



Local Government Waste Plan

City of Kalamunda



Acknowledgement of Country

We respectfully acknowledge the Traditional Owners, the Whadjuk Noongar People as the Custodians of this land. We also pay respect to all Aboriginal Elders, past, present and future who have and continue to reside in the area and have been an integral part of the history of this region.

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This document is available in alternative formats upon request.

Part 1 - Services and Performance

1.0 Introduction

Part 1 of the City of Kalamunda waste plan establishes the City's waste profile and base line information in relation to the objectives and targets set out in the Waste Avoidance and Resource Recovery Strategy 2030 (Waste Strategy):

- Avoid** Western Australians generate less waste.
- Recover** Western Australians recover more value and resources from waste.
- Protect** Western Australians protect the environment by managing waste responsibly.



2.0 Integrated Planning and Reporting

All local governments plan for the future¹ through the development of strategic community plans and corporate business plans. Waste plans form part of local government integrated planning and reporting as an issue-specific informing strategy.

Table 1: Links between plan for the future and waste management

Strategic Community Plan	
Title:	Kalamunda Advancing 2027
Come into force:	2017
Date of next review:	2021
Waste-related priorities:	Priority 2: Kalamunda Clean and Green: Objective 2.3 - To reduce the amount of waste produced and increase the amount of reuse and recycling of waste

Corporate Business Plan	
Title:	Kalamunda Achieving 2019-2023
Come into force:	2019
Date of next review:	2022
Waste related priorities:	Strategy 2.3.1 - Develop and implement of Waste Plan 2030. Investigate and develop options for upgrading the Walliston Waste Resource Recovery Facility (WRRF) in accordance with licensing conditions.

¹ 'Plan for the future' means a plan made under section 5.56 of the Local Government Act 1995 and Division 1 and 3 of Part 5 of the Local Government (Administration) Regulations 1996.

3.0 Avoid

Avoidance of waste generation is the preferred waste management option in the waste hierarchy. This section looks at waste generation rates and the reduction required to contribute to the state's waste generation reduction targets - **2025**: Reduction in MSW generation per capita by 5%, **2030**: Reduction in MSW generation per capita by 10%.

Reviewing this data is a critical element of waste planning as it can show how waste generation has changed, identify potential reasons for changes and indicate areas to target in *Part 2 - Implementation plan* (Table 2).

Table 2: City of Kalamunda population, households and waste generation compared with state averages and targets for 2025 and 2030

	Actual				Targets	
	2014-15 (baseline)	2015-16	2016-17	2017-18	2024-25	2029-30
Population ⁽¹⁾	60,570	59,230	59,304	59,378	60,248	61,362
Households ⁽¹⁾	22,433	21,937	21,964	21,992	22,314	22,727
Total domestic waste generated⁽²⁾	41,116	45,042	46,143	42,754		
Waste generation per capita/year (kg) ⁽²⁾	679	760	778	720	645	611

(1) Source (except 2014-15): Western Australia Tomorrow Population Report No. 11 <https://www.dph.wa.gov.au/information-and-services/land-supply-and-demography/western-australia-tomorrow-population-forecasts>. Population for 2014-15 from Western Australia Tomorrow Population Report No. 10. Population for intercensal years extrapolated. Households estimated using 'Average people per households' from 2016 ABS Census Quickstats.

(2) Source: Local Government Census data - domestic waste

Additional Comments

The City of Kalamunda has conducted a thorough review of the waste census data provided to the department. The review has identified several historical data errors. The City wishes to amend data for the 2014/15 and 2016/17 reporting years (as highlighted) to ensure an accurate representation of waste generation data.

For the 2014/15 reporting year it was identified that for the 'drop off facility', construction and demolition (C&D) was an accepted waste stream. However data was not captured or reported. C&D data was captured and reported for all proceeding years. The City has averaged this data, which equates to approximately 6,000tn per annum. The City wishes to include this data within the actuals for total domestic waste generated. The revised total (35,116 + 6,000) 41,116 is within the median range of the proceeding years total domestic waste generation data.

For the 2016/17 reporting year, it was identified that a number of conversion factors were not applied to various waste streams captured within the 'drop off facility'. Since the conversion factors were not applied to data captured as cubic metres, this significantly inflated the domestic waste generated volumes. The conversion factor was not applied to mixed waste, green waste, cardboard and C&D. The City has applied the appropriate conversion factors, as per the waste census, to the identified waste streams. A revised total domestic waste generation of 46,143 was calculated which is within the median range of previous and preceding reported years.

The City has significantly improved its data capture over the last 2 years and is very confident with the level of accuracy from 2017/18 forward.

4.0 Recover

Where waste generation is unavoidable, efforts should be made to maintain the circulation of materials within the economy. Table 3 gives the overall recovery rate for City of Kalamunda compared to Waste Strategy targets and the state average. This is broken down into the

proportion of the recovery which was materials recovery (reuse, reprocessing or recycling) or energy recovery. The Waste Strategy includes a target that from 2020, energy should only be recovered from residual waste (see Guidance Document – Table 1, for more information).

Table 3: City of Kalamunda population, households and recovery rate compared with state averages and targets for 2020, 2025 and 2030

	2014-15	2015-16	2016-17	2017-18	2020 target	2025 target	2030 target
Population⁽¹⁾	60,570	59,230	59,304	59,378			
Households⁽¹⁾	22,433	21,937	21,964	21,992			
Overall Recovery (%)⁽²⁾	27%	43%	37%	41%	45%	67%	70%
Materials Recovery	27%	43%	37%	41%	45%	>80%	>80%
Energy Recovery	0%	0%	0%	0%	<20%	<20%	<20%
Perth Metro Average⁽³⁾	36%	38%	40%	41%			

(1) Source (except 2014-15): Western Australia Tomorrow Population Report No. 11 <https://www.dplh.wa.gov.au/information-and-services/land-supply-and-demography/western-australia-tomorrow-population-forecasts>. Population for 2014-15 from Western Australia Tomorrow Population Report No. 10. Population for intercensal years extrapolated. Households estimated using 'Average people per households' from 2016 ABS Census Quickstats.

(2) Source: Local Government Census data - domestic

(3) Source: Waste Authority data fact sheets <http://www.wasteauthority.wa.gov.au/programs/data/data-fact-sheets/>

Additional comments

The City of Kalamunda, in partnership with the EMRC and Cleanaway, are reviewing options to significantly increase the recovery and recycling rates of general waste skips provided to local residents (Verge Side Recovery). Currently no recycling/recovery options are available for general waste skip bins, significantly reducing the City's recovery rates and targets. Targets for 2020 reflect incremental improvements in existing processes, whereas 2025 and beyond targets reflect implementation of new processes including food organics and garden organics (FOGO) & Waste to Energy.

The City understands that it's contracted waste to energy plant, which will take all waste from general waste kerbside collection previously destined for landfill, is due for commissioning in Jan 2023. This is when a significant amount of Energy Recovery occurs, however the City questions the DWER proposal that the <20% target is used for 2020, 2025 and 2030 because of the step change in energy recovery in 2023. Thus 2020 Energy recovery should be 0%

5.0 Protect

Objective 3 of the Waste Strategy is to protect the environment by managing waste responsibly, with targets for achieving better practice, reducing litter and illegal dumping.

By 2030 all waste is managed by and/or disposed to better practice facilities, by 2030 move towards zero illegal dumping and zero littering.

5.1 Better Practice

Adoption of better practice approaches to waste management is an important way in which local government can better protect the environment from the impacts of waste, and contribute to achievement of the targets under objective 3 of the Waste Strategy. See *Guidance Document - 5.0 Better practice, Table 4* for a summary of the Waste Authority's current and planned better practice guidelines.

Table 4: Better practice approaches and programs adopted by the City of Kalamunda

Waste Management Activity/Service	Waste Authority Better Practice Guideline or Program	Date of Adoption/Implementation	Comment
Kerbside Waste Services	Better Bins kerbside collection guidelines 2016	The City aims to roll-out the FOGO service by 2025.	The City has obtained funding through the better bins program.
Kerbside Waste Services (FOGO)	Better Bins kerbside collection guidelines	Latest adoption date 2025	
Behaviour Change Programs & Initiatives	Waste Sorted Communications Toolkit	2025	To implemented after FOGO roll out.

5.2 Litter

The data in Table 5 was reported by the City of Kalamunda in the 2017-18 local government census.

Table 5: 2017-18 litter data

	Response and Comments	
Litter hotspot used on a regular basis for littering in 17-18	All major reserves and arterial roads are monitored. Litter hot spots ~20	
What are the main items littered at these hotspots?	General rubbish.	Wrappers, soft plastics, aluminium cans, plastic and glass bottles, clothes and packaging
Current measures aimed at contributing towards the zero littering target	Received funding through Keep Australia Beautiful Council's Community Litter Grant Scheme to collect rubbish and litter dumped along the iconic Zig Zag trail with interactive signs that display the amount of litter collected and its related environmental, social and economic impacts. <ul style="list-style-type: none"> Keep Australia Beautiful Adopt A Spot Program. Clean up Australia Day and public advertising. Waste and Recycling Guide. 	
Estimated cost of clean-up (due to collection, disposal, education, infrastructure and enforcement)	\$225,453	

Source: Local government Census data 2017-18

Table 6: Additional litter information

Is littering increasing or decreasing in City of Kalamunda authority?	Increasing
How were the costs associated with cleaning up litter calculated? Employee time? Dollar value? Both?	\$676,746 (2019/20) Both. Litter and Illegal dumping have its own budget code WM02. The total budget allocation is used a cost reference.
Does the city have a litter strategy? If not, what is the ETA for completing one?	As per implementation plan
Have any of the city's compliance and waste education officers undergone training on litter prevention? If so, what training?	As per implementation plan
What current policies and guidelines does your council enact to prevent litter? E.g. Event planning guidelines on the use of balloons in council facilities and the release of helium balloons; no cigarettes on the beach; no single use plastics at events.	The adoption of guidelines and initiatives from Keep Australia Beautiful (KAB). Funding from KABC has allowed direct action and messaging to the local community and the City's website advises how residents can participate by "adopting a spot" and reporting illegally dumped waste.
How does City of Kalamunda measure the effectiveness and impact of programs designed to reduce littering and illegal dumping?	The City has assigned a 25cubic metre hook lift bin that all illegal dumping and litter is disposed in, after collection by City officers. This allows the City to obtain accurate weight and disposal cost figures. Additionally, Waste Services officers complete itemised lists and counts of larger illegal dumping and waste streams removed e.g. tyres, whitegoods, furniture, gas bottles etc. The City also monitors volumes and costs of the City's contractor responsible for removing and disposing of larger and or commercial illegal dumping items. These volumes and costs are compared each financial year (FY). The City has been limited in terms of overall educational programs and enforcement options.
Which division/unit/section of your organisation is responsible for litter management/prevention? Waste services? Compliance (e.g. Rangers)? Infrastructure?	Waste Services
How important is litter management to your organisation? (1 - Not at all important; 5 - Highly important).	5

Additional Comments

The City currently has three litter and illegal dumping collection officers. They are broken up into two teams. One team member is responsible for servicing all significant parks and reserves. This equates to ~40 reserves and hotspots per week. The other team, comprising of two team members, are responsible for illegal dumping collection and monitoring and litter collection from arterial roads. The team actively monitors ~60 illegal dumping sites, consisting of 20 immediate hotspots. In addition to normal scheduling the team is also responsible for completing customer service requests (ICs).

5.3 Illegal dumping

The data in Table 7 was reported by City of Kalamunda in the 2017-18 local government census.

Table 7: 2017-18 Illegal dumping data

	Response and Comments	
Cost of cleaning up illegally dumped waste during 2017-18	\$450,907	The total budget allocation is used as a cost reference.
Sites used on a regular basis for illegal dumping in 2017-18. Where possible, please provide site address/es	~20	However up to ~50-60 spots will be checked over a one month period. (Please see attachments)
What are the main items dumped at these sites?	Typically household items - Furniture, mattresses and tyres.	Additional items include gas bottles, paints, general litter, metal, green waste and asbestos
Current measures aimed at contributing towards the zero illegal dumping target	With the City now accurately recording the quantity of waste generated from illegal dumping sites, we are establishing a baseline to ensure future campaigns and initiatives have measured results.	

Source: Local government Census data 2017-18

Table 8: Additional illegal dumping information

Is illegal dumping increasing or decreasing in City of Kalamunda?	Increasing moderately
How does City of Kalamunda measure the effectiveness and impact of programs designed to reduce illegal dumping?	The City has assigned a 25cubic metre hooklift bin to disposed off all illegal dumping and litter once collected by City officers. This allows the City to obtain accurate weight and disposal cost figures. Additionally, Waste Services officers complete itemised audits of larger illegal dumpings and waste removed, e.g. tyres, whitegoods and furniture. The City also monitors volumes and costs collected by the City's contractor. These volumes and costs are compared each FY. The City has previously worked with DWER in utilising covert cameras to catch and prosecute offenders. In terms of educational programs and enforcement options, the City is has been limited. The City also monitors the number of customer service requests (ICS) generated each year.
Which division/unit/section of your organization is responsible for illegal dumping management/prevention? Waste services? Compliance (e.g. Rangers)? Infrastructure?	Waste Services

Additional Comments

The City of Kalamunda is comprised of both rural, peri-urban and urban areas. Evidence has revealed that peri-urban and urban areas have had both domestic and commercial sources targeting these locations to illegally dispose of waste given their relative ease to undertake illegal dumping unnoticed.

Table 9: Detailed illegal dumping data collection by the City of Kalamunda

Date of data collection: **FY 2018/19**

Waste Type	# of Incidents	Total Approximate Weight (Tonnes)	Change From Previous Year	Regulatory Notices Issued
C&I				
C&D	Conversion factor 1.4	36.62		
E-Waste	E-waste conversion (12.5kg)	1.23		
Household Waste	Mixed waste	31.11		
Mulch & Green Waste	Unprocessed green waste	6.12		
Scrap Metal	Scrap metal and white goods	60		
Soil & Excavated Material				
Hazardous/Problem Waste	Paint and Oils	0.23		
Other	Gas cylinders (52 x 5kg)	0.26		
TOTAL				
Cleaned up by	% of Total incidents	Clean-up Costs (\$)		
Local Government	Large illegal dumpings. This cost is associated with using a contractor to clean, remove and dispose of commercial quantities of waste within City boundaries.	\$59,806 ex GST		
Land Owner				
Offender				
TOTAL				

6.0 Waste Management Tools

6.1 Waste Services

Local government data relating to the waste collected, recovered and landfilled is presented in Table 10. It is important to review this data when developing Part 2 – Implementation Plan, as it can:

- » Provide an understanding of how different systems are performing (e.g. recovery levels)
- » Highlight the need for any new collection systems or infrastructure
- » Identify the timing and capacity of any new collection systems or facilities required to meet the changing needs of local governments.

In working towards alignment with the Waste Strategy, the local government should focus on the materials resources with the greatest potential to support the objectives and targets of the Waste Strategy.”

NB: DWER is currently developing a range of better practice guidelines. Better practice rates will need to be updated as the guidelines are released.

Table 10: Significant sources and generators of waste in 2017-18

Service/Sources		Tonnes Collected	Tonnes Recovered	Recovery Rate	Better Practice Rate	Target Rate 2025	Target Rate 2030
Kerbside	Mixed waste	18,986	-	18%	%	55% major regional centres	60% major regional centres
	Co-mingled recyclables	5,162	4,439				
	Green waste	-	-				
	FOGO	-	-				
Verge-Side	Green waste	1,887	1,887	44%	%		
	Hard waste	2,443	-				
Drop-Off	Mixed waste	2,936	-	79%	%		
	Dry recyclables	6,866	6,866				
	Green waste	4,300	4,300				
	Hard waste	5	5				
	Hazardous waste	2	2				
Public Place	Mixed waste	169	-	0%	%		
	Co-mingled recyclables	-	-				
Special Event	Mixed waste	-	-	0%	%		
	Co-mingled recyclables	-	-				
Commercial	Mixed waste	-	-	0%	N/a		
	Co-mingled recyclables	-	-				
	Paper/cardboard	-	-				
Local Government Waste	Illegal dumping clean up	-	-	0%	%		
	Street sweepings	-	-				
	Roadworks	-	-				
	Other C&D activities	-	-				
	Roadside pruning	-	-				
	Other	-	-				
TOTAL		42,756	17,499	41%		67% Perth and Peel	70% Perth and Peel

Source: Local Government Census Data 2017/18

Table 11: Compositional audit data for kerbside waste services

General Waste Bin	
Yield per household (kg/hhl/week)	N/A
Per capita (kg/per capita/week)	N/A
Audit year	N/A
Composition	Total %
Recyclables (paper, cardboard, plastics, steel, aluminum, glass)	N/A
Organics (organics, wood/timber, textiles, earth)	N/A
Hazardous (medical, sanitary/ hygiene, nappies, chemicals, paint, batteries, fluorescent tubes, light bulbs, oil, building material)	N/A
Other (electronic waste, miscellaneous)	N/A

Recycling Bin	
Yield per household (kg/hhl/week)	N/A
Per capita (kg/per capita/week)	N/A
Audit year	N/A
Composition	Total %
Recyclables (paper, cardboard, plastics, steel, aluminum, glass)	N/A
Organics (organics, wood/timber, textiles, earth)	N/A
Hazardous (medical, sanitary/ hygiene, nappies, chemicals, paint, batteries, fluorescent tubes, light bulbs, oil, building material)	N/A
Other (electronic waste, miscellaneous)	N/A

Recycling Bin	
Yield per household (kg/hhl/week)	N/A
Per capita (kg/per capita/week)	N/A
Audit year	N/A
Composition	Total %
Recyclables (paper, cardboard, plastics, steel, aluminum, glass)	N/A
Organics (organics, wood/timber, textiles, earth)	N/A
Hazardous (medical, sanitary/ hygiene, nappies, chemicals, paint, batteries, fluorescent tubes, light bulbs, oil, building material)	N/A
Other (electronic waste, miscellaneous)	N/A

Additional Comments

The City's aims to conduct bin tagging and audit programs, specifically for the potential FOGO rollout. Please refer to Part 2 - Implementation plan.

Table 11 provides space for the local government to include bin audit information for kerbside waste services, if available. Bin audits can help local governments understand the material composition in kerbside bins, highlight where additional efforts are required to increase performance and assist in planning future service options such as FOGO collection. See Appendix for the full breakdown of composition categories.



6.2 Waste Infrastructure

The number, type, capacity and location of key existing local government-owned and/or operated waste and resource recovery infrastructure is required to understand the future need for different facility types. This section is not relevant to local governments that do not own/operate waste facilities.

Table 12: Current waste and resource recovery infrastructure operated by the local government

Facility Name (and license number if applicable)	Facility Type	Location	Managed by	License category and approved production or design capacity	Material Type	Service/Activity	Remaining Capacity (if applicable)	Anticipated Closure (year)
Walliston, Waste Resource Recovery Facility (WRRF)	Transfer Station	155 Lawnbrook Rd, Walliston	City of Kalamunda	Awaiting DWER Classification	Green Waste	Drop-off Facility	100%	2050+
					General Waste	Drop-off Facility		
					Metals	Drop-off Facility		
					Tyres	Drop-off Facility		
					Motor Oil	Drop-off Facility		
					Whitegoods	Drop-off Facility		
					E-waste	Drop-off Facility		
					Cardboard	Drop-off Facility		
					Batteries	Drop-off Facility		
Fluorescent Tubes/Globes	Drop-off Facility							
C&D	Drop-off Facility							
Other								

Table 13 provides space for local governments to provide information about planned waste and resource recovery infrastructure, if relevant.

Table 13: Planned waste and resource recovery infrastructure

Location	Managed by	License category and approved production or design capacity (if known)	Waste Type	Service/Activity	Estimated Operation Start Date
N/A	N/A	N/A	N/A	N/A	N/A

Additional Comments

The City is awaiting DWER classification for its Walliston RRF and is currently reviewing a number of site conditions.

6.3 Policy and Procurement

6.3.1 Contracts

Information on the City of Kalamunda's existing waste contracts should be detailed in Table 14. When reviewing services, it is a good opportunity to evaluate how they are performing, opportunities for regional collaboration, and identify any opportunities for improvement, review or renegotiation.

Table 14: Existing waste management contracts

Contractor	Services		Notes/Comments
Cleanaway Pty Ltd.	Household General Waste Collection	Stock and Inventory of general waste MGBs	Cleanaway have performed well and have met all relevant KPIs as per their contract.
	Household Recycling Collection	Stock and Inventory of recycling MGBs	
	Skip Bin Service (Green and General waste)	Recycling processing MRF	
Western Tree Recyclers	Green waste processing		Western Tree has performed well and have met all relevant KPIs as per their contract.
West Bin	Removal/hauling of our delineated waste (generated/stored at Walliston WRRF) for recovery and disposal at their facilities.		West Bin has consistently performed well, providing a recovery rate (processed & diverted from landfill) of over 80% of wastes collected for disposal.
Instant Waste	Haulage of hook-lift skips (containing specific waste types) to designated/approved facilities		The contract term expired at the end of FEB 20. The City is presently utilising Instant Waste on an ad-hoc basis and undertaking a contract performance evaluation. An RFT will be issued, and new contract commencement will coincide with the onset of the 2020/2021 financial year.
Kala Bob Cats	Illegal dumping removal		Kala Bob Kats have performed well and have met all relevant KPIs as per their contract.

6.3.2 Waste Local Laws and Policies

Information on the City of Kalamunda's existing local laws, strategies or policies that may compliment/support this waste plan and contribute to the Waste Strategy objectives should be detailed in Table 15.

Table 15: Existing waste-related local laws, strategies and policies (LG to complete the table)

Type of Local Law, Strategy or Policy	Name of Local Law, Strategy or Policy	Came Into Force	Comments
Development of Waste Local Law			Refer to PT2 Implementation Plan.
Development of Local Environment Strategy	Kalamunda Clean and Green		Refer to PT2 Implementation Plan.

6.3.3 Land Use Planning Instruments

Table 16: Existing waste-related land use planning instruments related to waste management

Local Planning Strategy	TITLE:	Local Planning Strategy 2010	
	ENDORSED BY WAPC:	Yes	
	NEXT REVIEW DUE:	2020	
	Is waste considered and reflected in the Local Planning Strategy?	NO	Waste can be considered in future reviews.
	Does the Local Planning Strategy identify current and future waste facility sites?	NO	
Local Planning Scheme	TITLE:	Local Planning Scheme No 3	
	GAZETTED:	22-Mar-07	
	NEXT REVIEW DUE:	1-Jul-20	
	Are resource recovery facilities, waste disposal facility and waste storage facility defined as land uses (as per Planning and Development (Local Planning Schemes) Regulations 2015) and included in the council Local Planning Scheme zoning table, with either a P/I/D/A/X permissibility?	YES	Amendment 68 29/01/2016: Resource Recovery Centre' in alphabetical order in the 'Use Classes' column of 'Table One - Zoning Table' of the Scheme and classify 'Resource Recovery Centre' as a 'D' use in the 'General Industry' zone and as an 'X' use in all other zones. Inserting the land use definition for 'resource recovery centre' in alphabetical order in the 'Land Use Definitions' section of Schedule 1 of the Scheme
	If these land uses are not defined and not in the zoning table, how does the Scheme deal with such land uses (i.e. is an alternative definition used to that in the Regulations 2015? Or are these land uses zoned as "Use not listed")?		
Does the Local Planning Scheme identify statutory buffers as Special Control Areas for strategic waste infrastructure facilities to avoid encroachment by incompatible land uses?	YES	The Scheme does provide for Special control Areas, but not for buffers associated with waste infrastructure facilities	

*Continue overleaf



Local Planning Policies	TITLE:	LPP 9 Dual Density Design	
	ADOPTED BY COUNCIL:	Nov-17	
	RELATIONSHIP TO WASTE STRATEGY OBJECTIVES:	Sustainability initiatives	
Other	Does the local government have any local policies which relate to the objectives of the Waste Strategy (reduce generation, increase recovery, protect the environment)?	YES - Refer to above LLP	
	TITLE:	The Environmental Land Use Planning Strategy	
	ADOPTED BY COUNCIL:	23 JUL 19	
	RELATIONSHIP TO WASTE STRATEGY OBJECTIVES:	The Environmental Land Use Planning Strategy Action 1.1.1 addresses reducing waste internally through online processes.	

6.3.4 Sustainable Procurement

Local governments can be significant consumers whose purchasing decisions and procurement policies can have positive impacts. This section reviews activities relating to procurement of infrastructure, goods and services that avoid waste, promote resource recovery or encourage greater use of recyclable and recycled products. Information on existing sustainable procurement policies or practices that may contribute to the Waste Strategy objectives should be detailed in Table 17.

Table 17: Existing sustainable procurement policies and practices

Sustainable Procurement Policy or Practice	Date Adopted By Council	Actions Implemented e.g. Switching to recycled printer paper	Alignment With Waste Strategy Targets, Objectives or Focus Materials
N/A	N/A	N/A	N/A

Additional Comments

The City, utilising the WALGA template, is to develop a sustainable procurement policy relating to provision of goods and services that avoid waste generation and encourage greater use of recyclable and recycled products (circular economy) Please refer to Part 2 (Implementation Plan).

6.4 Behaviour Change Programs and Initiatives

Communication and engagement with waste generators and managers underpins many local government waste management activities, and are vital in driving behaviour change needed to achieve the objectives and targets of the Waste Strategy.

Behaviour change programs and initiatives refers to activities that increase awareness, skills and knowledge; provide consistent messaging; help people to use waste infrastructure; and encourage the adoption of specific, positive waste behaviours and attitudes.

Most local governments have existing behaviour change programs and initiatives and it is important to evaluate their effectiveness. This section includes an opportunity for a high level qualitative assessment process to understand what has worked and what has not. The results can be used to inform actions for Part 2 – Implementation plan (Table 21)."

Information on the local government's existing waste behaviour change programs or initiatives should be detailed in Table 18. This may include participation in Waste Authority funded programs, or programs/initiatives run by the local government.

Table 18: Behaviour change programs and initiatives, including Waste Authority programs and other local government initiatives

Local Government Program/ Initiative	Description	Outcomes Achieved As A Result Of The Program (Qualitative/Quantitative)	Evaluation Method	What's Worked/Not Worked	Suggested Improvements
Better Bins Funding (FOGO)	The City has applied for better bins funding (3rd Bin roll-out), through the Waste Authority.	Successful	City has received funding allocation from Waste Authority		Better Bins funding rules and timing reflect the pragmatic issues of timing of FOGO processing plants available for Councils
Waste Sorted Tool Kit	The City has agreed with other LGs to utilise the waste sorted tool kit for consistent messaging.	Consistent messaging utilised in all waste communications by the City.	Used by all LGs	All local governments using the waste sorted tool kit.	
Garage Trail Sale	The City is a 3-year signatory of the Garage Trail Sale (2018-2020).	Promotion of waste hierarchy to residents and community encouragement			
Waste Education	Annual Waste and Recycling Calendar	Local Residents advised and educated on waste collections, classifications and initiatives.	Waste services operating as expected and resident feedback.	Ongoing evaluation	Actioned for the following year.



6.5 Data

Table 19 provides an opportunity to assess existing waste data practices, identify strengths and gaps and consider the kinds of data activities which could be included in the Part 2 – Implementation Plan to improve the local government’s waste data. It should be completed based on the data/information covered in Part 1 of this document, as well as the individual experience of the officer/s responsible for collecting and using waste data.

Table 19: Assessment of waste data

	Please ✓		Comment
	YES	NO	
Does the local government have access to adequate waste data to complete Part 1 of the waste plan?	✓		The City has prioritised data capture of all waste streams over the past 2.5 years and has made considerable progress in this space, however recognises improvements in some areas can be made.
Does the local government use waste data when undertaking planning activities for waste projects/programs?	✓		Waste data used to evaluate the type, amount and frequency of wastes accepted at the Walliston WRRF and its utilisation by local and non-local residents. Findings resulted in the implementation of the Entry Pass system. This data is used to facilitate behaviour change amongst residents by developing communication plans with corporate communications.
Does the local government have access to adequate waste data for this purpose?	✓		
Does the local government use waste data when monitoring or assessing waste projects/programs?	✓		Waste data capture is intrinsic to the successful operation of the Walliston WRRF, to ensure assets are correctly utilized and serviced and that ongoing waste processes (green waste shredding, fridge degassing, C&D removal etc) are orchestrated for safe and successful completion. The data is also useful in assessing future waste service considerations such as FOGO and CDS .
Does the local government have access to adequate waste data for this purpose?	✓		
Does the local government use adequate waste data to measure progress toward the targets and objectives of the Waste Strategy?	✓		The City records the amount of illegally dumped waste recovered and is in the process of ensuring the type and description is also recorded. Waste data obtained at Walliston WRRF necessitated in the provision of a dedicated receptacle for wood waste.
Does the local government have access to adequate waste data for this purpose?	✓		
Does the local government have access to adequate waste data to fulfill annual data reporting obligations under the WARR Regulations? (previously undertaken through the Waste and Recycling Census)	✓		Internal data capture and 3rd party contractual provision ensures all wastes collected (kerbside, verge collection (skip bin provision), Walliston WRRF, illegal dumping) are correctly characterised and recorded.
Are there any types of waste data that the local government does not currently collect or have access to that would be helpful/useful?	✓		Waste types collected in MSW verge side skip bins (provided by our contractor Cleanaway) is not recorded/audited. The council aims to audit this in the future as it undertakes assess future recovery options with its contractor, Cleanaway.
Are there any ways which local government waste data collection, storage or use could be improved?	✓		Audit on the amount and type of litter found/collected on the roadside(s) to Walliston WRRF
Is the data collected by the local government accurate? Are any new strategies needed to improve accuracy?	✓		Future consideration of mobile weighbridge at the Walliston WRRF and waste data capture software. The City is to assess what technologies and software is available in the market.
Does the pre-filled data provided in this template align with the data the local government has? i.e. is this pre-filled data accurate?		✓	Appears to be abrogation in 16/17 data and however extended years have improved due to the City improving data capture methodology
Any additional comments?		✓	

7.0 Summary

The purpose of Part 1 of the waste plan is to consolidate information about current waste management practices, to enable you to assess and identify:

- » Current waste management performance
- » Alignment between current waste management practices and the Waste Strategy
- » Strengths and successes, as well as gaps and opportunities for improvement.

Table 20 provides space to analyse the data and information presented in Part 1, and should be used to determine waste management priorities for the short, medium and long term, and translate these priorities into actions in Part 2 – Implementation plan (Table 21).

Table 20: Assessment of current waste management performance and prioritisation of future actions

Waste management achievements (for example, performance/achievement against Waste Strategy targets or objectives or where particular waste management objectives have already been met)	<ul style="list-style-type: none"> » Introduction of an entry pass system at Walliston WRRF » Introduction of a commercial vehicle permit system at Walliston WRRF » Keep Australia Beautiful initiatives and grant allocation » Engaging and collaborating with our 3rd party contractors to receive desired waste type and quantity data to meet our and Strategy target objectives » Capturing the specific quantity of illegally deposited wastes
Opportunities for improvement (for examples, where performance against Waste Strategy targets or objectives could be improved or where waste management objectives have not been met)	<ul style="list-style-type: none"> » Improve verge side recycling/recovery rates » Further increase data capture and analysis of illegal dumping and litter occurring within the City of Kalamunda » Develop and implement behavioural change programs and programs targeting waste education, litter and illegal dumping » Development of robust polices and local laws » Undertake an internal waste questionnaire requiring the participation of all City employees, explaining the aims and objectives of the Waste Strategy and how we, as a team, can provide a positive contribution
Priority areas for action in Part 2 – Implementation plan	Ongoing (activities currently under way and/or continuously undertaken) Development of Waste Plan, data capture and analysis.
	Short term (within the next 1-2 years) License of WTS including potential facility improvements, employment of Waste Education Officer, Development of Waste Plan, CDS education for school, sporting clubs and community groups, development of Waste Local Law, Collection and processing Tender for City Waste Collection, Litter and illegal dumping guidelines. Bin tagging and auditing.
	Medium term (within the next 3-5 years). Review of in-house City general waste and recycling collection (parks and reserves), software systems for data capture and analysis. Potential introduction of a 3 bin system (FOGO) subject to availability of suitable FOGO processor.
	Long term (more than five years) Assessment of future use of Walliston Transfer Station, pending licence conditions and approvals.

Part 2 - Implementation Plan

This implementation plan outlines the actions which City of Kalamunda will take over the next 5+ years to contribute to the achievement of relevant Waste Strategy targets and objectives. It is where the priorities described in the summary (Part 1 – 7.0 Summary, Table 20) are translated into actions.

Please refer to the Guidance Document under sections: **4.0 How to complete Part 2 – implementation plan, 5.0 Better practice and 6.0 Waste management tools**, when developing this implementation plan.

Table 21: Implementation plan

Waste Management Tool	Action (OR link to existing local government plan/document that details this activity)	Is the action new or existing?	Detailed Actions/Sub-Actions (OR link to existing local government plan/document that details this activity)	Milestones (SMART - Specific, Measurable, Achievable, Relevant, Timed)	Target (SMART)	Timeframe for Delivery (completion date)	Cost of implementation incorporated into annual budget and Corporate Business Plan? Y/N - (if not, why?)	Aligns to Waste Strategy Objective/s			Responsibility for implementation (branch, team or officer title, not the names of individual officers)	Identified Risks (Impact/consequences and mitigation strategies)
								Avoid	Recover	Protect		
Waste Services	Introduction of 3 bin FOGO for kerbside collection service	New	<ol style="list-style-type: none"> In conjunction with Better Practice Guidance FOGO - Better Bins GO FOGO, conduct initial communication with the community about the City's implementation program of a 3 bin FOGO system Develop a business case to identify preferred service options. Collaborate with the EMRC to identify FOGO processing capacity and options. Present a business case identifying preferred service and processing options, implementation timeline and strategy to council. Go to tender for FOGO processing. Roll out FOGO service. Undertake monitoring and evaluation (Bin Tagging) 	<ol style="list-style-type: none"> Better Practice - Go FOGO reviewed - July 2020. Community consulted - December 2020. Business case completed and preferred service process options established - July 2021. Present to Council for approval by December 2021. Tender process approved and completed - June 2022. FOGO rollout commencing mid-end 2022 in conjunction with Commission of new EMRC FOGO facility. Annual monitoring and evaluation completed - July-December 2023 	100% of City provided bin services for residents will have access to FOGO by 2025	Jul-25	Yes		✓		Asset and Waste Services.	Risks: Community resistance, contamination, lack of effective communication, poor rollout service, FOGO plant commissioning pushed out. Mitigation: Ensure ongoing and effective communication with all stakeholders, careful planning with effective milestones, have options for people with special needs/large families, bin audits/tagging to reduce contamination levels
Waste Services	Recovery of recyclable materials from verge-side skip bins	New	<ol style="list-style-type: none"> Consultation with Cleanaway on proposed recovery of waste from skips. Geographically representative audit of verge-side bins to establish what wastes are being disposed. Generate audit report. Stakeholder meeting to discuss feasibility of waste recovery options and associated costs. Implement waste recovery trial. 	<ol style="list-style-type: none"> Engagement with Cleanaway - April 2020. Audit completion - July 2020. Audit report issued - September 2020. Stakeholder meeting to discuss feasibility of waste recovery - December 2020. Implement trial in January 2021 	Recovery 20% of recyclable material from verge-side skips by June 2021	Jun-21	NO - trial only. Will be incorporated into annual budget pending successful trial and accurate costs established.		✓	✓	Asset and Waste Services	Risks: Skewed audit results. Unfeasible waste recovery, cost blow-outs, delay in skip turnaround times. Mitigation: Ensure consistent approach to audit for meaningful results, investigate multiple options/facilities for waste recovery, trial will uncover issues in continuity. Will need to assess market conditions
Waste Infrastructure	Walliston Transfer Station	Existing	<ol style="list-style-type: none"> Implement licence conditions set out by Department of Environment, Water and Regulation (DWER). Forecast future waste infrastructure requirements for Walliston Transfer Station to adequately accept specified waste streams and ensure compliance. 	Implement licence conditions in specified timeframes set out by DWER - TBA	Upon receiving licence conditions from DWER, work to implement conditions and or recommendations within specified time frame. The City will need to assess the infrastructure required for Walliston Transfer Station to ensure compliance.	Timeframe for delivery will be dependant upon receiving DWER licence approval - TBA.	No		✓	✓	Asset and Waste Operations. DWER & Planning.	
Waste Infrastructure	Walliston Transfer Station - source segregating hard plastics	New	<ol style="list-style-type: none"> Establish which plastics are presently recyclable/non-recyclable. Generate Safe Operating Procedure for site staff to follow to allow the recovery of suitable waste plastics into a dedicated receptacle. Stakeholder meeting to discuss new SOP and list of acceptable plastics for recovery. Begin 3-month trial of plastics recovery. Generate a report on volumes recovered against labour intensity. 	<ol style="list-style-type: none"> Plastics recycling evaluation and SOP generation - June 2020. Stakeholder meeting and 3-month trial commencement - June 2020. Report generated and follow up stakeholder meeting - September 2020. 	By the end of 2020 the feasibility study will show if it is economically viable to recover solid plastics contained in mixed loads delivered by local residents for disposal.	End 2020	Yes		✓		Asset and Waste Services	Risks: non-recyclables placed into receptacle, site staff contact with waste, inaccurate report generated. Mitigation: Site staff trained and to follow SOP, dedicated project management to ensure accurate and meaningful data is captured and reported.
Policies And Procurement	Develop Waste Local Law	New	<ol style="list-style-type: none"> Ensure all employees involved with waste management are aware of the law, its intent and enforcement capabilities. Waste Local Law adopted. 	<ol style="list-style-type: none"> All employees involved with waste management or resident advice/complaints made aware of the Waste Local Law - July 2020. Waste Local Law guidance note for employees generated July 2020. Waste Local Law adopted and displayed on City website - March 2023 	Ensure all city waste operations, actions, policies and procedures are following the directives of the Waste Local Law by June 2020	Jun-23	No		✓	✓	Asset and Waste Services	Risks: Employees not trained, or following correct procedures and give out inconsistent messaging/ advice. Mitigation: Well-structured training program with accompanying guidance notes to facilitate conformity and consistent messaging.

Waste Management Tool	Action	New or Existing?	Detailed Actions/Sub-Actions	Milestones (SMART)	Target (SMART)	Timeframe for Delivery	Cost of implementation	Avoid	Recover	Protect	Responsibility for implementation	Identified Risks
Policies and procurement	Develop a Sustainable Procurement Policy	New	<ol style="list-style-type: none"> Obtain and consult the WALGA Guide to Sustainable Procurement. Develop the Procurement Policy in line with the WALGA Procurement Toolkit. Circulate Policy to relevant departments for feedback. Following Feedback submit to Council for approval. In line with WALGA guidelines (Preferred Suppliers etc) Incorporate the Policy in the decision-making process. 	<ol style="list-style-type: none"> WALGA guide and Toolkit consulted - April 2020. Initial Policy developed and circulated for feedback - late 2020. Submit to Council for approval - early 2021. 4. Initiate Policy. 	"By January 2021 the Sustainable Procurement Policy will ensure a consistent interdepartmental approach to the provision of goods and services that avoid waste generation and encourage greater use of recyclable and recycled products (circular economy). City to determine how objectives to be measured."	Jun-21	Yes	✓	✓	✓	Asset and Waste Services	Risks: Resistance to change, inability to source applicable services, Increased spending. Mitigation: Consistent messaging to all stakeholders advising the City's alignment to the Waste Strategy. Ensure all Stakeholders have the correct and current information/guides to assist in obtaining the competitive services required in line with the new Policy.
Policies and procurement	Action items in Local Environmental Strategy	Existing	<ol style="list-style-type: none"> Implement the WARR Strategy Support community groups and reduce waste in reserves. Reduce incidence of illegal dumping. Increase material recovery to 70% by 2025. 10% reduction in waste generation per capita by 2025 	<ol style="list-style-type: none"> Consistent focus group meetings with all stakeholders - 2020 onwards. Employ a Waste Education Officer during 2020. Ongoing support and Engagement of local community groups through advertising, initiatives and incentives/ grant allocation(s) 	To protect the City's natural environment and to reduce the amount of waste generated in alignment with the timelines, goals and objectives of the Waste Strategy	2020-2030	Yes	✓	✓	✓	Asset an Waste Services	Risks: Stakeholder Inaction and targets not met, Community feels disenfranchised, City unaware of current initiatives/incentives and grants. Mitigation: Employment of Waste Education officer, ongoing dialogue with the EMRC as a resource, feedback from local groups and residents welcomed and encouraged.
Data	Improve data collection for illegal dumping	Existing	<ol style="list-style-type: none"> Align the WALGA Model Process: Illegal Dumping to the present and future objectives of the City. Disseminate these principles and objectives of the WALGA Model to all stakeholders, specifically educating and training field officers in the Illegally Dumped Waste Department. 	<ol style="list-style-type: none"> Stakeholder engagement and review of the WALGA Illegal Dumping Model Process - April 2020. Implement new objectives focusing on data capture and reporting - Mid 2020. 	Following the WALGA guidance in conjunction with our existing policies and procedures will improve customer service, internal and external communication, resource recovery and increase our understanding of the associated costs of managing and responding to illegally dumped waste. The trends exposed through increased data capture will assist in developing business cases for action.	Mid 2020	Yes	✓	✓	✓	Asset and Waste Services	Risks: Inconsistent data capture due to lack of training or technology, Stakeholder inaction following the submission of field reports. Mitigation: Structured training for all field officers and Investment in new technologies for data capture where appropriate, Illegal dumped waste data reports included as an agenda item in Stakeholder meetings.
Data	Litter audit on major roads leading to Walliston Transfer Station	New	<ol style="list-style-type: none"> Undertake an audit on the amount and type of litter located along the main roads leading to Walliston Transfer Station with simultaneous clearance. Using all media platforms (including posters at the transfer station) release/advertise the Unsecure Load Unsafe Road campaign from Keep Australia Beautiful. Following the campaign undertake a second audit to ascertain its effectiveness. 	<ol style="list-style-type: none"> Undertake 1st audit by June 2020. Media release of Unsecure Load Unsafe Road campaign for 3 months following initial audit. Undertake 2nd audit and report findings to stakeholders by end 2020. 	By the end of 2020 the City will be aware of the impact Walliston Transfer Station has/had on the amount of litter deposited on roads leading to it. Also, the effect (if any) the KAB campaign has had in mitigating present and future litter deposits.	Mid to late 2020		✓	✓	✓	Asset and Waste Services	Risks: Inaccurate/meaningless data, Ineffective advertising/community engagement. Mitigation: Ensure agreed action plan by stakeholders prior to audit, coordinate with the City's media department to allow the rollout of the campaign to have the maximum effect.
Behaviour change programs and initiatives	Develop a Civil Works Waste Management Plan	New	<ol style="list-style-type: none"> Stakeholder meeting to establish what wastes are generated, their frequency and present disposal method. Collaborative effort by stakeholders to develop a Waste Management Plan aiming at reducing waste generation and the recovery/reuse of materials. Instigation of Plan with associated structured training to all stakeholders, specifically those undertaking the civil works. Six-month review to determine what impact the plan has had on waste generation and material recovery/reuse. 	<ol style="list-style-type: none"> Stakeholder meeting by April 2020. Develop Plan by June 2020. Initiate Plan with associated training to all stakeholders. Six-month review in December 2020 to ascertain the effect of the plan. 	The end of 2020 will see a reduction in waste generation and the recovery/ reuse of materials where appropriate, resulting in reduced Civil Works spending on procurement and waste disposal. Baseline is not currently available, this will be a significant first step.	Mid to end 2020	Yes	✓	✓		Civil and Waste services	Risks: Unrealistic and unusable Waste management Plan, Ineffective stakeholder engagement, Inaccurate data capture on waste avoidance/recovery Mitigation: Ensure all stakeholders involved in civil activities contribute to the plan, clear messaging to ensure data capture is accurate and meaningful.
Behaviour change programs and initiatives	Provide enhanced community education to increase awareness and encourage behaviour change around illegal dumping	New	<ol style="list-style-type: none"> Review the WALGA Model Process: Illegal Dumping focusing on community engagement. Circulate action items to stakeholders for comment. Generate an action plan following the outcomes of stakeholder consultation. Implement action plan. 	<ol style="list-style-type: none"> WALGA Process Model: Illegal Dumping reviewed and stakeholders engaged for comment - mid 2020. Interdepartmental Action plan generated mid-late 2020. Staggered rollout of action items and initiatives mid-late 2020 	"By the end of 2020 the Local community has been targeted with education and participation initiatives aiming towards the elimination of illegally dumped waste. Our communication strategy is measured by reach and community participation both at events and online."	Mid-late 2020	Yes	✓	✓	✓	Asset and Waste Services	Risks: Insufficient/ineffective advertising or community engagement initiatives, Stakeholders unaware of current initiatives or grants available. Mitigation: Employment of Waste Education Officer, ongoing dialogue with WALGA, Waste Authority and the EMRC to ensure contemporaneous initiatives, grants and information is available to the City for appropriate action, Local community feedback actively encouraged.

Waste Management Tool	Action	New or Existing?	Detailed Actions/Sub-Actions	Milestones (SMART)	Target (SMART)	Timeframe for Delivery	Cost of implementation	Avoid	Recover	Protect	Responsibility for implementation	Identified Risks
Behaviour change programs and initiatives	Investigate the possibility of utilising recovered waste material generated through the Roads to Reuse scheme in civil engineering projects	New	<ol style="list-style-type: none"> Stakeholder meeting with the Civil Works Department to advise them of the Roads to Reuse Scheme and to ascertain the engineering materials they require, and if the end product generated through the scheme is a viable option. Liaise with West Bin - current contractor disposing of C&D waste generated through Civil Works activities and wastes accepted at Walliston Transfer Station to see if they would be interested in participating in the scheme; thereby if we purchased material from them then it would align with WARR Strategy circular economy principles. Small trial civil works project using recovered materials from the scheme actioned and a report generated on completion. Stakeholder meeting following the trial to review success/failures and the future adoption of the scheme in civil works activities. 	<ol style="list-style-type: none"> Stakeholder meeting - April, 2020. Liaising with West Bin to obtain their view on participation - April 2020. Engaging with other companies participating in the scheme and investigating the suitability of their end product - April 2020. Civil works trial utilizing the recovered material - mid 2020. Report generated and review meeting held - mid to late 2020. " 	By the end of 2020 the City will have piloted a new scheme using circular economy and sustainable procurement principles to establish if Road to Reuse materials are suitable for ongoing specific civil works activities.	Mid-late 2020	Yes	✓	✓		Civil and Waste services	Risks: Material is contaminated, material is unsuitable for use, report following trial is inaccurate. Mitigation: Material is sourced only from Waste Authority approved suppliers with certified material analysis results, various suppliers and associated materials investigated to ensure suitability for specific activities, trial is closely project managed to ensure resultant data is accurate and meaningful.
Behaviour change programs and initiatives	In-house employee waste questionnaire disseminating the aims and objectives of the Waste Strategy and asking how individuals, groups and organisations can ensure positive contributions/ Outcomes	New	<ol style="list-style-type: none"> Formulation of questions for questionnaire. Circulation of draft questionnaire to CEO and department heads for comment. Upload questionnaire to Intranet and invite all employee participation through e-mail and other sources. Collate data from questionnaire and publish findings and how this will affect future waste practices. 	<ol style="list-style-type: none"> Initial formulation of questions - July 2020. Circulation of draft questions for comment - September 2020. Upload questionnaire onto Intranet and record results - December 2020. Publish findings and action items - March 2021 	By mid-2021 City Employees will understand how they and the community are contributing to the success of the Waste Strategy in achieving its targets and goals.	Early-mid 2021	Yes	✓	✓	✓	Asset and Waste Services and Marketing	Risks: Questions do not align or are not meaningful to the Waste Strategy, poor employee participation, delays in generating findings/ report, City inaction on findings. Mitigation: Initial questionnaire circulated to professional bodies (WALGA/EMRC) for comment, Questionnaire is accompanied by thoughtful introduction/ explanation to facilitate participation, Strict project management timelines, City to ensure all actions following the findings are published.
Behaviour change programs and initiatives	The City to assist the DWER Container Deposit Scheme by advertising Refund Points and promoting the message on City website	New	<ol style="list-style-type: none"> Interdepartmental meeting with Waste Services and Marketing to discuss and action advertising and educational messaging on City website. City website updated with consistent messaging (aligning with the scheme and the Waste Strategy) and Refund Point locations. Work with schools, community and sporting groups to assist in education on how the scheme operates and use of donation points. 	<ol style="list-style-type: none"> Interdepartmental meeting - April 2020. Refund Point locations obtained and City website updated - mid 2020 	By mid to late 2020 the City will have assisted in the inception and continued success of the CDS.	Mid-late 2020	Yes		✓	✓	Asset and Waste Services and Marketing	Risks: Incorrect Refund Point locations advertised, Incorrect/inconsistent messaging deviating from the CDS/Waste Strategy published on website. Mitigation: Vigilant verification of CDS participant locations, intended scheme and educational messaging sent out for consultation (WALGA/EMRC) prior to publication.
Other	Creation of a mobile waste education vehicle for events and schools	New	<ol style="list-style-type: none"> Research into establishing the appropriate vehicle Obtain quotes for purchase and modifications. Formulate usage plan in conjunction with purchase justification and submit to Directorate/CEO for review and approval. Purchase, modify and sign vehicle. Advertise the vehicle service on the city web page. Roll out the usage plan and respond to appropriate resident and professional body requests. 	<ol style="list-style-type: none"> Appropriate vehicle researched and quotes obtained - September 2020. Waste Services/Waste Education Officer establishes a usage plan - December 2020. Purchase justification submitted and signed off - March 2021. Vehicle ready for roll out and Web page updated - July 2021. 	By mid-2021 the City will have its own Waste Education vehicle	Mid 2021	Yes	✓	✓	✓	Asset and Waste Services and Marketing	Risks: Inappropriate vehicle sourced, vehicle underutilised, Mitigation: Thorough research into appropriate vehicle undertaken and comments sourced from organisations using a similar message method e.g. EMRC, Waste Education Officer to facilitate vehicle inception and ongoing utilisation.
	City to develop local Litter Strategy	New	<ol style="list-style-type: none"> City is to identify litter hot-spots Working in conjunction with KAB City is to develop its own local Litter Strategy based upon the Litter Prevention Strategy for Western Australia 2015-2020. Waste Education Officer and litter collection team to undertake training. 	<ol style="list-style-type: none"> This strategy is to complement the introduction of the Waste Local Law - 2023 	Jul-23	Jul-23	Yes	✓	✓	✓	Asset and Waste Services	Waste local does not get adopted by Council, strategy is out-dated.
Other	Assisting the Waste Wise Schools program	New	<ol style="list-style-type: none"> Waste Education Officer engaged. Waste Education Officer to contact local schools to see if they are aware of the Waste Authorities' Waste Wise School's program and if they are interested in participating. Waste Education officer to facilitate school's participation and successful outcomes. 	<ol style="list-style-type: none"> Waste Education Officer employed - mid 2020. Waste Education Officer contacts schools to ascertain participation - mid to end 2020. Waste Education Officer offers ongoing assistance to schools. 	"By the end of 2020 The City will have facilitated -as many as possible- local school's adoption of the Program."	Mid to end 2020	Yes	✓	✓	✓	Asset and Waste Services	Risks: School's participation is ineffective with no consistent messaging to pupils. Mitigation: Waste Education officer to assist in facilitating successful/ positive outcomes.

Appendix: Bin Audit Composition Category Details

Recyclable Components				
1	2	3	4	Descriptors
Recyclables	Paper	Recyclable Paper	Newspaper	Newspapers, Newspaper like pamphlets,
			Glossy Paper	Magazines (glossy) pamphlets, present wrapping paper,
			Office Paper	A4 document paper, writing pads, letters, stationery papers, Print / Writing Paper, envelopes
			Coloured Paper	Coloured Paper
		Non-Recyclable Paper	Composite Paper	Composite paper items where the weight of the paper is estimated to be greater the weight of the other materials, envelopes with transparent windows
			Contaminated Paper	Paper towel, Paper Napkins, Contaminated Paper - soiled not recyclable
			Other Paper	Non-Recyclable Paper, greaseproof paper, paper with wax coating, high wet strength papers, telephone books
		Cardboard	Recyclable Cardboard	Corrugated Cardboard
	Packaged Flat Cardboard			Packing boxes etc, cereal boxes, business cards, folding cartons
	Liquid Paper Board Foil Lined and Other			UHT / Long life milk, Soy Milk Cartons, some fruit juice cartons, Carbon barriers, Milk Cartons, Cardboard with wax coating, paper/disposable cups including biodegradable cups
	Non-Recyclable Cardboard		Composite cardboard	Composite cardboard items where the weight of the cardboard is estimated to be greater the weight of the other materials, e.g. Pringle boxes etc,
			Contaminated Cardboard	Contaminated Cardboard e.g. pizza boxes
			Other Cardboard	Non-Recyclable Cardboard
	Plastics	Recyclable Plastics	PET #1	Soft drink bottles, juice bottles, some food & mouthwash containers (e.g. jam & sauce bottles, peanut butter jars) including coloured PET
			HDPE#2	Milk and cream bottles, shampoo and cleaner bottles, HDPE bottles, including coloured HDPE
			PVC#3	Cordial and juice bottles, blister packs, plumbing pipes and fittings, PVC labels
			LDPE#4	Ice cream container lids, cream bottle lids, squeeze bottles, lids, builder's black plastic, black mulch film, plant nursery bags
			Polypropylene#5	Ice cream containers, drinking straws, pot plant pots, some bottle caps, plastic garden settings, potato crisp bags, compost bins
			Polystyrene #6	Yoghurt / sour cream containers, hot drink cups, take away containers, plastic cutlery, video/CD boxes, packaging foam, any foam
			Plastic#7 Other	Tupperware, Mixed unidentifiable plastics, all other resins and multi-blend plastic materials

Recyclables	Plastics	Non-Recyclable Plastics	Plastic Bags	Plastics Shopping Bags, Plastic Produce/Food Bags, Resealable Plastic Bags, Bin liners, Garbage bin liners, Compostable Plastics Bags
			Plastic Film	Cling film
			Composite (Mostly Plastic)	Composite plastic items where the weight of the plastic is estimated to be greater than the other material items
	Glass	Recyclable Glass (CDS Glass)	Glass Bottles	Beer/Cider Mixed Drinks, Soft drink bottles, not broken glass
			Glass Other	Wine bottles, food and sauce jars,
		Non-Recyclable Glass	Miscellaneous/ Other Glass	Plate glass (window and windscreens), broken light globes, glass, glass particles, Black or ceramic lined glass, Including broken glass that is recyclable more than 50mm in size
	Ferrous (Steel)	Steel	Steel Cans	Food cans, pet food cans, tins, empty paint tins,
			Steel Aerosols	Aerosol cans
			Composite Ferrous (Mostly Ferrous)	Composite ferrous items where the weight of the metal is estimated to be greater than the other material items
			Ferrous Other	Beer bottle tops, 100% ferrous items that are not cans / tins / packaging materials
	Non Ferrous (Aluminium)	Aluminium	Aluminium Cans	Beer and soft drink cans,
			Aluminium Aerosols	Aluminium aerosol cans
			Aluminium Foil	Clean foil
			Composite Non-Ferrous (Mostly Non-Ferrous)	Composite non-ferrous metal items where the weight of the metal is estimated to be greater than the other material items
			Non-Ferrous Other	Copper / brass / bronze items, other metals (not ferrous / aluminium), Aluminium tamper proof seals



Contaminants/Non-Recyclable Components			
Organic	Organic	Food Waste	Vegetable scraps, meat scraps, animal food, leftover food, Food particles, Bones
		Green Waste	Grass clippings, tree trimmings / prunings, flowers, tree wood
		Packaged Food Waste	(Liquid containers - quarter full or more) and (Food Waste in containers or bags)
		Other Putrescible	Animal excrement, mixed compostable items
	Other Organics	Wood/Timber	Milled wood / timber, wooden skewers
	Textiles	Textiles	(Natural/Synthetic - Apparel/Bedding etc.), (Leather and Rubber)
		Other Textiles	Shoes, handbags, millinery etc
Earth	Soil/Dust 'n' Dirt and Inert and Broken Glass, Ash/Coal	Vacuum bag contents, soil, rocks, dirt, grit, mud, Broken Glass less than 50mm in size	
	Ceramics, Rocks/Stones, Bricks, Concrete	Bricks and stones, Cups, bowls, pottery items, concrete	
Hazardous	Medical Waste	Pharmaceuticals	Unused prescription medicine, vitamins and Minerals
		Medical Waste	Band aids, Bandages, Used surgical gloves, Surgical Instruments, Medical aids/kits, Medical devices and radioactive materials, any solid waste generated from a diagnosis, treatment of humans or animals, /Medical Other
		Hypodermic Syringes	Hypodermic Syringes, Epi Pens
	Pathogenic Infectious	Sanitary / Hygiene	Used tissues (items with any bodily fluids), tampons/pads, cotton buds)
		Nappies	Adult and Child disposable nappies
	Hazardous	Chemicals	Bleach, Shampoo, Cleaning Products, (where the weight of the product is estimated to be greater than the weight of the container)
		Paint	Wet/Dry Paint
		Batteries Household	Batteries (Single Use and Rechargeable), Mobile phone battery
		Batteries Other	Vehicle Batteries e.g. Car/Boat, Industrial batteries e.g. Power Supply (UPS)
		Fluorescent Tubes/Light Bulbs	
		Oil Household, Motor & Other	
		Building Material	
	Hazardous Other	Uncategorized hazardous waste	
Other	Electronic Waste	Toner Cartridges	Toner Cartridges
		Computer Equipment	Computer Components, Peripheral Devices/Computer Printer or Photocopier/Printer
		Mobile Phones	Mobile phones
		Electrical Items	Electrical Products
	Miscellaneous	Miscellaneous (Specify)	Any items not applicable to other categories

Glossary

Avoidance	Avoidance refers to the prevention or reduction of waste generation and is the most preferred option in the waste hierarchy.	
Better practice	Better practice refers to practices and approaches that are considered by the Waste Authority to be outcomes-focused, effective and high performing, which have been identified based on evidence and benchmarking against comparable jurisdictions	
Commercial and industrial waste (C&I)	Solid waste generated by the business sector, State and Federal Government entities, schools and tertiary institutions.	
Commercial waste services	» Refers to drop-off, kerbside, verge side or other waste services provided by the local government to commercial premises. » Discretionary service, not offered by all local governments	
Construction and demolition waste (C&D)	Solid waste produced by demolition and building activities, including road and rail construction and maintenance, and excavation of land associated with construction activities.	
Disposal	» Disposal refers to the discharge of waste into the environment, either into landfill or another disposal route. » Disposal is the least preferred option in the waste hierarchy.	
Drop-off facilities and services	» Drop-off collections are where reportable waste is delivered to the waste depot (drop-off facility) by the residents of the local government i.e. self-hauled waste. » Services are provided to collect waste or recyclable materials. » May be temporary or permanent standalone drop-off points for one or more materials, or may form part of other waste facilities (such as landfills or transfer stations). » Note: this does not include HHW drop-off points	
Energy recovery	The process of extracting energy from a waste stream through re-use, reprocessing, recycling or recovering energy from waste	
Household hazardous waste (HHW) facility	» Refers to facilities for the drop-off and storage of HHW » Includes consideration of the drop-off and storage procedures and infrastructure, staffing and resourcing, layout, operation and management HHW facilities, etc.	
Illegal Dumping	Illegal dumping is the unauthorised discharging or abandonment of waste and is an offence under Section 49A of the Environmental Protection Act 1986. Illegally dumped waste is generally considered to have the following attributes:	
	Volume	> 1 cubic metre
	Environmental impact	Contains items/substances that are potentially noxious or hazardous; potential for environmental harm if material leaks, spreads or degrades
	Type of waste	Commercial or industrial waste; larger-scale household waste
	Reason for offence	Premeditated decision; commercial benefit or avoidance of fee
	Mode of deposition	Deposited using a vehicle
Kerbside waste services	» A regular, containerised collection service (often a wheelie bin) where the waste or recycling is collected from outside a resident's dwelling. » Can apply to either recycling or general waste (and in a few instances green waste).	
Landfill	» Refers to inert or putrescible waste, registered or licenced landfills » Activities related to the layout, operation, management and post closure of a landfill. » Includes consideration of the technology and infrastructure on site, staffing and resourcing, and any other waste facilities or services at the landfill site (e.g. green waste or recycling drop off, mulching, tip shop, etc.)	

Litter	Litter is defined in the Litter Act 1979 as including: » All kinds of rubbish, refuse, junk, garbage or scrap; and » Any articles or material abandoned or unwanted by the owner or the person in possession thereof, but does not include dust, smoke or other like products emitted or produced during the normal operations of any mining, extractive, primary or manufacturing industry. Litter is generally considered to have the following attributes:	
	Volume	< 1 cubic metre
	Environmental impact	Nil or minor actual or potential environmental impact
	Type of waste	Personal litter
	Reason for offence	Unpremeditated, convenient disposal
	Mode of deposition	Deposited by hand (includes dropping by hand from a vehicle)
Local government waste management	» Refers to waste generated by a local government in performing its functions » Includes materials such as construction and demolition waste from road and footpath building and maintenance; green waste from parks maintenance; waste generated at local government offices, depots, and facilities	
Municipal solid waste (MSW)	Solid waste generated from domestic (residential) premises and local government activities	
Peel region	The Peel region is the area defined by the Peel Region Scheme.	
Perth metropolitan region	The Perth metropolitan region or the Perth region is the area defined by the Metropolitan Region Scheme.	
Public place services	Public place waste services refers to permanent bins provided by local government in public places to collect waste and/or recycling.	
Recovery	The process of extracting materials or energy from a waste stream through re-use, reprocessing, recycling or recovering energy from waste.	
Reuse	Reuse refers to using a material or item again.	
Reprocessing	Reprocessing refers to using an item or material that might otherwise become waste during the manufacturing or re-manufacturing process.	
Recycling	The process by which waste is collected, sorted, processed (including through composting), and converted into raw materials to be used in the production of new products.	
Residual Waste	» Waste that remains after the application of a better practice source separation process and recycling system, consistent with the waste hierarchy as described in section 5 of the WARR Act. » Where better practice guidance is not available, an entity's material recovery performance will need to meet or exceed the relevant stream target (depending on its source - MSW, C&I or C&D) for the remaining non-recovered materials to be considered residual waste under this waste strategy.	
Special event waste services	Special event waste management refers to temporary bins and/or waste collection services provided by local government to manage waste generated at events such as fireworks displays, music festivals, sports events, markets etc.	
Sustainable procurement	Sustainable procurement involves meeting a need for goods and services in a way that achieves value for money and generates benefits not only to the organisation, but also to society and the economy, while minimising damage to the environment.	

Transfer station	» Refers to facilities which undertake large scale consolidation of waste or recyclable materials for transfer to another facility for processing or disposal » Activities related to the layout, operation and management of a transfer station » Includes consideration of the technology and infrastructure on site, staffing and resourcing, and any other waste facilities or services available at the site (e.g. green waste or recycling drop off, mulching, tip shop, etc.)
Verge side waste services	» Verge side collection services are bulk, infrequent (~every 4-6 month or on demand) services. » Material is collected from residential 'verge sides' either non-containerised or in a skip provided by the local government. Verge side services may relate to green waste or hard waste » Includes waste and/or recyclable materials that may be mixed or separated and the source and can include green waste or hard waste.
Waste services	Waste services are defined by the Waste Avoidance and Resource Recovery Act 2007 as the: » The collection, transport, storage, treatment, processing, sorting, recycling or disposal of waste; or » The provision of receptacles for the temporary deposit of waste; or » The provision and management of waste facilities, machinery for the disposal of waste and processes for dealing with waste.





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