management costs for regional Local Governments in Western Australia. By identifying, analysing, and understanding these drivers, the Shire can proactively manage their waste management budgets, optimise resource allocation, and enhance operational efficiency.

This section provides a summary of the above cost drivers and how they may impact the Shire in the future.

5.1 Changes to Markets

Changes to markets refer to shifts in demand, pricing, and market conditions for recyclable materials and waste products. These changes can significantly impact the financial viability and sustainability of waste management operations for the Shire.

Understanding and responding to changes in markets is essential for regional Local Governments to effectively manage their waste management programs. Fluctuations in market demand, commodity prices, and export restrictions can directly influence the cost of recycling programs. Moreover, changes in market conditions can also affect the availability of end markets for recyclable materials, posing challenges for sustainable waste diversion and resource recovery initiatives.

Changes to markets are largely outside of the Shire's control, however the Shire can exert some influence by ensuring that market demand for recycled material exists by choosing to purchase materials with recycled content. The Shire must be aware of potential changes to markets and be ready to adapt to changing conditions and optimise waste management operations and services for the benefit of their community.

5.2 Transportation Logistics

Effective transportation logistics are essential for ensuring cost effective collection and disposal of waste materials, while minimising environmental impacts and landfill diversion. Transportation logistics directly impact operational efficiency, service quality, and overall waste management costs for regional Local Governments.

The difficulty to overcome for the Shire, is the distance required to transport waste for recycling as there is very little existing infrastructure located within the Southwest. For instance, recycling of mattresses requires transportation to Perth to be disassembled which adds a significant cost. This cost, in many instances, is greater than the cost of processing/recycling. Some efficiencies may be gained from engaging with neighbouring Local Governments to bulk up loads to be transported to Perth, but this can still be cost prohibitive as it may require significant investment in a facility for interim storage to bulk up loads.

5.3 On Shore Processing Initiatives

As a result of the China Sword policy detailed in Section 2.1, the Australian Government introduced an export ban on recyclables. Prior to the ban, most recyclables collected and sorted in Western Australia, were exported to southeast Asian countries such as China, Vietnam, Malaysia and Thailand for further processing and recycling. These countries, led by China, became concerned with the environmental impact of accepting imported recyclables for processing.

The goal of the export ban is to create local markets for processing recyclables within Australia. Because Australia does not have enough current capacity to meet demand, recyclers can apply for an exemption to export materials where there is a demand, and they can meet quality requirements. These exemptions are set to expire shortly as on shore processing becomes available.

The Australian and State Governments have both been providing grant funding for infrastructure projects to establish facilities locally to process the volume of material collected and sorted. These facilities are generally located in population centres, usually capital cities such as Perth.

The impact of on shore processing is likely to result in increased cost of processing due to labour costs being higher. However, the cost of processing locally will be less exposed to external factors such as foreign government policies.

5.4 Waste Levy and Gate Fees

As discussed in Section 2.3.2, the Waste Levy is likely to have the geographical area where it applies increased, as well as an increase in the Waste Levy rate. This expansion of the geographical area may include the Shire and could therefore increase the cost of landfilling waste.

The application of the Waste Levy to the Shire's waste sent to landfill is calculated to be approximately \$500,000 per annum based on the applicable Waste Levy rate of \$85 per tonne from 1 July 2024. A benefit of the increased cost of disposal to landfill is that some recycling streams may become more economically viable to implement, albeit by increasing overall cost of waste management.

5.5 Regulatory Compliance

Waste in Western Australian is regulated by the DWER who administer the requirements of various waste management legislation including:

- Waste Avoidance and Resource Recovery Act 2007;
- Waste Avoidance and Resource Recovery Levy Act; and
- Part V of the Environmental Protection Act 1986.

Compliance with the legislation and subsidiary regulations impacts the Shire in many ways:

- Directly through the Shire's WTS and reporting requirements; and
- Indirectly through increased processing or disposal costs.

As the application of the Waste Levy is likely to expand to include the Shire, so will the DWER's expectation of reporting on waste data to correlate Landfill Levy returns. This increase will require the Shire to keep accurate waste data and report on it in a timely manner or face penalties.

There is also likely to be increased scrutiny applied to the Shire's WTS to ensure that the existing licence conditions are adhered to and that environmental impacts are minimised. Many existing waste facilities have been impacted by changing compliance requirements which can impact the cost of operating a facility and has even led to the closure of some facilities, though these are usually because of odours.

Indirectly, the Shire may experience increased processing or disposal costs because of increased regulatory compliance. For instance, should separation distances be increased for composting facilities, there may be a requirement to implement odour reduction strategies or move a facility's location. Both options result in higher cost to the Shire through either higher gate fees or increased transportation costs.

6 Shire of Capel – Future

6.1 Waste Projections

In 2022-23 the Shire generated a total of 10,510 tonnes of waste. Over the next ten years waste generation is estimated to rise steadily with population growth to approximately 12,021 tonnes per annum in 2033-34 (Figure 6-1). These projections emphasise the importance of efficient waste management practices within the next ten years while population and therefore waste generation is increasing. Encouraging strong waste practices now that promote acceptable behaviours will help ensure that the Shire can improve and maintain sustainable waste outcomes.

These projections are based on the current anticipated population growth. Any expedited land release, residential development, and subsequent population growth will see these projections rise more sharply.

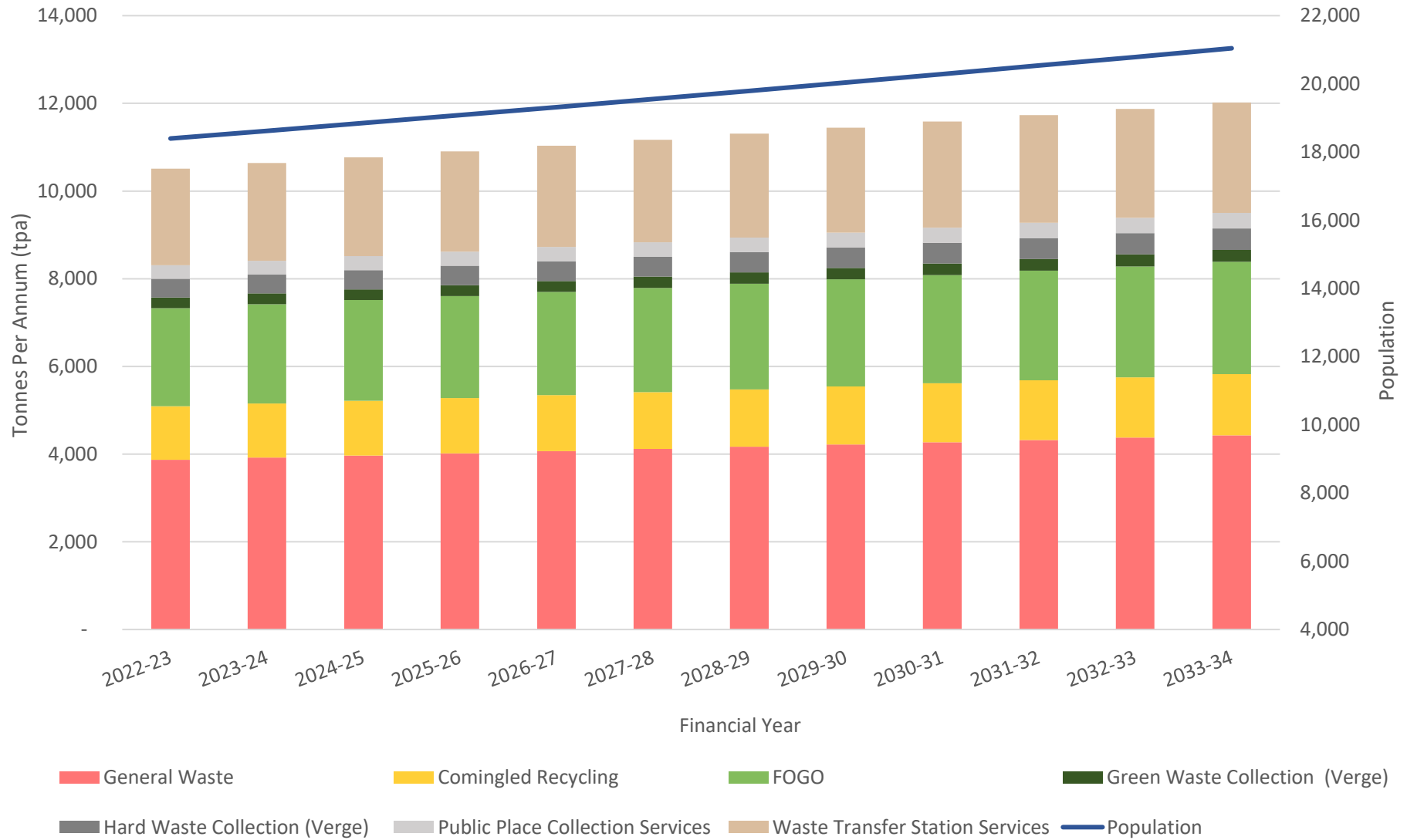


Figure 6-1: Shire of Capel 10 Year Waste Projections

From the Waste Projections, the Shire is likely to exceed the licenced capacity of the Capel WTS in 2033-34. The DWER allows for a 10 percent allowance over licence capacity to take into account margins for error and some fluctuations in throughput from year to year. However, the Talis Waste Projections includes linear growth of waste volume where in the past the quantity of material through the Capel WTS fluctuates from year to year. Should a high year occur, there is the potential for the licenced capacity to be exceeded earlier than 2033-34.

Talis recommends that the Shire seeks to amend the licence capacity well before it is breached and/or before any substantial changes are made to collection services such as cancelling or reducing the number of verge collections. This will ensure that licenced capacity is not breached before approval is sought to increase throughput.

6.2 Financial Projections

In 2023-24 the Shire's waste collection services are anticipated to cost approximately \$2.6 million, with an anticipated waste generation of 10,639 tonnes. Over the next ten years costs are estimated to rise steadily with service cost increases to approximately \$3.98 million in 2033-34, with an anticipated waste generation of 12,021 tonnes. This equates to an average annual cost increase of approximately 5.5% across all kerbside, vergeside, and Capel WTS collection services.

The projections are based on the Shire's current contracted prices and recent invoices for the 2023-24 financial year. Price escalation mechanisms apply to all costs. The Shire's Contract Rise and Fall price mechanism has been applied to all services provided by Cleanaway, while Consumer Price Index (CPI) increase has been applied to all other costs. CPI is based on the average ABS increase of the last five years (March 19 – March 23), and Rise and Fall is based on the ABS index average of the last four years (March 19 – March 23). A full list of assumptions has been provided in Appendix A.

7 Action Plan

Talis evaluated a wide range of better practice waste management improvements and initiatives that are utilised by a variety of Local Governments. All initiatives were assessed individually to determine their appropriateness for the Shire. The initiatives which have stemmed from the assessment are listed in the Action Plan shown in Table 7-3 with their anticipated commencement timeframes and priority.

The options and initiatives have been grouped into the categories in Table 7-1.

Table 7-1: Improvements and Initiatives Categories and Descriptions

Category	Description
Waste Data	Tools to improve waste data recording and reporting capabilities.
Waste Services	Improvements to waste services provided by the Shire to residents.
Waste Infrastructure	Improvements to waste infrastructure such as the Capel Transfer Station.
Behaviour Change Initiatives	Tools to improve waste education to support correct waste management behaviours.
Administration	Tools to improve internal waste management practices within Shire buildings and policies.

The Action Plan outlines the following:

- Initiative – A brief description of the potential improvement;
- New/Existing – if this initiative is new or existing to the Shire;
- Actions – The actions required to achieve the initiative;
- Priority – The priority rating of initiatives;
- Anticipated Timeframe – Estimated time of action commencement:
 - Short-term – first two years of the of the Strategy
 - Medium-term – years 3 - 6 of the Strategy
 - Long-term – years 7 – 10 of the Strategy; and
- Cost Estimate – The approximate cost of each initiative.

Anticipated Costs per year have been categorised according to Table 7-2.

Table 7-2: Anticipated Cost Categories

Cost	Value
Low	Less than \$5,000
Medium	\$5,000 to \$15,000
High	\$15,000 or more

Cost	Value
In house	Not allocated funding within the budget

7.1 Action Plan Review

Every attempt has been made to ensure that the initiatives identified, evaluated, and presented in Table 7-3 are relevant to the Shire’s capacity, ability, and objectives. However, the nature of waste management can be dynamic with strategic direction of both the Shire and the Government (State and Federal) being subject to change from year to year. This has been evident in recent years with changes such as:

- The Western Australian State Waste Strategy 2030;
- New National Waste Policy;
- COAG Export Ban;
- Western Australia Container Deposit Scheme; and
- Western Australia Single Use Plastic Ban.

Therefore, the Action Plan should be treated as a live document that is reviewed every two years and updated to ensure the relevance of the actions are maintained.

Table 7-3: Waste Strategy Action Plan

No.	Initiative	New or Existing	Detailed Actions/Sub-Actions	Target Outcomes / Measure	Anticipated Timeframe	Priority	Anticipated Cost
Waste Data							
1	Streamline waste data recording	Existing	<ul style="list-style-type: none"> Undertake a review and update of the Shire's waste data system to improve reporting and analysis capabilities, using the Waste Data Strategy 2019 as a guide. 	Have an updated centralised data spreadsheet in place.	Short-term	High	In house
2	Illegal dumping and littering data	New	<ul style="list-style-type: none"> Establish a process to accurately record entire costs, waste streams and tonnages associated with illegal dumping. Create a standard centralised database for illegal dumping and littering data. 	Establish a litter and illegal dumping recording system.	Short-term	Medium	In house
3	Kerbside compositional audit	New	<ul style="list-style-type: none"> Carry out regular kerbside compositional audits to collect data on material types and amounts in the FOGO, general waste, and recycling bins. This could be carried out by the kerbside waste contractor or a suitable consultant. 	Carry out a kerbside compositional audit.	Medium-term	Medium	High
Waste Services							
4	Investigate the vergeside collection service	New	<ul style="list-style-type: none"> Review the vergeside collection service in terms of participation rates, tonnages of waste materials collected and associated costs of collection and disposal, to determine if the service should be reduced or removed. 	Review vergeside collection service and assess options.	Short-term	High	In house or High (Consultant)
5	Vergeside hard waste collection schedule	New	<ul style="list-style-type: none"> If hard waste collection services continue, review its schedule and place preference on collections outside of winter to reduce windblown litter. 	Schedule hard waste outside of winter.	Short-term	Medium	In house
6	Kerbside collection schedule	New	<ul style="list-style-type: none"> Investigate options to increase kerbside collections to weekly during the holiday periods such as Easter, Christmas, and New Years. 	Increased kerbside collections during holiday periods if warranted.	Medium-term	Low	Medium
7	Electric/hydrogen contractor fleet	New	<ul style="list-style-type: none"> Include preference for low emission fleets in future waste collection contracts. 	Include preference for renewable fleets following contract expiry.	Long-term	Low	In house
Waste Infrastructure							
8	Capel WTS licencing	New	<ul style="list-style-type: none"> Maintain and comply with the appropriate licences for the Capel WTS. Review any increases to the licence required for future tonnage projections. 	Review and update the Capel WTS licence as required.	Short-term	High	High
9	Capel WTS opening hours	New	<ul style="list-style-type: none"> Further investigate peak times during weekdays and weekends and if alternative opening hours are warranted. 	Alternative Capel WTS opening hours if warranted.	Short-term	Medium	In house
10	Investigate the feasibility of a Reuse shop	New	<ul style="list-style-type: none"> Investigate the feasibility of a Reuse shop at the Capel WTS. The investigation should consider the WALGA Better Practice Guidelines to Reuse Shops which build a broader awareness of successful practices and provide guidance for Local Governments. 	Investigate the feasibility of a Reuse shop at the Capel WTS.	Medium-term	Medium	In house or High (Consultant)
11	Investigate recycling of construction waste	New	<ul style="list-style-type: none"> Investigate practices of pavement material reuse, and explore options for further recycling opportunities, such as the use of EfW facility bottom ash aggregate or crumb rubber in civil products. 	Increased recycling of construction materials.	Medium-term	Low	In house
Behaviour Change Initiatives							

No.	Initiative	New or Existing	Detailed Actions/Sub-Actions	Target Outcomes / Measure	Anticipated Timeframe	Priority	Anticipated Cost
12	Waste and recycling calendar	Existing	<ul style="list-style-type: none"> Continue developing the annual waste and recycling calendar to outline important information around bin days, what to put in each bin, vergeside collections and Capel WTS opening hours and materials accepted. The calendar should continue to be developed in consultation with the Waste Authority Program "Waste Sorted," 	Provide an annual Waste and Recycling calendar to residents.	Short-term	High	Low
13	New resident waste education packs	Existing	<ul style="list-style-type: none"> Continue to provide waste education materials as part of the electronic welcome packs sent to new residents. Investigate options for collaboration with real estate or owners on new tenants of rental properties. 	Provide new resident waste education packs.	Short-term	Low	In house
14	Develop education plan	New	<ul style="list-style-type: none"> Work with the kerbside collection contractor to develop an annual education plan. Waste education ideas that were suggested in the recent community survey include bin stickers, fridge magnets, social media posts and updates to the website. 	Increased waste education within the community.	Short-term	High	Low – High depending on actions
15	Investigate a bin tagging program	New	<ul style="list-style-type: none"> Carry out a bin tagging program across sample households utilising the kerbside collection contractor or staff and WALGA resources. The bin tagging program should be carried out ideally once each year. 	Carry out the bin tagging program once each year.	Medium-term	Medium	High
16	Introduce a Contamination Process	New	<ul style="list-style-type: none"> Introduce a Contamination Process where residents who do not correctly sort their materials are notified and progressive penalties applied for repeated infractions. Ensure all employees involved are aware of the Waste Local Law, its intent and enforcement capabilities. 	Waste Contamination Process in place	Medium Term	High	In house
17	Increased website and social media activity	New	<ul style="list-style-type: none"> Increase promotion of waste minimisation and diversion from landfill initiatives such as third-party community reuse initiatives, CDS and refund points, household composting methods. 	Increased website and social media activity on waste.	Medium-term	Low	In house
18	Support school incursion programs	New	<ul style="list-style-type: none"> Continue to engage the kerbside collection contractor to deliver school incursion program and recycling education reports. Promote programs on the Shire website and social media platforms. 	Engage the collection contractor to deliver its school incursion program.	Medium-term	Medium	Low- Medium
Administration							
19	Maintain efficient waste services	Existing	<ul style="list-style-type: none"> Continue to manage existing waste services, including the kerbside and vergeside collection and disposal and processing contracts. It should also be ensured that waste services are meeting the needs of the community by carrying out period reviews and surveys. 	Providing efficient waste services to meet the needs of the community.	Short-term	High	In house
20	Sustainable Procurement Policy	New	<ul style="list-style-type: none"> Review and update any Purchasing Procedures and Policies to encourage the consideration of supplier strategies to minimise environmental impacts, avoid unnecessary consumption and minimise waste. The updates should consider the WALGA Guide to Sustainable Procurement and Procurement Toolkit. 	Review and update Purchasing Policies and Procedures.	Medium-term	Medium	In house
21	Reviewing Planning Policies and Guidelines	New	<ul style="list-style-type: none"> Review and update Planning Policies and Guidelines to ensure development aligns with better practice waste management. 	Review and update Planning Policies and Guidelines.	Medium-term	Low	In house

No.	Initiative	New or Existing	Detailed Actions/Sub-Actions	Target Outcomes / Measure	Anticipated Timeframe	Priority	Anticipated Cost
22	Developing a Corporate Waste Avoidance and Minimisation Plan	New	<ul style="list-style-type: none"> Develop a Corporate Waste Avoidance and Minimisation Plan to reinforce the Shire's commitment to sustainable resource management. A key outcome from the Corporate Waste Avoidance and Minimisation Plan would be annual auditing and reporting, inclusive of volumetric summaries on waste types and recycling together with opportunities to celebrate sustainability successes internally and via the website. 	Develop a Corporate Waste Avoidance and Minimisation Plan.	Long-term	Medium	In house
23	Internal waste audit	New	<ul style="list-style-type: none"> Undertake a waste audit across all departments and Shire facilities including administration buildings, works depots, childcare centres, libraries, and leisure centres. A waste audit would involve collecting data on types and quantity of waste being generated to determine areas for improvement, training and education. 	Carry out an internal waste audit.	Long-term	Low	In house or High (Consultant)
24	Audit of household bin numbers	New	<ul style="list-style-type: none"> Carry out an audit of bin numbers at each household, to ensure each household in being charged for the correct services. 	Carry out an audit of household bin numbers.	Long-term	Medium	In house or High (Cleanaway)

APPENDIX A

Waste Data Assumptions

Table 7-4: Assumptions

	Assumption
General	<ul style="list-style-type: none"> • Housing growth rate applied to all services, 1.37%. • Population growth rate applied to all waste tonnages, 1.23%. • Shire of Capel quarterly bin maintenance cost applied to per annum cost. • CPI is based on average ABS increase of last five years (March 19 – March 23). • CPI applied to all costs other than Cleanaway contract services. • Shire of Capel Rise and Fall is based on ABS index average of last four years (March 19 - March 23). • Rise and Fall applies to all collection rates and comingled recycling processing costs.
Kerbside Service	<ul style="list-style-type: none"> • Two-bin system: <ul style="list-style-type: none"> ○ General waste collected weekly; and ○ Comingled recycling collected fortnightly. • Three-bin system: <ul style="list-style-type: none"> ○ FOGO collected weekly. ○ General waste collected fortnightly. ○ Recycling collected fortnightly. • Number of services based on total residential/commercial services supplied by the Shire from 2022-23. • Number of services applied rather than number of rateable properties when calculating cost due to a property having one or more separate service at the same address. • As the contract is based on a drive-by rate, 100% charge rate has been applied regardless of the actual presentation. • Collection cost = number of services* cost per bin * cost per collections per annum. • No growth has been assumed for public place bin services. • Kerbside collection data is based on the Shire’s 2022-23 annual return. • Kerbside collection costs are based on the 2023-24 contract rate.
Vergeside Service	<ul style="list-style-type: none"> • Vergeside collection waste tonnage data is based on the Shire’s 2022-23 annual return and contractor invoicing.

	Assumption
	<ul style="list-style-type: none"> Collection and processing/disposal costs are based on the Shire of Capel's 2023-24 Contractor rates (\$/tonne).
Capel WTS	<ul style="list-style-type: none"> Number of services and waste tonnages based on the average of last two complete financial years (2021-22 and 2022-23) Costs are based on the collection and disposal/processing of waste tonnages at the Capel WTS only. Collection and processing/disposal costs are based on the Shire of Capel's 2023-24 Contractor rates (\$/tonne).
Recovery Rates	<ul style="list-style-type: none"> Recovery rates are based on the proportion of waste recovered from 2022-23 data supplied by the Shire.



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