



Waste Strategy Options Identification

Report



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1 Introduction

This report has been developed to support the decision making within the Shire of Capel’s (the Shire’s) Waste Strategy, through assessing a wide range of waste management improvement options utilised by a variety of Local Government Areas (LGAs). These initiatives have been categorised into five categories – Waste Data, Waste Services, Waste Infrastructure, Behaviour Change Initiatives, and Administration (Table 1-1). Each option under every category has been assessed individually to determine their effectiveness.

Table 1-1: Categories and Initiatives

Category	Initiatives
Waste Data	<ul style="list-style-type: none"> • Streamline waste data recording; • Illegal dumping and littering data; and • Kerbside compositional audit.
Waste Services	<ul style="list-style-type: none"> • Investigate the vergeside collection service; • Vergeside hard waste collection schedule; • Kerbside collection schedule; and • Electric/hydrogen contractor fleet.
Waste Infrastructure	<ul style="list-style-type: none"> • Capel Waste Transfer Station (WTS) licensing; • Capel WTS opening hours; • Investigate the feasibility of a Reuse shop; and • Investigate recycling of construction waste.
Behaviour Change Initiatives	<ul style="list-style-type: none"> • Waste and recycling calendar; • New resident waste education packs; • Develop an Education Plan; • Investigate a bin tagging program; • Introduce a contamination process; • Increase website and social media activity; and • Support school incursion programs.
Administration	<ul style="list-style-type: none"> • Maintain efficient waste services; • Sustainable Procurement Policy; • Review Planning Policies and Guidelines; • Develop a Corporate Waste Avoidance and Minimisation Plan; • Internal Waste Audit; and • Audit of household bin numbers.

For each initiative an overarching strengths, weaknesses, opportunities, and threats (SWOT) analysis has been completed and is detailed in the sections below.

2 Waste Data

2.1 Streamline Waste Data Recording

Data provides a foundation for the effective management of waste, being crucial to evaluating performance, identifying issues and opportunities, and enabling evidence-based decisions and actions. Good data collection and recording can help to understand trends in waste tonnages and costs to the Shire and better inform decisions around service delivery and budgeting. Waste data is also required for reporting against State targets in DWER annual waste returns, under the *Waste Avoidance and Resource Recovery Regulations 2008*.

This action is for the Shire to review and update current waste data collecting and recording systems to improve reporting and analysis capabilities, with a suitable target being to ensure all data is collected monthly, typically in line with invoicing. This would also improve efficiencies in invoicing, waste education utilising data, and annual State Government reporting requirements.

This action could involve developing a centralised spreadsheet to record kerbside, vergeside, and Capel (WTS) tonnages as well as collection, disposal and processing costs each year. The Waste Authority Data Strategy 2019 could be referred to as a guide¹.

The strengths, weaknesses, opportunities, and threats of this option have been summarised in Table 2-1.

Table 2-1: SWOT Analysis – Streamline Waste Data

Strength	Weaknesses	Opportunities	Threats
<ul style="list-style-type: none"> Accurate recording of waste data Inexpensive Non-resource intensive 	<ul style="list-style-type: none"> Needs to be recorded consistently 	<ul style="list-style-type: none"> Can inform decisions around service delivery and budgeting Improve efficiencies in invoicing Improve efficiencies in waste education and data sharing 	<ul style="list-style-type: none"> Incorrect usage or maintenance resulting in inconsistencies or inaccuracies Staff turnover

2.2 Littering and Illegal Dumping Data

Establish a process to accurately record entire costs, waste streams and tonnages (or estimated volume) associated with illegal dumping and littering and create a standard centralised spreadsheet or database of relevant data.

This would assist the Shire in determining hot spot areas and where to effectively direct education and compliance resources to minimise illegal dumping and littering. This may include restricting access

¹ Waste Authority. 2019. Waste Data Strategy.
https://www.wasteauthority.wa.gov.au/images/resources/files/2019/12/Waste_Data_Strategy.pdf

to hot spots or partnering with the DWER Illegal Dumping team to use covert CCTV and issue infringements.

The strengths, weaknesses, opportunities, and threats of this option have been summarised in Table 2-2.

Table 2-2: SWOT Analysis – Littering and Illegal Dumping Data

Strength	Weaknesses	Opportunities	Threats
<ul style="list-style-type: none"> Accurate recording of littering and illegal dumping data Inexpensive Non-resource intensive 	<ul style="list-style-type: none"> Needs to be recorded consistently 	<ul style="list-style-type: none"> Collaboration between Departments Can inform hot spot areas and allow targeted responses from the Shire and DWER Illegal Dumping team Improve efficiencies in waste education and data sharing 	<ul style="list-style-type: none"> Incorrect usage or maintenance resulting in inconsistencies or inaccuracies Staff turnover

2.3 Kerbside Compositional Audit

It is recommended that the Shire investigate carrying 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 (Cleanaway) or a suitable consultant, ideally every few years. Audit methodology could be based on the WA Department of Environment and Conservation *Kerbside Waste and Recycling Audit Manual (2008)*².

Data would typically include the material composition of each bin (extrapolated from compositional audit data), bin contamination, disposal averages (household per annum and per week), average bin weight and presentation rate.

Regular audits would be beneficial for the Shire for ongoing comparison and understanding of the material composition of kerbside bins, to determine trends in waste generation and contamination and identify opportunities to improve service user behaviours.

Indicative costs for Talis to carry out a compositional audit of 100 three bin households, a total of 300 bins, is approximately \$30,000.

² WA Department of Environment and Conservation. 2008. Kerbside Waste and Recycling Audit Manual. https://www.wasteauthority.wa.gov.au/images/resources/files/2019/10/Kerbside_Waste_and_Recycling_Audit_Manual_2007.pdf

The strengths, weaknesses, opportunities, and threats of this option have been summarised in Table 2-3.

Table 2-3: SWOT Analysis – Kerbside Compositional Data

Strength	Weaknesses	Opportunities	Threats
<ul style="list-style-type: none"> • Accurate recording of kerbside bin compositions • Improved understanding of the material composition of kerbside bins • Provides contamination information • Provides insight into resident behaviour 	<ul style="list-style-type: none"> • Resource intensive and costly • Audit data is captured from a sample providing a snapshot of waste composition, which is then used as a representation of the Shire • Results can sometimes be skewed by residents intentionally contaminating bins 	<ul style="list-style-type: none"> • Ongoing data can allow comparison over time to measure waste management behaviours • Data can be compared with other LGA audit data • Improve efficiencies in waste education and data sharing 	<ul style="list-style-type: none"> • Frequency is often not enough to determine trends or effectiveness of behaviour change programmes • Waste quantity and composition data can vary seasonally and with holiday periods

3 Waste Services

3.1 Investigate the Vergeside Collection Service

It is recommended that the Shire review the vergeside collection service in terms of recent community engagement, participation rates, tonnages of waste materials collected and associated costs of collection and disposal. Reviewing this data will inform if any services could be reduced or removed to save costs.

Additionally, as mentioned, in recent years there has also been a shift in hard waste service delivery driven by resource recovery, safety, local amenity, and initiatives to reduce illegal dumping. Emerging better practice options such as on demand collections and on demand skip bins could also be explored as options during this review.

The verge collections (one hard and two green waste collections per year) accounts for approximately 6% of the Shire’s total waste collected. Talis anticipates that if a collection were to be removed, some of the waste that was previously collected would be collected via an alternative service, i.e. 50% of green waste verge material would alternatively be collected in the FOGO bin and Capel WTS, with the remaining 50% likely being disposed of outside of the Shire’s services potentially by onsite composting or during burn offs.

The cost of removing the one hard waste collection in Year 1 (2024 – 25) is estimated to save the Shire approximately \$150,665 per annum.

The cost of removing the two green waste collections in Year 1 (2024 – 25) is estimated to save the Shire approximately \$68,509 per annum.

It may also be beneficial to undertake further tailored community consultation to understand the importance of the service to residents, their willingness towards any changes, and highlight any potential savings which could be realised.

The strengths, weaknesses, opportunities, and threats of this option have been summarised in Table 3-1.

Table 3-1: SWOT Analysis – Investigate the Vergeside Collection Service

Strength	Weaknesses	Opportunities	Threats
<ul style="list-style-type: none"> Decreased costs Non-resource intensive 	<ul style="list-style-type: none"> Changes to the service may result in community pushback 	<ul style="list-style-type: none"> Reduction/removal of the vergeside collection service would likely result in waste minimisation if people are required to reconsider their disposal method 	<ul style="list-style-type: none"> Potential increase in littering and illegal dumping Potential increase in waste being disposed of at the Capel WTS, contributing to licence volume pressures

3.2 Vergeside Hard Waste Collection Schedule

Should the vergeside collection be retained, it is recommended that the Shire review its hard waste vergeside collection schedule as several comments from the recent community survey mentioned that the hard waste collection service should be scheduled outside of winter to avoid waste getting wet and being blown around. It is important to note that the collection schedule is often limited by the availability of contractors to complete the works.

The strengths, weaknesses, opportunities, and threats of this option have been summarised in Table 3-2.

Table 3-2: SWOT Analysis – Review Hard Waste Collection Schedule

Strength	Weaknesses	Opportunities	Threats
<ul style="list-style-type: none"> • Avoids materials becoming windblown or wet during winter • Minimises windblown litter • Increased community satisfaction • Inexpensive • Non-resource intensive 	<ul style="list-style-type: none"> • Difficult to predetermine schedule due to contractor availability 	<ul style="list-style-type: none"> • Cleaner materials have higher possibility of being reused via 'scavenging' 	<ul style="list-style-type: none"> • Vergeside collection contractor availability

3.3 Kerbside Collection Schedule

In response to the recent community survey, the Shire could investigate the possibility of increasing kerbside collections to weekly during the holiday periods such as Easter, Christmas, and New Years. Several survey respondents mentioned concerns around the size of the general waste bin in particular not meeting the demands of high waste generation patterns over the holiday periods. The Shire could approach Cleanaway to discuss a variation to the Collection Contract to increase the frequency of General Waste and Recycling Collection over the Christmas and New Year period. The cost implication for these additional collections could then be considered by the Shire for adoption. On demand additional collections could also be discussed with Cleanaway to determine if this service could be offered and the associated costs. Where this service is offered by other LGAs, the cost is passed on to the resident requesting the additional service.

The strengths, weaknesses, opportunities, and threats of this option have been summarised in Table 3-3.

Table 3-3: SWOT Analysis – Review Kerbside Collection Schedule

Strength	Weaknesses	Opportunities	Threats
<ul style="list-style-type: none"> • Increased community satisfaction 	<ul style="list-style-type: none"> • Increased administration • Increased costs 	<ul style="list-style-type: none"> • Could target households with high waste generation with 	<ul style="list-style-type: none"> • Lack of kerbside collection contractor availability for

<ul style="list-style-type: none"> Minimises risk of overfull bins, litter, and vermin 	<ul style="list-style-type: none"> Does not promote waste minimisation 	<p>waste education to promote minimising their waste</p>	<p>additional collections</p> <ul style="list-style-type: none"> Additional collections may result in confusion when schedule returns to normal
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3.4 Electric/Hydrogen Contractor Fleet

To reduce diesel usage and emissions, the Shire could include preferences and/or additional options for renewable electric or hydrogen waste truck fleets to be included in future contract specifications. This would have huge contributions to the Shire’s sustainability as a standard waste truck uses about 500L of diesel fuel and produces more than 1.3 tonnes of carbon dioxide every week³.

Several Perth metro Local Governments such as the City of Fremantle and the City of Cockburn have recently trialled electric waste collection vehicles. The City of Cockburn forecasted significant savings in fuel and major service costs over the life of the truck⁴.

Hydrogen vehicles are also emerging, with REMONDIS introducing one of the world’s first hydrogen-powered waste collection trucks for residential collections in the Illawarra region of NSW in 2023⁵. The vehicle relies on hydrogen which combines with air to generate electricity to motor function. Only water vapour is emitted, and nothing harmful to the environment⁵.

Trials have shown the hydrogen-powered truck can travel about 200 kilometres and thereby complete full collection runs without refuelling, the same as conventional trucks⁵.

The strengths, weaknesses, opportunities, and threats of this option have been summarised in Table 3-4.

Table 3-4: SWOT Analysis – Electric/Hydrogen Contractor Fleet

Strength	Weaknesses	Opportunities	Threats
<ul style="list-style-type: none"> Saving on emissions Long term savings on fuel and servicing costs Non-resource intensive 	<ul style="list-style-type: none"> High capital cost Not readily available and currently only used in trials 	<ul style="list-style-type: none"> Could be a regional trial of electric/hydrogen vehicles Opportunity to demonstrate commitment to sustainability 	<ul style="list-style-type: none"> Lack of infrastructure in regional areas

³ City of Fremantle. 2019. Introducing EVie – the electric rubbish truck.

<https://www.fremantle.wa.gov.au/news-and-media/28102019-introducing-evie-electric-rubbish-truck>

⁴ City of Cockburn. Electric waste truck trial begins. <https://www.cockburn.wa.gov.au/City-and-Council/Events-and-News/Latest-News/Electric-waste-truck-trial-begins>

⁵ Waste Management Review. 2023. REMONDIS Australia’s hydrogen powered waste truck a global breakthrough. <https://wastemanagementreview.com.au/remondis-australia-hydrogen-powered-waste-truck-a-global-breakthrough/>

4 Waste Infrastructure

4.1 Capel WTS Licensing

The Shire must maintain and comply with the appropriate licence for the Capel WTS to avoid penalties being applied or having the licence cancelled. The current licence duration is from 01/05/2014 to 26/05/2034 for Category 62 – Solid Waste Depot – premises on which waste is stored or sorted pending final disposal or reuse for a capacity of 2,500 tonnes per annum⁶.

As part of this licence the Shire is required to comply with the licence conditions, reporting requirements and notification requirements in the event of any condition breaches or fire at the premises. Reporting requirements include DWER Annual Audit Compliance Reports, which can be completed utilising the online template⁷.

The Shire is currently accepting 2,200 tonnes per annum through the Capel WTS. As the population grows, the Shire is increasingly more likely to exceed their licenced capacity. To prevent a breach of their licence conditions, the Shire may apply to DWER for a licence amendment to increase the licenced throughput of the facility. DWER may request that certain controls are implemented to reduce the environmental impact of the higher quantity of material moving through the facility. The cost of a consultant to compile and submit a licence amendment is approximately \$20,000 to complete assuming that no capital works or improvements are required.

The strengths, weaknesses, opportunities, and threats of this option have been summarised in Table 4-1.

Table 4-1: SWOT Analysis – Capel WTS Licencing

Strength	Weaknesses	Opportunities	Threats
<ul style="list-style-type: none"> Provision of a transfer station facility for the community 	<ul style="list-style-type: none"> Licence amendment is resource intensive and costly DWER may require more controls 	<ul style="list-style-type: none"> Increased transfer station capacity and/or material types accepted 	<ul style="list-style-type: none"> Inadequate resources or funds Lack of community uptake/participation

4.2 Capel WTS Opening Hours

The Shire’s previous Waste Strategy 2014 included a recommendation to reduce the opening hours of the Capel WTS to 10:00am – 4:00pm, five days each week. Noting that the facility is busier on weekends and public holidays, with typically twice the patronage compared to weekdays.

⁶ DWER. 2022. Licence L6993/1997/12 Capel Transfer Station.
https://www.der.wa.gov.au/component/k2/item/download/14108_64d85c5e44b38d3af669b3393ea9c485

⁷ DWER. 2023. IR-F14 Annual Audit Compliance Report Form.
<https://www.wa.gov.au/government/publications/ir-f14-annual-audit-compliance-report-form>

Currently, the Capel WTS is open from 9:30 am – 5:00pm (last entry at 4:30pm) on Monday, Tuesday, Friday, Saturday, and Sunday, as well as all Public Holidays except Good Friday and Christmas Day.

Several respondents of the recent community survey mentioned that the facility could be open during more accessible hours for those working full time. Although the facility is open on weekends, it could be beneficial for the Shire to further investigate peak and low times during weekdays and if alternative opening hours are warranted, such as later opening and closing times.

The strengths, weaknesses, opportunities, and threats of this option have been summarised in Table 4-2.

Table 4-2: SWOT Analysis – Capel WTS Opening Hours

Strength	Weaknesses	Opportunities	Threats
<ul style="list-style-type: none"> Increased efficiencies of the Capel WTS Non-resource intensive Inexpensive 	<ul style="list-style-type: none"> Changes or reductions to the Capel WTS opening hours may result in community pushback Reducing work hours for staff 	<ul style="list-style-type: none"> Reductions to the opening hours would result in cost savings 	<ul style="list-style-type: none"> Negative community and/or staff pushback

4.3 Investigate the Feasibility of a Reuse Shop

Another option for the Shire is to investigate the feasibility of a Reuse shop at the Capel WTS where reusable items could be separated and stored for community members to browse and repurchase, thus diverting reusable material from landfill and saving on disposal fees. Reuse shops can also provide benefits to the community by providing lower cost goods and employment opportunities, and was an initiative suggested by several respondents in the recent community survey.

A Reuse shop would be a great way to increase reuse and raise awareness of sustainable practices, as well as provide a source of revenue for the Shire. Although it would also require infrastructure and resources in the form of a suitable shed or building, cash/EFT facilities and staff to manage the day-to-day operations of the shop. Many reuse shops are either run by volunteer or through a not-for-profit group on the Shire’s behalf.

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 looking to set up Reuse shop operations⁸.

⁸ WALGA. 2016. Better Practice guidelines Reuse Shops. <https://www.wastenet.net.au/documents/287/better-practice-reuse-shops>

The strengths, weaknesses, opportunities, and threats of this option have been summarised in Table 4-3.

Table 4-3: SWOT Analysis – Investigate the Feasibility of a Reuse Shop

Strength	Weaknesses	Opportunities	Threats
<ul style="list-style-type: none"> Helps connect the community Source of revenue and saves disposal costs Diverts waste from landfill 	<ul style="list-style-type: none"> Resource intensive and costly 	<ul style="list-style-type: none"> Employment opportunities Raises awareness of reuse and diverting waste from landfill Waste education opportunities 	<ul style="list-style-type: none"> Lack of community uptake/participation Inadequate resources or funds Lack of EFT facilities at the site

4.4 Increase Recycling of Construction Waste

Recently, government and industry have increased the use of recycled materials in their projects including in road infrastructure. Considering the variety of recycled materials that can be used in road construction, this sector can contribute significantly to achieving State resource recovery targets⁹.

Several major projects in Australia have incorporated recycled materials, setting a precedent for future projects. In 2021 – 22, over 1,900 tonnes of crumb rubber were used on state road networks, the equivalent of 380,000 car tyres⁹. Crumb rubber modified asphalt was used across the metropolitan area to resurface key routes including Kwinana Freeway, Leach Highway and Roe Highway⁹.

It is recommended that the Shire investigate practices of pavement material reuse, and explore options for further recycling opportunities, such as the use of recycled crushed concrete, crushed brick, crushed glass, recycled steel, reclaimed asphalt pavement and crumb rubber products, in civil projects¹⁰.

This option offers a great opportunity for the Shire to divert materials from landfill and demonstrate its commitment to waste minimisation and sustainable behaviours.

The strengths, weaknesses, opportunities, and threats of this option have been summarised in Table 4-4.

⁹ Australian Council of Recycling. 2023. Standards to facilitate the use of recycled material in road construction. https://acor.org.au/wp-content/uploads/2023/06/K_3054-Recycled-Content-Roads-Report.pdf

¹⁰ Mainroads Western Australia. 2020. Recycled Construction Materials. <https://www.mainroads.wa.gov.au/community-environment/sustainability/recycled-construction-materials/#:~:text=Two%20key%20recycled%20construction%20materials,recycled%20concrete%20and%20crumb%20rubber.>

Table 4-4: SWOT Analysis – Investigate Recycling of Construction Waste

Strength	Weaknesses	Opportunities	Threats
<ul style="list-style-type: none"> • Diverts waste from landfill • Reduces the need for depleting virgin materials • Contributes to creating markets for recycled materials • Non-resource intensive 	<ul style="list-style-type: none"> • Local sources may not be available 	<ul style="list-style-type: none"> • Collaboration between Shire Departments and other stakeholders such as Main Roads 	<ul style="list-style-type: none"> • Not meeting Australian Standard product specifications of road base • Lack of material processing opportunities for construction waste

5 Behaviour Change Initiatives

5.1 Waste and Recycling Calendar

It is recommended that the Shire continue its annual waste and recycling calendar which outlines important information around residents’ bin days and what to put in each bin. The calendar could also be developed to include more information on vergeside collection dates and materials collected, as well as Capel WTS opening hours and materials accepted.

The calendar should continue to be developed in consultation with the Waste Authority Program Waste Sorted, and their toolkit and resources available to assist local governments to support residents sorting their waste¹¹.

The strengths, weaknesses, opportunities, and threats of this option have been summarised in Table 5-1.

Table 5-1: SWOT Analysis – Waste and Recycling Calendar

Strength	Weaknesses	Opportunities	Threats
<ul style="list-style-type: none"> Non-resource intensive 	<ul style="list-style-type: none"> One way communication Not actively engaging residents Not easy to change printed versions Unused calendars contributing to waste Costs associated with printing and postage 	<ul style="list-style-type: none"> Can be printed or electronic Clear waste related information presented Collaborating with resources available such as Waste Authority and WALGA 	<ul style="list-style-type: none"> Uninterested residents Residential turnover

5.2 New Resident Waste Education Packs

Another effective waste education option is for the Shire to provide new resident waste education packs to new households and businesses outlining their waste services and how to correctly use them. The Shire could identify new residents and businesses through any ‘New Bin Request’ forms for distribution of waste education information and through property settlement requests through the Rates team.

This could include any new or available resources such as brochures, bin stickers, fridge magnets, and a Waste and Recycling Guide, and would therefore be carried out in conjunction with the option mentioned in Section 5.1 and Section 5.3.

¹¹ Waste Sorted. 2024. WasteSorted: a toolkit for local governments and regional councils. <https://lga.wastesorted.wa.gov.au/>

The strengths, weaknesses, opportunities, and threats of this option have been summarised in Table 5-2.

Table 5-2: SWOT Analysis – New Resident Waste Education Packs

Strength	Weaknesses	Opportunities	Threats
<ul style="list-style-type: none"> Inexpensive Non-resource intensive 	<ul style="list-style-type: none"> One way communication Not actively engaging residents Not easy to change printed versions 	<ul style="list-style-type: none"> Can be printed or electronic Clear waste related information presented Collaborating with resources available such as Waste Authority and WALGA 	<ul style="list-style-type: none"> Uninterested residents Residential turnover

5.3 Develop Education Plan

Waste education is vital to help raise the community awareness of why and how to manage waste, as well as the concepts of the waste hierarchy and a circular economy. Results from the recent community survey showed that 73.66% of respondents believe there is a need for more waste education in the community. It is noted that there was some confusion around plastic packaging recycling and that residents need a clearer understanding of other options for recycling for example batteries, textiles, polystyrene, soft plastics, and e-waste rather than placing these in recycling or general waste bins at the kerbside.

There is also a need for increased publicity around existing platforms for upcycling (mentioned in Section 5.6) and reuse together with a need for targeted education on specific waste streams, particularly plastics and nappies, to improve compliance and reduce contamination in the kerbside bins.

It is recommended that the Shire produce an annual Education Plan for ongoing waste education actions. Waste education ideas that were suggested in the survey and commonly utilised by other Local Governments include bin stickers, fridge magnets, social media posts, workshops, and updates to the website. DWER provide templates and other materials at no cost through its WasteSorted campaign which could be utilised by the Shire¹¹. To reduce the cost of printing, the Shire may seek to partner with nearby LGAs to increase the quantity of items being printed which may reduce the per item printing cost. This would have the added benefit of creating uniform educational material across participating LGAs.

The strengths, weaknesses, opportunities, and threats of this option have been summarised in Table 5-3.

Table 5-3: SWOT Analysis – Develop Education Plan

Strength	Weaknesses	Opportunities	Threats
<ul style="list-style-type: none"> Provides waste education to the community 	<ul style="list-style-type: none"> Could include resource intensive and costly actions 	<ul style="list-style-type: none"> Collaboration with collection contractor 	<ul style="list-style-type: none"> Lack of resourcing Staff turnover

<ul style="list-style-type: none"> • Reduction in contamination • Reduction in waste generation 	<ul style="list-style-type: none"> • Requires ongoing effort to maintain benefits 		
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5.4 Investigate a Bin Tagging Program

The Bin Tagging program has been utilised by many Local Governments to provide incentives and enforcement options to encourage residents to appropriately dispose of their waste.

Since 2020 – 21 the Program has been funded by the Waste Authority and to date has reached 43,111 households in 19 Local Governments in metropolitan and regional WA¹².

Particularly for a new service being introduced, such as a kerbside organic collection, it is vital to have regular and consistent feedback provided to residents. Local Governments which have introduced the three bin FOGO system have found the Program highly valuable for both reinforcing messaging around the new system and identifying areas where further communications are required, for example if residents are using non-compostable liners in the FOGO bin¹².

Seven Local Governments with a three bin FOGO service have participated in the Program since 2020 – 21 and have seen consistently positive results. Across these Local Governments, correct FOGO behaviour has been recorded at an average starting point of 80% and increased to an average of 88%¹².

With limited resources, the Shire may consider completely outsourcing such a program to a suitable organisation, which is anticipated to cost around \$20,000 to complete a 6 – 7 week program covering 1,100 households with a final report.

The strengths, weaknesses, opportunities, and threats of this option have been summarised in Table 5-4.

Table 5-4: SWOT Analysis – Investigate a Bin Tagging Program

Strength	Weaknesses	Opportunities	Threats
<ul style="list-style-type: none"> • Provides direct feedback • Repetition helps form good habits • Information is highly targeted • Two-way communication can occur 	<ul style="list-style-type: none"> • Resource intensive • Bin Tagging receives negative media due to the perception of an invasion of privacy • Results can sometimes be skewed by residents intentionally 	<ul style="list-style-type: none"> • Collects greater data such as service use, bin conditions, number and size of bins 	<ul style="list-style-type: none"> • Messaging is not consistent • Frequency is not enough to form good behaviours or measure effectiveness • Collection contractor is not committed to

¹² Waste Sorted Bin Tagging Program. 2024.

https://www.wastenet.net.au/Profiles/wastenet/Assets/ClientData/Bin_Tagging_Program/WasteSorted_Bin_Tagging_Program_Guidelines_2024_FINAL_ID_693435_.pdf

<ul style="list-style-type: none"> Provides contamination information 	contaminating the bin		delaying collections to enable tagging
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5.5 Introduce a Contamination Process

Many LGAs who have introduced FOGO find that gross contamination in the FOGO bin can become an issue which affects entire loads of material. Gross contamination is where a resident does not try to put the right materials into the FOGO bin and instead uses it as another general waste bin. This type of contamination can be so severe that entire loads of FOGO material may be rejected by the processing facility.

To combat gross contamination many metropolitan LGAs have introduced a Contamination Process where a resident who contaminates a bin (FOGO or Recycling) is notified and penalties applied. These penalties can be infringements or suspension of services as outlined in the Waste Local Law 2016. Generally, the response is graduated with warnings being issued for the first and second offence and then higher penalties applied for subsequent offences. Some LGAs will not apply infringements and simply remove the bin from service temporarily after three offences and permanently after four offences.

Generally, contamination offences are reported by the collection vehicle operator who provides photos to the LGA to act upon. Some LGAs allow their contractor to run the process and inform them of any action taken. Many LGAs will often include a visit to the property after a second offence to rule out any language barriers or any other issue which may be impacting the resident’s ability to sort their waste correctly.

The strengths, weaknesses, opportunities, and threats of this option have been summarised in Table 5-6.

Table 5-5: SWOT Analysis – Introduce a Contamination Process

Strength	Weaknesses	Opportunities	Threats
<ul style="list-style-type: none"> Provides direct feedback Repetition helps form good habits Information is highly targeted Two-way communication can occur 	<ul style="list-style-type: none"> Resource intensive May receive negative media due to the perception of an invasion of privacy 	<ul style="list-style-type: none"> Gather information on any barriers residents may have – Languages other than English, etc. 	<ul style="list-style-type: none"> Application of process is not consistent Collection contractor is not committed to reporting contamination Lack of enforcement resources

5.6 Increased Website and Social Media Activity

Local Government websites and social media provide great platforms to update and educate residents on certain topics such as waste.

The Shire should take advantage of existing third-party waste minimisation and reuse initiatives to support and promote on the website and social media, such as:

- WasteSorted;
- Planet Ark;
- Textile recycling programs such as clothes swaps and op shops;
- Cloth nappies; and
- Household composting methods such as compost, bokashi, and worm farming.

The strengths, weaknesses, opportunities, and threats of this option have been summarised in Table 5-6.

Table 5-6: SWOT Analysis – Website and Social Media

Strength	Weaknesses	Opportunities	Threats
<ul style="list-style-type: none"> • Customisable • Two-way communication • Reach, exposure and engagement measurable • Multiple ways to present messages • Educational and persuasive communication can be interlinked • Inexpensive • Non-resource intensive 	<ul style="list-style-type: none"> • Could cause confusion if messaging is not consistent and clear • Changes in behaviour is unmeasurable • May not be reaching portions of the population and speaking to the converted - target audiences still somewhat restricted • Needs to be part of a well-considered plan 	<ul style="list-style-type: none"> • Monitor analytics to determine how to increase outreach to different audiences which may include those harder to reach • Utilise QR codes to link to social media channels • Collaborating with resources available on such as Waste Authority and WALGA • Share information in real time • Messages going viral and attracting interest from around the world 	<ul style="list-style-type: none"> • The risk of getting negative feedback and public backlash if information is contentious or incorrect • Uninterested audience • Too much information • Insufficient information

5.7 Support School Incursion Programs

To deliver waste education to the future leaders, the Shire could investigate the engagement of the collection contractor (Cleanaway) or an alternative waste education incursion company to create and deliver a school incursion program.

Cleanaway offers face-to-face and online waste education sessions for preschool, primary school, secondary school, university, and TAFEs in select locations around Australia¹³.

The strengths, weaknesses, opportunities, and threats of this option have been summarised in Table 5-7.

Table 5-7: SWOT Analysis – Support School Incursion Programs

Strength	Weaknesses	Opportunities	Threats
<ul style="list-style-type: none"> • Highly engaging • Two-way conversations • Highly targeted • Helps connect the community • Pester power 	<ul style="list-style-type: none"> • Expensive • Resource intensive 	<ul style="list-style-type: none"> • Collaboration with collection contractor • Could offer education to community groups as well 	<ul style="list-style-type: none"> • Low attendance or interest

¹³ Cleanaway. 2024. Waste Education School Programs. <https://www.cleanaway.com.au/about-us/community-education/waste-education-school-programs/>

6 Administration

6.1 Maintaining Efficient Waste Services

It is recommended that the Shire continue to manage its existing waste services, including the kerbside and vergeside collection and disposal and processing contracts.

The strengths, weaknesses, opportunities, and threats of this option have been summarised in Table 6-1.

Table 6-1: SWOT Analysis – Maintaining Efficient Waste Services

Strength	Weaknesses	Opportunities	Threats
<ul style="list-style-type: none"> Complies with the WARR Act Minimises litter and illegal dumping Community satisfaction 	<ul style="list-style-type: none"> Expensive Resource Intensive 	<ul style="list-style-type: none"> Can undertake periodic reviews to ensure the waste services are meeting the community needs 	<ul style="list-style-type: none"> Changes to State Government Policy, product markets, and contractor availability Lack of resourcing Residents not utilising the services correctly

6.2 Sustainable Procurement Policy

Sustainable procurement takes into consideration the economic, environmental, social and governance impacts of any purchase. It also considers circular economy principles such as eliminating waste and pollution and circulating products and materials¹⁴.

To align with this, the Shire could review and update its Purchasing Policy and Purchasing Procedure 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 Toolkit¹⁵.

The strengths, weaknesses, opportunities, and threats of this option have been summarised in Table 6-2.

¹⁴ Ellen McArthur Foundation. 2024. What is a circular economy. <https://www.ellenmacarthurfoundation.org/topics/circular-economy-introduction/overview#:~:text=The%20circular%20economy%20is%20based,Regenerate%20nature>

¹⁵ WALGA. 2024. Procurement Toolkit Info. <https://walga.asn.au/procurement/procurement-toolkit-info>

Table 6-2: SWOT Analysis – Sustainable Procurement Policy

Strength	Weaknesses	Opportunities	Threats
<ul style="list-style-type: none"> Supporting sustainable principles and waste minimisation Non-resource intensive Inexpensive 	<ul style="list-style-type: none"> Budget constraints Limited supplier options 	<ul style="list-style-type: none"> Cost savings through reduced energy consumption, waste reduction, and optimized resource use Opportunity to demonstrate the Shire’s commitment to sustainability 	<ul style="list-style-type: none"> Market disruptions may impact the availability and cost of sustainable products and materials Disruptions in supply chain impacting the availability of sustainable products and services

6.3 Review Planning Policies and Guidelines

To assist sustainable development, the Shire could complete regular reviews of Planning Policies to ensure that developments submitting for Development Application are required to be designed to meet the needs of the community and align with better practice waste management.

The Shire could also investigate the development of Waste Management Plan Guidelines to assist developers when designing developments. Talis has previously assisted the City of South Perth and City of Vincent in developing Waste Management Plan Guidelines for new developments to be used as reference points when developing waste management plans for Development Application submission.

The strengths, weaknesses, opportunities, and threats of this option have been summarised in Table 6-3.

Table 6-3: SWOT Analysis – Review Planning Policies and Guidelines

Strength	Weaknesses	Opportunities	Threats
<ul style="list-style-type: none"> Supports sustainable development that allows for waste services 	<ul style="list-style-type: none"> Resource intensive Can be costly if using a consultant 	<ul style="list-style-type: none"> Development of Waste Management Plan Guidelines Collaboration between the Shire, service providers and developers 	<ul style="list-style-type: none"> Lack of resources or funds Lack of uptake/adherence by developers

6.4 Develop a Corporate Waste Avoidance and Minimisation Plan

It is recommended that the Shire develops a Corporate Waste Avoidance and Minimisation Plan to reinforce the Shire’s commitment to sustainable resource management. This offers a strong

opportunity for the Shire to lead by example in formalising its commitment to internal corporate waste minimisation.

Development of a Corporate Waste Minimisation Plan would provide an understanding of how waste is generated and managed within the Shire. The Plan would assess progress in waste minimisation and opportunities to improve.

Such a Plan should address the following:

- Signage, best practices for in-house waste source separation, collection efficiencies, management recovery and disposal of packaging, and printing for example;
- Review and streamlining of internal catering to reduce food waste and potential for food waste collections from administration centres, leisure centres and childcare centres and the potential for food waste donations to a food charity;
- Actions, targets, responsibilities, and timeframes; and
- Guidance and capacity.

A key outcome from a Corporate Waste Avoidance and Minimisation Plan will ideally be annual waste auditing and reporting, inclusive of volumetric summaries on waste types and recycling together with opportunities to celebrate sustainability successes both internally with staff and via the Shire’s website.

The strengths, weaknesses, opportunities, and threats of this option have been summarised in Table 6-4.

Table 6-4: SWOT Analysis – Develop a Corporate Waste Avoidance and Minimisation Plan

Strength	Weaknesses	Opportunities	Threats
<ul style="list-style-type: none"> • Increased diversion of Shire waste from landfill 	<ul style="list-style-type: none"> • Can be resource intensive • Buy in from all staff not assured 	<ul style="list-style-type: none"> • Showcase correct waste behaviour to the community 	<ul style="list-style-type: none"> • Access to recycling schemes • Uninterested staff members • Staff turnover

6.5 Internal Waste Audit

Internal business waste audits can identify where waste is mismanaged, create opportunities and positive change, offer increased efficiencies, improve operational transparency, identify new waste streams, and assist in making well-informed waste management recommendations.

A waste audit would involve collecting data on types and quantity of waste being generated to determine areas for improvement and training and education. This could be an action included in the Corporate Waste Avoidance and Minimisation Plan mentioned in Section 6.4.

It is recommended that the Shire undertake a waste audit across all departments and Shire facilities including administration buildings, works depots, childcare centres, libraries, and leisure centres.

The strengths, weaknesses, opportunities, and threats of this option have been summarised in Table 6-5.

Table 6-5: SWOT Analysis – Internal Waste Audit

Strength	Weaknesses	Opportunities	Threats
<ul style="list-style-type: none"> Provide insight into Shire waste performance 	<ul style="list-style-type: none"> Can be resource intensive and costly 	<ul style="list-style-type: none"> Identify areas of improvement to Shire processes and waste behaviours 	<ul style="list-style-type: none"> Access to local recycling opportunities may be limited

6.6 Audit of Household Bin Numbers

With available resources the Shire could carry out an audit of bin numbers at each household, to ensure that each household is being charged for the correct services. This could be done by staff on a return-to-work program or light duties, or a casual if needed, and could be spaced out over time to audit a certain percentage of households each year. Cleanaway also provided an indicative cost of \$49,908 to carry out these works.

This would benefit in determining which households are not paying for the correct services and update their property rates or services accordingly, generating revenue or saving collection costs for the Shire.

The strengths, weaknesses, opportunities, and threats of this option have been summarised in Table 6-6.

Table 6-6: SWOT Analysis – Audit of Household Bin Numbers

Strength	Weaknesses	Opportunities	Threats
<ul style="list-style-type: none"> Identify where incorrect charges are levied Inexpensive if in house 	<ul style="list-style-type: none"> Can be resource intensive 	<ul style="list-style-type: none"> Ensuring that charges are fairly levied Creating revenue or saving collection costs 	<ul style="list-style-type: none"> Lack of resources to implement Negative public perception of audit Negative pushback from residents being incorrectly charged



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