

## Regional summaries

This section provides more detail on the waste generation and infrastructure needs of each region in Western Australia. Each summary includes a snapshot of the region's industries, demographics and economy, painting a picture of how the region's activities have influenced waste generation in 2020. The 2020 waste generation and demographic data is then used to estimate 2030 waste generation.

The 2020 resource recovery infrastructure capacity is based on licensed capacity which was obtained through the *State Waste Infrastructure Register*. Gaps in existing infrastructure capacity are identified when comparing 2020 infrastructure capacity and 2030 waste generation data. Projections of needed waste infrastructure are developed using the methodology described in previous sections. Existing and planned infrastructure by region is compared to projected waste volumes to determine need, based on the concept of critical mass presented in this plan and the need for expansion of existing or development of new facilities.

Each regional summary includes waste generation by source, including MSW, C&D and C&I, to provide more insight and guide decision-making at the regional level. Each regional summary includes:

- an assessment of the social, economic and environmental indicators of the region
- a summary of waste generation, treatment and movements in 2020
- a summary of waste generation and treatment in 2030
- infrastructure capacity needs in 2030, including assessment of opportunities to provide or access capacity in neighbouring regions
- breakdown of the waste by facility type and source (MSW, C&I or C&D) in 2030
- breakdown of the material generation and recovery in 2030
- analysis of landfills by type and identified capacity risk
- an assessment of the principles and priorities for the region.

A desktop assessment of facilities' licences has been employed to understand infrastructure capacity and, as such, may not accurately reflect the specific activities conducted on site. This is one of the key limitations of with the *State Waste Infrastructure Needs Analysis* methodology for assessment, particularly in relation to FOGO recovery facility capacity needs and organics recovery facility capacity needs.

The infrastructure plan focuses on identifying infrastructure needs in alignment with meeting the waste strategy targets. Targets specifically relating to FOGO are currently limited to the Perth and Peel regions. In regions outside of Perth and Peel, FOGO waste is collectively categorised as 'organics'. Stakeholder feedback highlighted this gap in the 2030 needs assessment as several major regional centre municipalities, such as the South West and Great Southern, are considering or implementing FOGO recovery as a means to achieve their MSW recovery targets.

While there appears to be sufficient licensed capacity for organics recovery to meet regional demands until 2030, the specific availability of FOGO recovery capacity remains uncertain. In addition, there is potential for barriers to arise in regions outside of Perth and Peel depending on regional approaches on kerbside FOGO recovery. Some facilities, despite being licensed for FOGO waste, either do not accept it or handle quantities below their licensed capacity. This is discussed in more detail in the Considerations and limitations section.

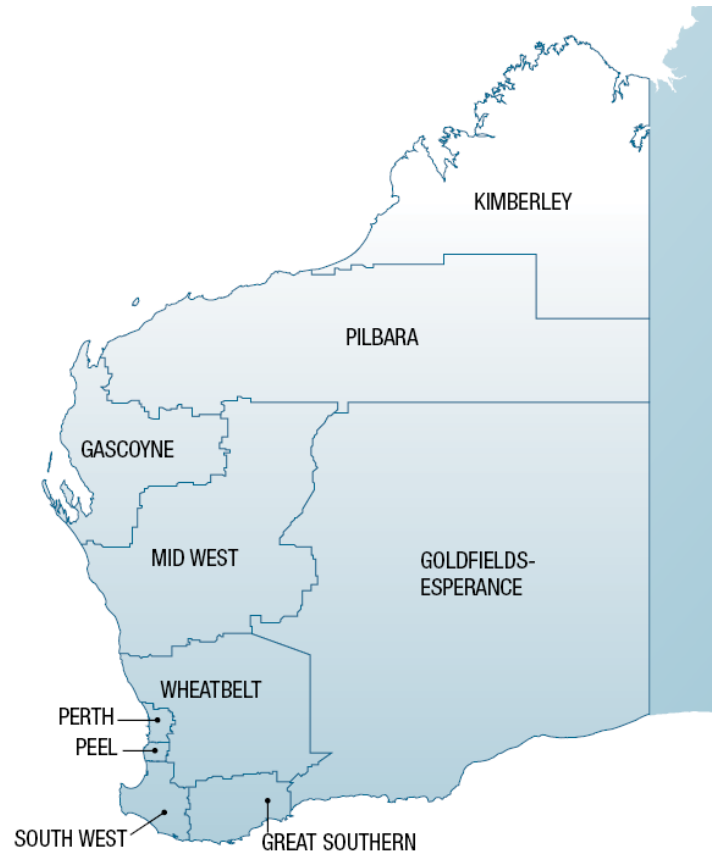
Further, more detailed exploration of FOGO capacity needs outside Perth and Peel is required as an area of future work.

The infrastructure plan includes a summary for each region outlined in Figure 22:

- Perth
- Peel
- Pilbara
- Kimberley
- South West
- Great Southern
- Mid West
- Gascoyne
- Wheatbelt
- Goldfields-Esperance.

Major regional centres as defined by the waste strategy are also included in assessments:

- Albany (Great Southern region)
- Bunbury (South West region)
- Busselton (South West region)
- Greater Geraldton (Mid West region)
- Kalgoorlie-Boulder (Goldfields-Esperance region).



**Figure 22 Regions used for the infrastructure plan**

## Perth region

### Waste profile in 2020

The Perth region generates and treats the largest amounts of waste in Western Australia. The region generated 4,327,000 tonnes of waste in 2020, consisting of about 50 per cent C&D, 25 per cent C&I waste, and 25 per cent MSW. The region treated 3,847,000 tonnes in 2020 with 2,539,000 tonnes (66 per cent) being recovered and 1,308,000 tonnes (34 per cent) being landfilled. Key waste profile data for Perth waste and resource recovery in 2020 is presented below.

#### Residents in Perth

77 per cent of Western Australia's population resides in the Perth region.

**Population** density of 375 people per km<sup>2</sup>.

Residents mostly live on the western coastal side of the region, with higher density around the Perth and Rockingham city centres.

#### Local governments within the region

City of Armadale, Town of Bassendean, City of Bayswater, City of Belmont, Town of Cambridge, City of Canning, Town of Claremont, City of Cockburn, Town of Cottesloe, Town of East Fremantle, City of Fremantle, City of Gosnells, City of Joondalup, City of Kalamunda, City of Kwinana, City of Melville, Town of Mosman Park, Shire of Mundaring, City of Nedlands, Shire of Peppermint Grove, City of Perth, City of Rockingham, City of South Perth, City of Stirling, City of Subiaco, City of Swan, Town of Victoria Park, City of Vincent, and City of Wanneroo.

#### Generating waste

Perth generates 73 per cent of the waste generated in Western Australia.

#### Transporting waste

Comprehensive transport networks and access to markets, using primarily road freight with air, sea freight and commercial rail networks available.

#### Treating waste

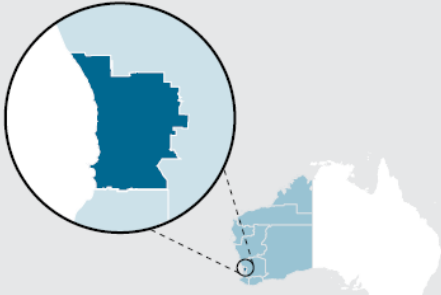
Perth treats 65 per cent of the waste treated in Western Australia.

Perth recovers 78 per cent of the waste recovered in Western Australia.

Perth landfills 49 per cent of the waste landfilled in Western Australia.

Plays a critical role in recycling activities in the Western Australia.

# PERTH REGIONAL SUMMARY

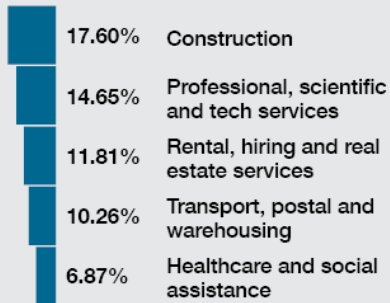


**AREA**  
5,423 km<sup>2</sup>

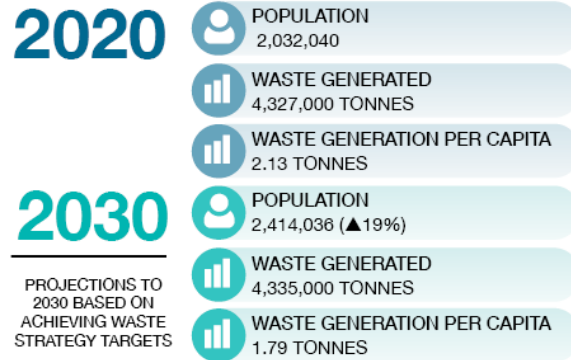
**GROSS REGIONAL PRODUCT (2019–20)**  
\$56.50B/CAP

**NUMBER OF BUSINESSES (2019–20)**  
169,161

## TOP 5 EMPLOYMENT BY INDUSTRY



The mining industry sector makes the greatest contribution to economic output in the region, which at \$48.4B accounts for 44.15% of total output. This industry sector is also the largest employer with 15,883 jobs which represents 10.63% of total employment within the region.

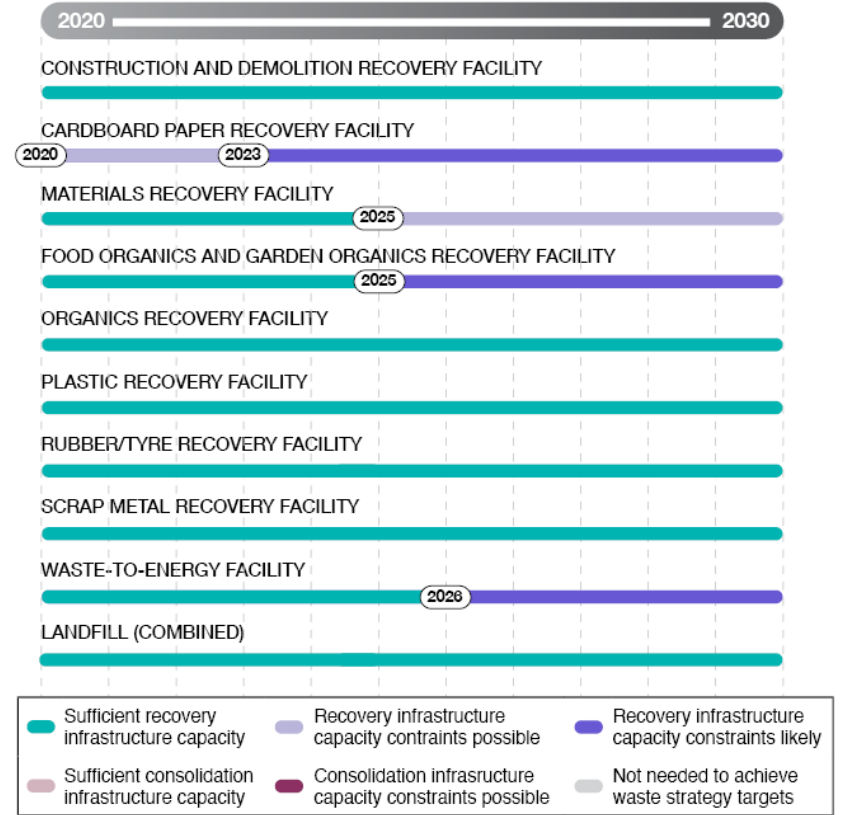


- 2030 INFRASTRUCTURE CAPACITY NEED**
1. Food organics and garden organics | 254,000 tonnes
  2. Cardboard and paper | 291,000 tonnes
  3. Material recovery facilities | 33,000 tonnes
  4. Waste-to-energy | 73,000 tonne

- TOP PRIORITIES**
1. Investigate designating a waste precinct in southern Perth to facilitate additional facilities.
  2. Monitor progress for implementation of capacity expected from the Food Waste for Healthy Soils program.
  3. Investigate and facilitate upgrade of existing garden organics facilities to accept food organics and garden organics
  4. Investigate contingency planning arrangements for cardboard and paper.
  5. Investigate alternative landfill facility contingency arrangements with the Peel region.
  6. Assess whether existing 67A licensed facilities in Perth or neighbouring regions can be increasingly utilised to alleviate food organics and garden organics recovery capacity need.

## INFRASTRUCTURE NEED BETWEEN 2020 AND 2030

Projections for capacity constraints compare current, approved and planned capacity against the infrastructure needs by 2030 to meet the waste strategy targets.



## WASTE IN PERTH 2020 AND 2030

Waste projections to 2030 based on meeting the waste strategy targets

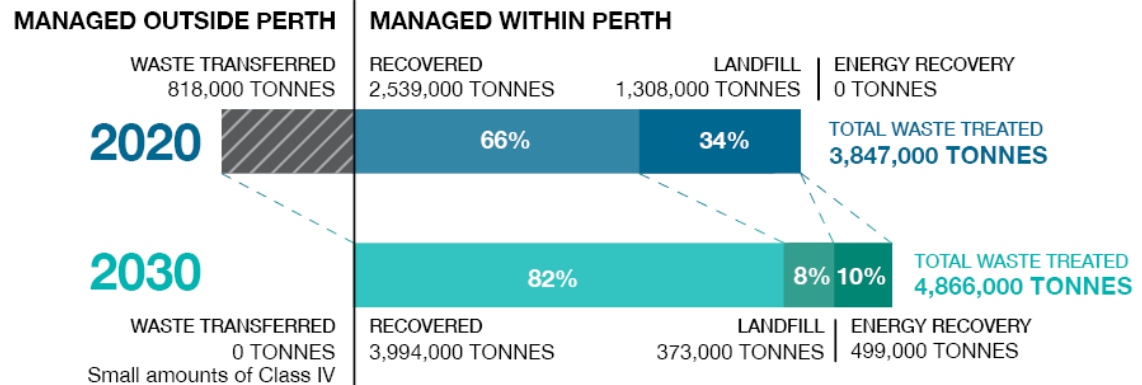


Figure 23 Waste in Perth: statistics and projections

## Waste and resource recovery in 2020

Perth acts as a recovery hub for other regions, recovering 2,539,000 tonnes which equates to 78 per cent of all waste recovered in Western Australia. The region recovers significant amounts of C&D waste, with a capacity to process 4,348,000 tonnes of C&D per year. The top five materials processed in the region in 2020 include:

1. mixed C&D waste
2. commingled recycling
3. FOGO
4. metals consisting of ferrous steel
5. mixed putrescible waste.

Most waste infrastructure in the region are resource recovery facilities. There are 11 inert landfills, six putrescible landfills and one class IV disposal facility. There are 44 C&D recovery facilities, 16 organics recovery facilities, five FOGO recovery facilities, seven MRFs and six scrap metal facilities. Western Australia's only two tyre recovery facilities are the Perth region, providing 45,000 tonnes of recovery capacity. Specialist waste treatment facilities accept the remaining material.

Urbanisation and high rates of development in Perth means that C&D waste requires local processing options to mitigate high transportation costs. Similarly, local developments create markets to use recovered C&D products. Perth is also leading the state in emerging waste trends for specialty material such as electronic and electric waste (particularly used solar cells and battery storage). Perth provides speciality waste processing for material received from other regions, along with access to international offtake markets.

The region also has waste infrastructure under development, expecting an increase of five plastic recovery facilities, one paper and cardboard facility and one MRF by 2030. In addition, Perth has two waste-to-energy facilities under development, each being serviced by a bottom ash treatment facility. The two bottom ash treatment facilities are also under development and will be able to treat a total capacity of 190,000 tonnes per annum of bottom ash. Perth may be hindered by high-density development, with possible challenges in siting new waste infrastructure in central areas close to the largest sources of waste generation.

Perth plays a major role recovering material from other regions through material consolidation and transport. Perth received 338,000 tonnes of material from other regions in 2020, consisting predominantly of ferrous steel and mixed C&D waste. The material received comes from as far as the Kimberley region, as shown below. Perth transferred 818,000 tonnes of material to other regions in 2020, consisting predominantly of putrescible waste and green waste. The transferred material travels as far as Goldfields-Esperance, with most transfers occurring to the Wheatbelt, including more than 511,000 tonnes of mixed putrescible waste for landfilling.

The location of current and planned recovery infrastructure in Perth in 2030 are shown in Figure 26 (see Facility lists in the Appendix for a full list of facilities). Facilities granted work approvals since 2020 by the department in the Perth region are listed below in Table 23. These facilities have not been included in the modelling for the infrastructure plan and may alleviate some of the region's capacity needs.

Table 23 Facilities granted licences or works approvals since 2020 in Perth

Facility type	Facility name	Location
Consolidation centre	Controlled Waste Disposals	Perth
Scrap metal recovery facility	Enecell Resource Recovery Solutions	Perth
Scrap metal recovery facility and consolidation centre	Keppel Holdings	Perth
Used tyre storage	Elan Energy Matrix Pty Ltd Tacoma Facility	Perth
Plastic consolidation and recovery facility	D & M Waste Management	Perth
Scrap metal recovery facility	King Scrap Metal	Perth
Consolidation centre	BMT Australia Pty Ltd	Perth
Consolidation centre	Clartech Transfer Station	Perth
Scrap metal recovery facility	FTR Operations	Perth
Consolidation centre	Brajkovich Landfill & Recycling Pty Ltd	Perth
Consolidation centre	Cockburn Resource Recovery Park	Perth
Consolidation centre	Wattleup Sand Supplies	Perth

WASTE FLOWS 2020

# PERTH

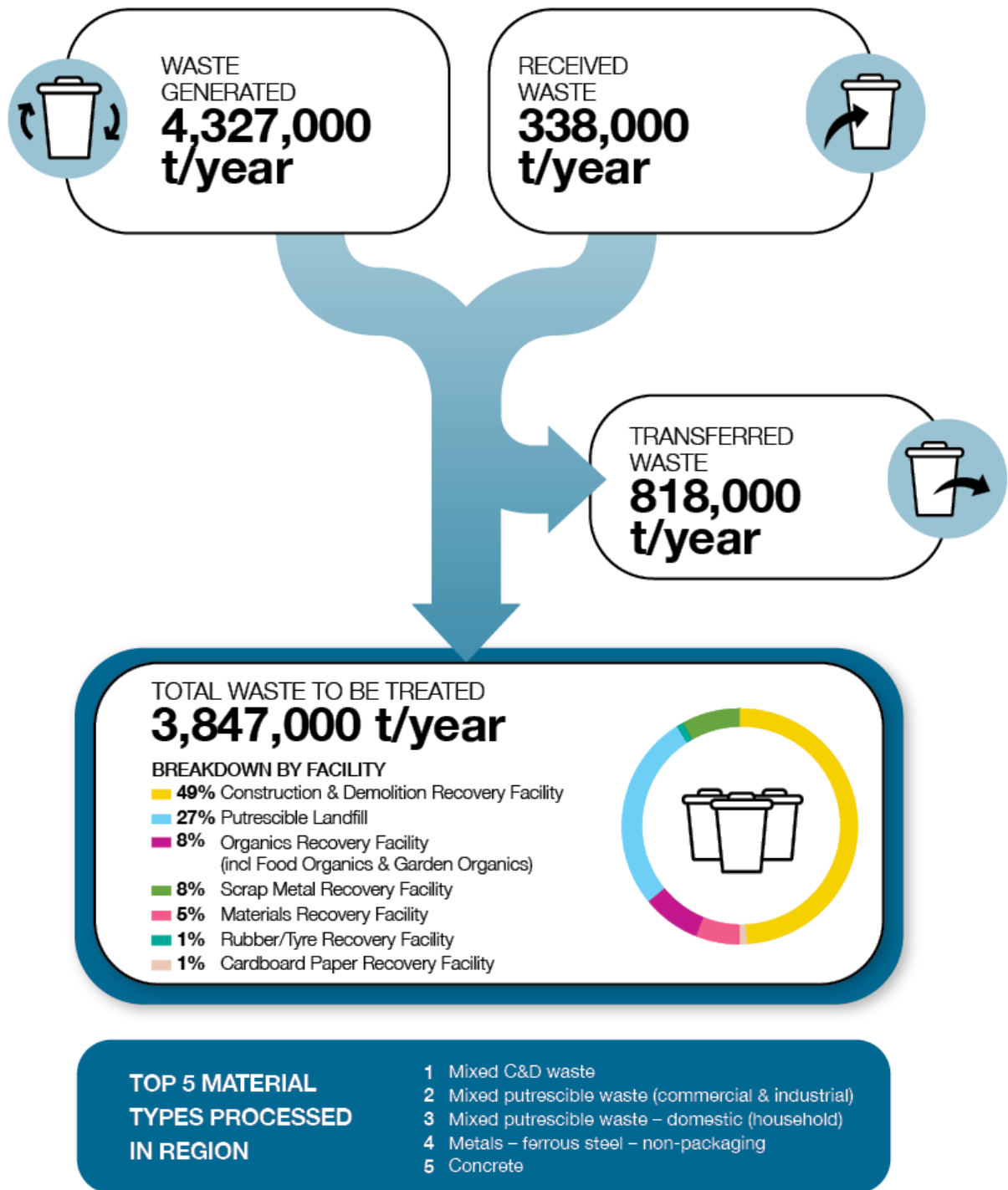


Figure 24 Waste generated, received, transferred and treated in Perth in 2020

# WASTE FLOWS 2020 PERTH

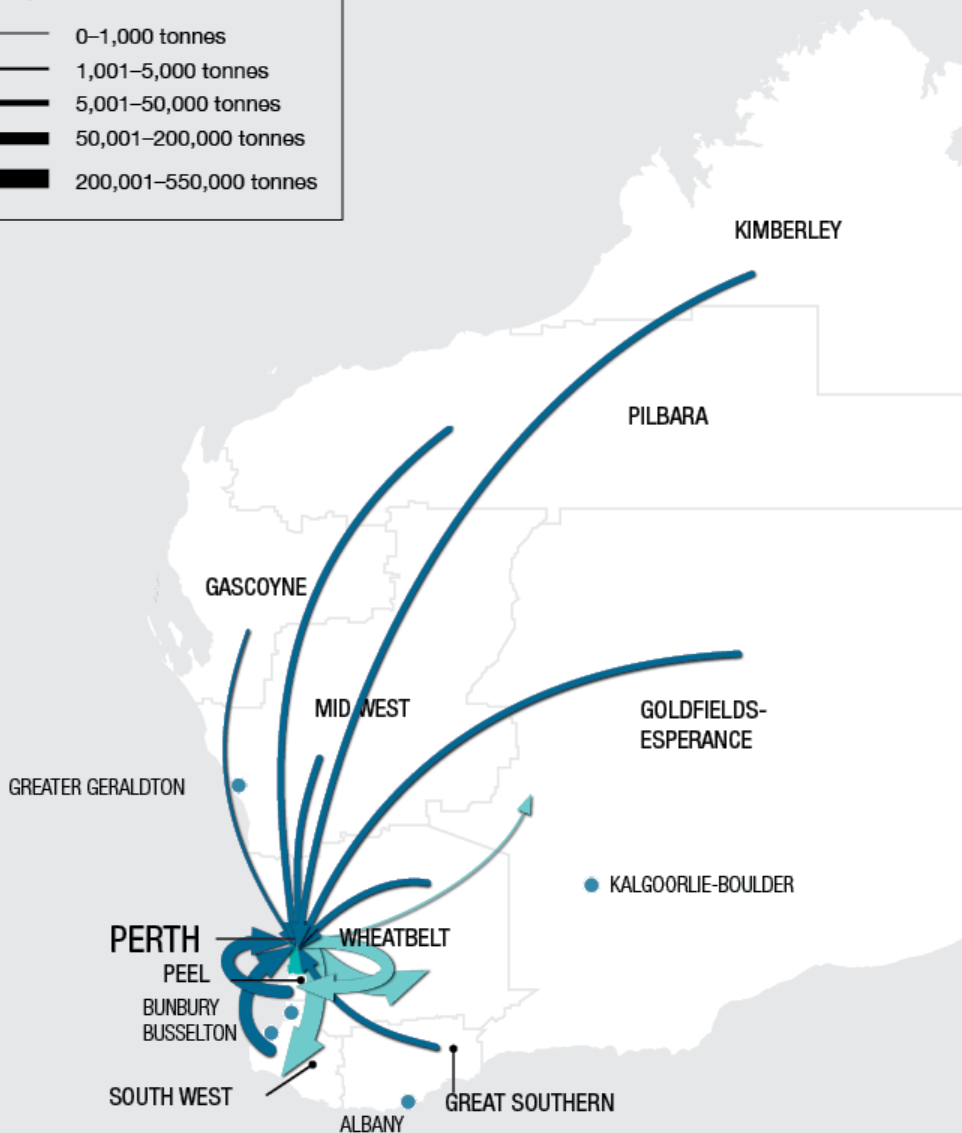
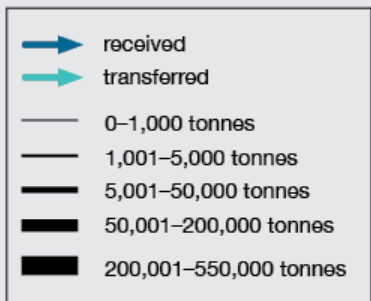


Figure 25 Waste flows in Perth in 2020



# CURRENT AND PLANNED INFRASTRUCTURE BY REGION PERTH

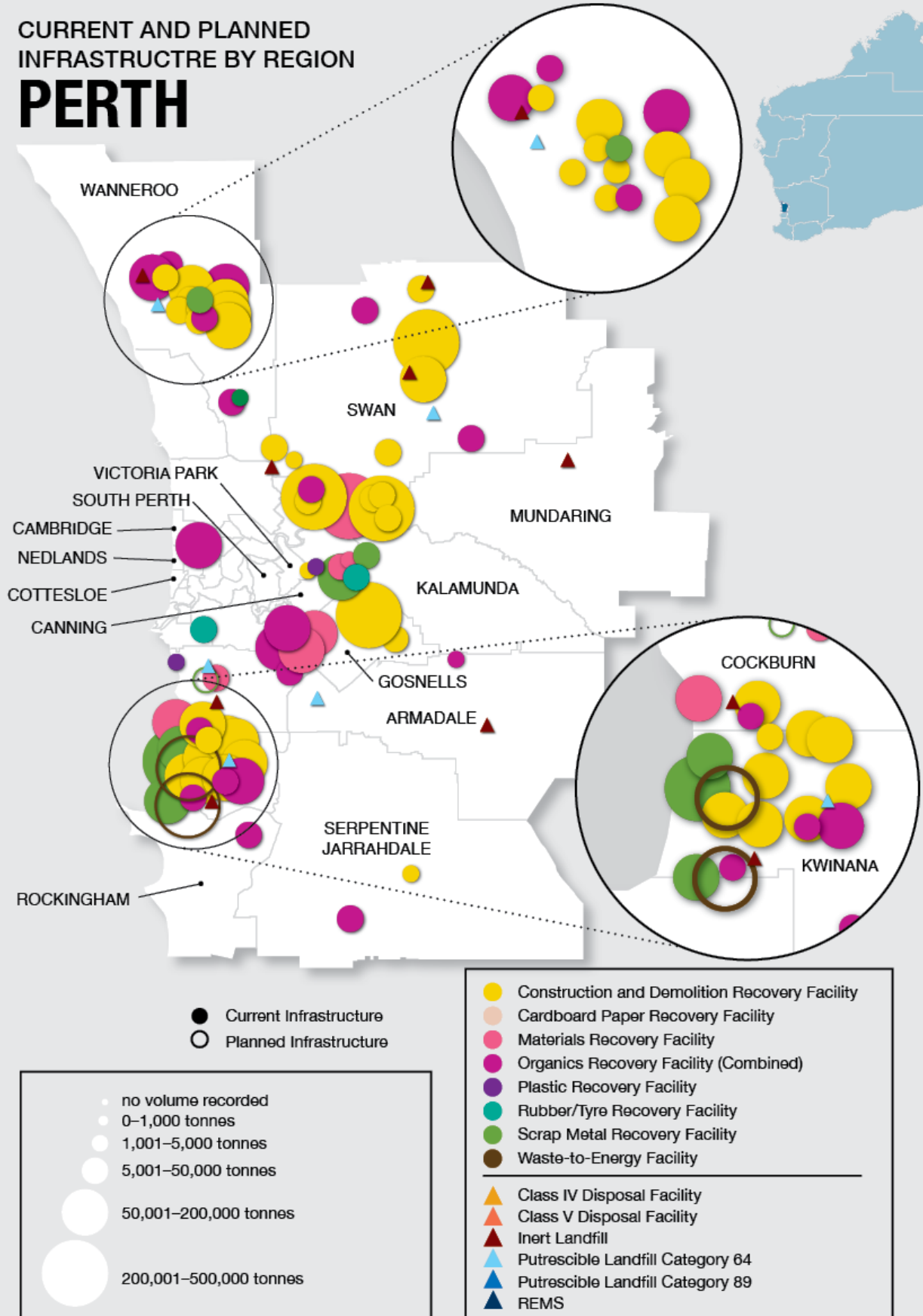


Figure 26 Current and planned infrastructure locations in Perth in 2020

Key aspects of the waste and resource recovery system in Perth in 2020, considered by the infrastructure plan, include:

- Mixed C&D formed the largest waste material generated in the Perth region, consisting of about 2,200,000 tonnes, of which 85 per cent was recovered in the region.
- Perth received 338,000 tonnes of waste from other regions in the state, with 67 per cent of materials from the Peel region (135,000 tonnes) and South West region (91,000 tonnes).
- Ferrous steel and mixed C&D formed the two main material types received into the region.
- The Perth region transferred more than 818,000 tonnes of waste to other regions, predominantly the Wheatbelt, including over 511,000 tonnes of mixed putrescible waste disposal at landfill.
- Development and operation of waste-to-energy facilities will have a significant impact on waste transfers out of the region to neighbouring regions.
- Enabling transport within the region to waste-to-energy facilities will likely result in new consolidation infrastructure in the north of the Perth region.

### Waste and resource recovery in 2030

Modelling to achieve all 2030 waste strategy targets found Perth would generate 4,335,000 tonnes, similar to 2020 quantities. However, the increased capacity for materials recovery means the total waste treated in Perth will increase by 26 per cent. This shift will increase the Perth materials recovery rate from 66 per cent to 82 per cent. Figure 27 highlights the increase from materials recovery (82 per cent) to resource recovery (materials recovery plus energy recovery; 92 per cent), emphasising the increasing importance of energy recovery in waste management strategies.

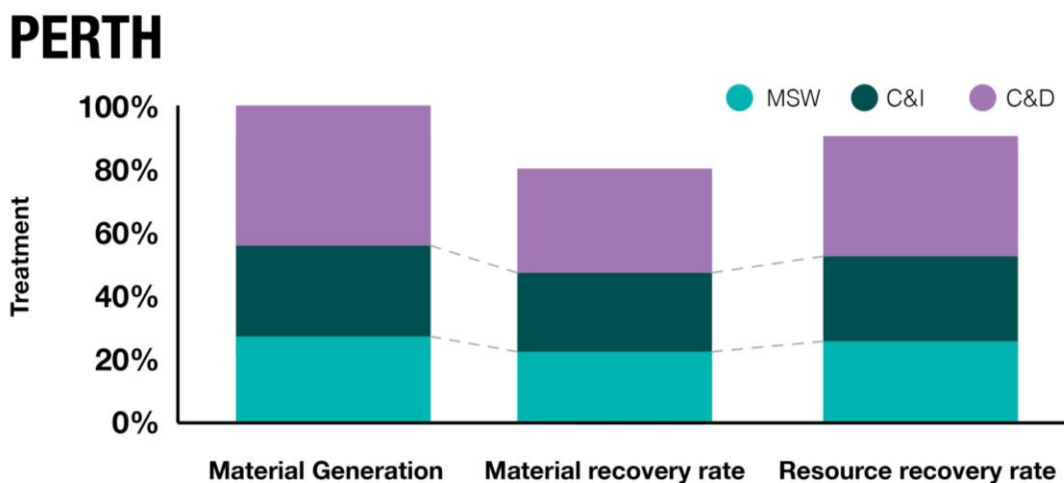


Figure 27 Generation, material recovery and resource recovery by source in Perth in 2030

Figure 28 shows the distribution of feedstock materials used by each facility type, indicating which waste streams are most significant and where the resource recovery efforts should be concentrated. This is also reflected in the Perth region Principles and priorities section.

## PERTH

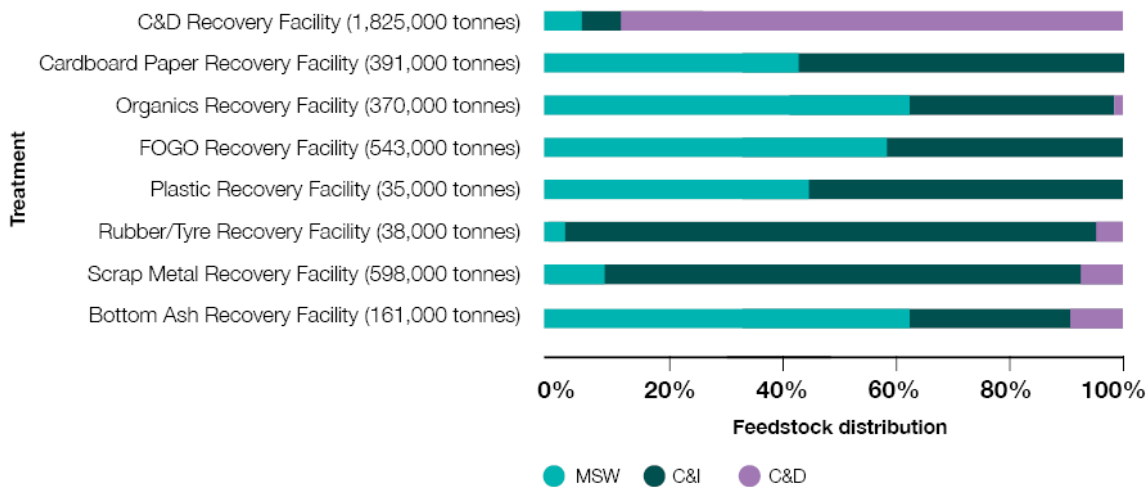


Figure 28 Feedstock distribution of treatments in Perth in 2030

### Infrastructure capacity needs in 2030

Based on current, planned and approved infrastructure in 2020, Perth will have a surplus processing capacity of 2,423,000 tonnes for C&D material and 180,000 tonnes for scrap metal material. This surplus capacity can support the capacity needs of other regions, like the 52,000-tonne need for C&D capacity in the Peel region.

Perth requires the following additional capacities to meet the waste strategy targets in 2030:

- 254,000 tonnes of additional recovery capacity is needed in FOGO facilities, which may be alleviated to 110,000 tonnes by transporting material to the Peel (which has 69,000 tonnes surplus capacity) and the Wheatbelt (which has 75,000 tonnes of surplus capacity) regions. A preliminary analysis of spare FOGO capacity in Category 67A facilities identified this capacity need may be entirely alleviated by sharing capacity across the Perth, Peel, South West and Wheatbelt regions.
- 291,000 tonnes of additional recovery capacity is needed in cardboard and paper facility.
- 33,000 tonnes of additional recovery capacity is needed MRFs.
- 73,000 tonnes of additional recovery capacity is needed in waste-to-energy facilities.

CAPACITY REMAINING BY LANDFILL TYPE

#### PERTH

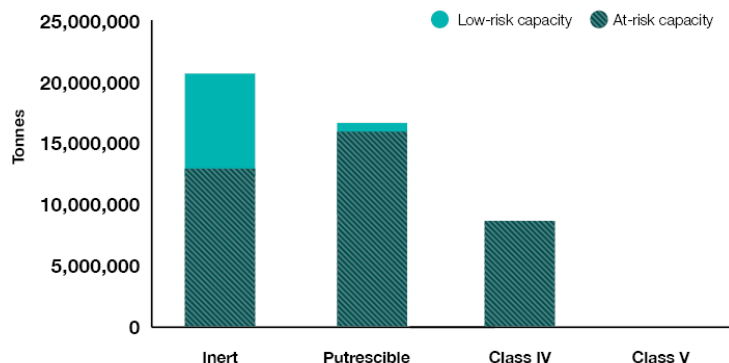


Figure 29 Capacity remaining by landfill type in Perth, including an assessment of low-risk and potentially at-risk capacity

Total remaining capacity by landfill types is presented in . This figure also indicates the proportion of that capacity that is at risk (see section on Landfill capacity lifetime assessment to 2030 and 2050).

Under a low-risk scenario, most of the total landfill capacity of 38 million tonnes was identified as potentially at risk, of which inert landfills make up 34 per cent, putrescible landfills 43 per cent, and class IV landfills 24 per cent. *State Waste Infrastructure Needs Analysis* modelling predicts 395,000 tonnes of residual waste will be disposed of in landfill each year. Feedstock lifetime remaining for landfills is shown in Figure 19 .

Details of the infrastructure needed to support the waste strategy targets are outlined Figure 30, including the expected facilities, capacities and capacity needs in 2030.

CURRENT RECOVERY INFRASTRUCTURE PIPELINE

# PERTH

This overview includes a comparison of projected generation and capacities to determine the infrastructure need in 2030. It includes planned and approved facilities, as well as closures between 2020 and 2030.

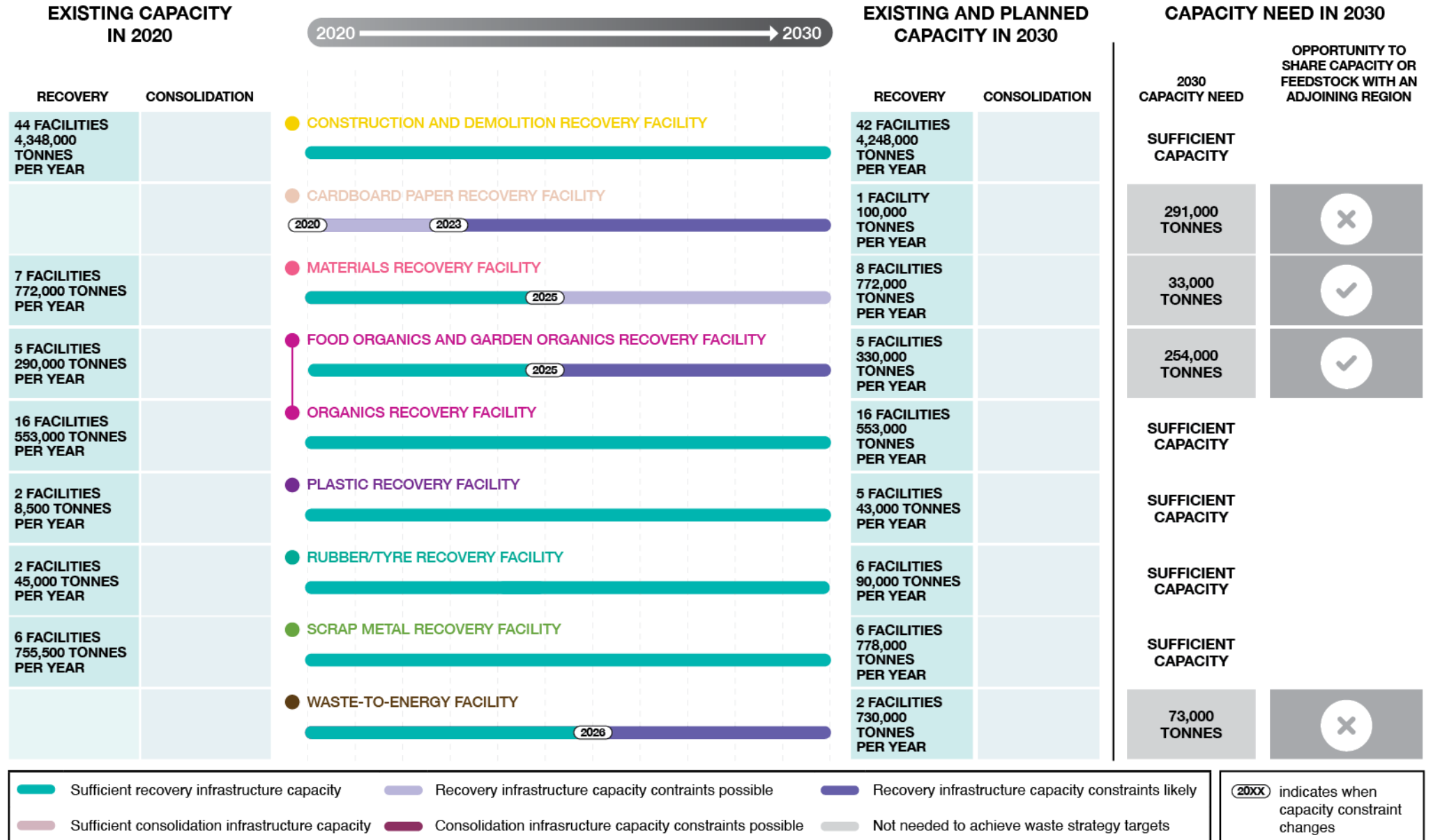


Figure 30 Perth infrastructure capacity need in 2030

## Principles and priorities

The principles outlined in this plan have been used to identify priorities.

Priority areas that are projected to go beyond capacity need, based on the completed modelling for the region, arise when applying the principles.

Based on the analysis, the top priorities for the Perth region are:

- Investigate designating a waste precinct in Southern Perth to facilitate additional facilities.
- Monitor progress for implementation of capacity expected from the Food Waste for Healthy Soils program.
- Investigate and facilitate the upgrade of existing garden organics facilities to accept FOGO.
- Investigate contingency planning arrangements for cardboard and paper.
- Investigate alternative landfill facility contingency arrangements with the Peel region.
- Assess whether existing 67A licensed facilities in Perth or neighbouring regions can be increasingly utilised to alleviate FOGO capacity need.

These are discussed in more detail in Table 24 below. The principles are outlined once more in Figure 2 for reference.

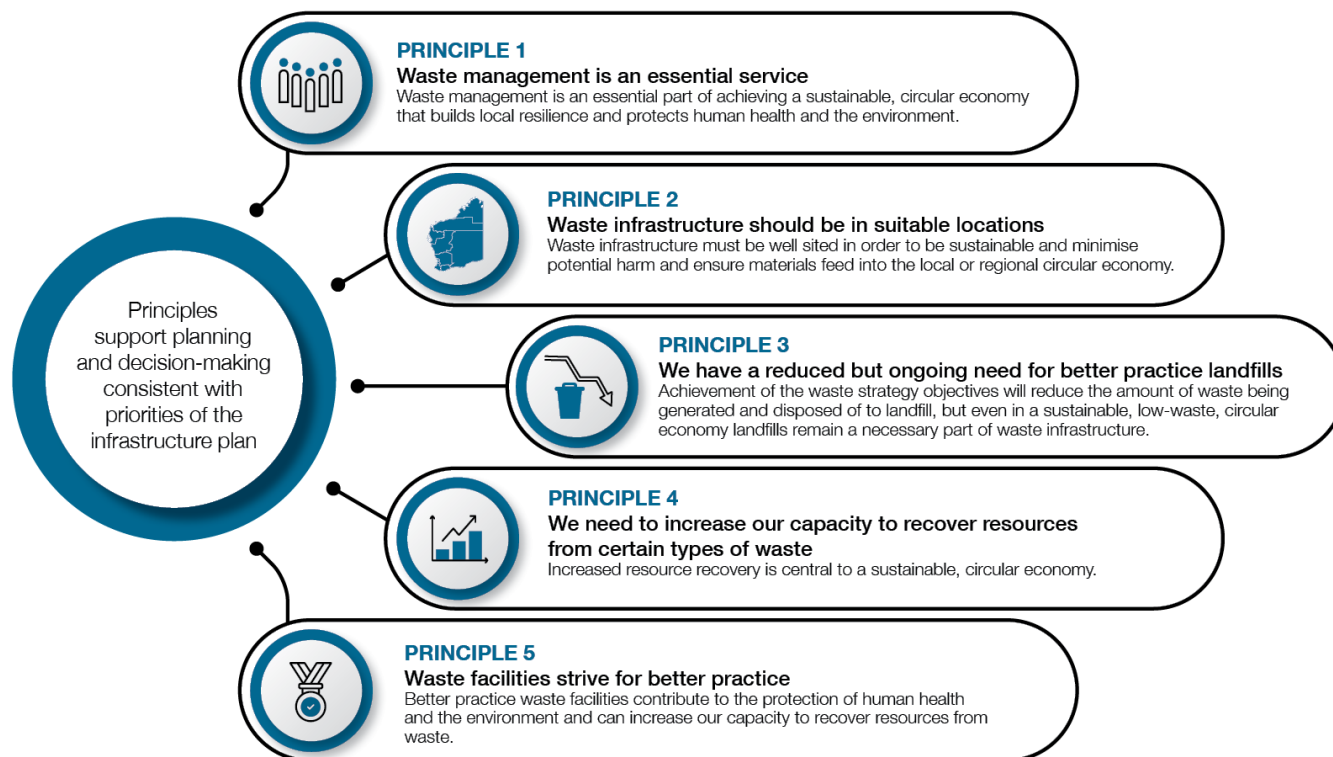


Figure 2 Principles of the State waste infrastructure plan

Table 24 Consideration of infrastructure plan principles and priorities in Perth

Capacity needs to achieve waste strategy targets 2030	Consideration of infrastructure plan principles	Findings from working to achieve waste strategy 2030 targets (with assigned priority ranking)
<p>254,000 tonnes of additional capacity in FOGO recovery</p>	<p><b>Principle 1: Waste management is an essential service</b>                      Development of local capacity for FOGO recovery is essential for meeting waste strategy targets and reducing the region’s greenhouse gas emissions. While there is an opportunity to alleviate some of the capacity needed by transporting materials to the Peel and Wheatbelt regions, Perth should develop processing infrastructure and leverage agricultural markets in adjoining regions that de-risk organics recovery as a critical element of the circular economy model. Contingency planning should include alternative facilities in adjoining regions to counter emergency situations (such as natural and other disasters) and unexpected closures of facilities arising from a variety of potential causes.</p> <p><b>Principle 2: Waste infrastructure should be in suitable locations</b>                      Southern Perth has potential siting for new infrastructure with low constraints, as Perth’s Strategic Industrial Areas and a significant portion of industrial zoned land are in this area. Siting and development of this additional capacity close to large sources of feedstock, adequate road networks and access to agricultural end markets in adjoining regions makes southern Perth an appropriate location for new facilities; however, facilities are also needed in northern Perth to cater to the growing population and demand for FOGO recovery services there. Barriers may be faced in developing sites in dense, urban environments of the Perth region, and whole-of-life impacts should be determined and evaluated for any proposed site. This includes accounting for eventual urban encroachment and having suitable buffers which may be addressed with strategic industrial areas and/or precincts.</p> <p><b>Principle 4: We need to increase our capacity to recover resources from certain types of waste</b></p>	<p><b>High</b>                      Strategically located areas of land for waste processing facilities in northern Perth, and to a lesser extent in southern Perth, would improve infrastructure proximity to source wastes.</p> <p><b>High</b>                      Upgrading of existing organics facilities in the Perth and Peel regions to accept FOGO will decrease the risk, capital costs and timeframes required to meet capacity needs.</p> <p><b>High</b>                      Supported implementation of the <i>Guideline: Better practice organics recycling</i> will improve waste strategy Protect target outcomes.</p>

Capacity needs to achieve waste strategy targets 2030	Consideration of infrastructure plan principles	Findings from working to achieve waste strategy 2030 targets (with assigned priority ranking)
	<p>Consideration of principle 4 raises a priority for increased capacity to recover food organics using existing organics facilities. The FOGO capacity need of 254,000 tonnes may be alleviated by increasing the capacity of existing organics facilities within the Perth region and/or transporting organic waste to surrounding regions. If land use planning and licensing allow the upgrade of existing organics facilities to accept FOGO, the capacity needed to achieve waste strategy Recover targets may be reduced by 75,000 tonnes.</p> <p><b>Principle 5: Waste facilities strive for better practice</b></p> <p>While the large number of facilities needed to achieve capacity targets assists with contingency planning, it also increases the risk of facility or capacity limitations if future better practice standards are implemented under principle 5.</p> <p>A review of existing organics recovery facility compliance with the <i>Guideline: Better practice organics recycling</i> would facilitate an understanding of the capacity risk for this facility type.</p>	
291,000 tonnes of additional capacity in cardboard and paper recovery	<p><b>Principle 1: Waste management is an essential service</b></p> <p>The Perth region currently relies on consolidation and export of cardboard and paper for treatment. Local cardboard and paper processing capacity should be developed when considering principle 1. With one facility anticipated to be operational in 2030, contingency planning considerations and the additional need for 291,000 tonnes of capacity create an opportunity for a new cardboard and paper facility. Even if this capacity need is met, contingency risk remains as no other regions have paper and cardboard processing capacity that could be used if a Perth facility is not operational for a prolonged period. Given the state dependency on these facilities to process large volumes, development of an additional facility or multiple smaller facilities with lower capacity thresholds should be considered to overcome the contingency risk.</p>	<p><b>High</b></p> <p>Improving contingency planning in Perth will reduce the risk of capacity needs not being met.</p>



Capacity needs to achieve waste strategy targets 2030	Consideration of infrastructure plan principles	Findings from working to achieve waste strategy 2030 targets (with assigned priority ranking)
	<p><b>Principle 2: Waste infrastructure should be in suitable locations</b> Perth needs to recover 391,000 tonnes of cardboard and paper to meet the waste strategy Recover targets. Perth also generates the largest volume of material, generating about 100,000 tonnes of cardboard and paper per annum. With this scale of generation and treatment, combined with access to downstream markets, Perth is a suitable site for additional facilities when considering principle 2.</p> <p><b>Principle 4: We need to increase our capacity to recover resources from certain types of waste</b> The impending fibre export ban will impact processing of cardboard and paper in Perth. Application of principle 4 encourages the development of a cardboard and paper recovery facility to recover more materials and decrease the risk of fibre export bans.</p>	
33,000 tonnes of additional capacity in MRFs	<p><b>Principle 1: Waste management is an essential service</b> MRFs in Perth enable the recovery of material from regions that do not have sufficient capacity to operate a facility, providing essential waste management services according to principle 1.</p> <p><b>Principle 2: Waste infrastructure should be in suitable locations</b> The expected 8 per cent increase in Perth's population and continued urbanisation will drive the need for Perth to recover an additional 33,000 tonnes in MRFs to meet the waste strategy Recover targets. MRFs must continue to play a role in resource recovery to meet the waste strategy Recover and Protect targets. Eight facilities are planned to exist in 2030, with most being in central Perth. Development of a waste precinct in northern Perth for a new facility could increase accessibility to the Mid West region and Goldfields-Esperance region, which have additional capacity needs totalling 26,500 tonnes for material recovery but insufficient feedstock to develop a new facility.</p>	<p><b>High</b> Options for designating a strategic industrial area in northern Perth and/or waste precincts in both northern and southern Perth could facilitate low-risk development of MRFs.</p>

Capacity needs to achieve waste strategy targets 2030	Consideration of infrastructure plan principles	Findings from working to achieve waste strategy 2030 targets (with assigned priority ranking)
73,000 tonnes of additional capacity in waste-to-energy facilities	<p><b>Principle 1: Waste management is an essential service</b> Two waste-to-energy facilities with combined capacity of 730,000 tonnes per year are under development and are critical to meeting the waste strategy Recover and Protect targets. Any delays in commissioning should be noted and will result in a continued reliance on landfill. Bottom ash treatment has sufficient capacity in two facilities in Perth.</p> <p><b>Principle 2: Waste infrastructure should be in suitable locations</b> Statewide, 803,000 tonnes of residual waste needs to be recovered in waste-to-energy facilities to meet the 2030 material recovery, energy recovery and landfill diversion waste strategy targets. Perth generates almost 90 per cent of the residual waste required. With this large generation and transport networks to obtain feedstock, Perth remains a suitable location for waste-to-energy facilities. However, the northern suburbs of Perth have limited existing resource recovery infrastructure and are currently highly constrained for the development of new waste infrastructure. There is a need for consolidation facilities to enable transfer of material from these areas, in particular for residual waste-to-energy. Development of consolidation facilities in northern Perth is needed for efficient transfer of residual waste to waste-to-energy facilities, as well as other facilities fed by material received from regional Western Australia.</p>	<p><b>High</b> Facilitate appropriate guidelines and a regulatory framework and specification for the recovery and treatment of bottom ash. This is a high priority as waste-to-energy facilities are anticipated to be operational in 2025.</p> <p><b>Medium</b> Consolidation infrastructure for residual waste in northern Perth could facilitate efficient transfers to waste-to-energy infrastructure in southern Perth to decrease reliance on local landfill capacity.</p>
Large volume of organics allows for development of other processes	<p><b>Principle 2: Waste infrastructure should be in suitable locations</b> Development of bioenergy infrastructure could be located where organics are being processed as an additional option to treat suitable organics, to expand capacity, or to diversify outputs (expanding from compost to energy production). This may present an opportunity for the Wheatbelt region to treat organic waste or FOGO waste that exceeds the treatment capacity of the region.</p>	<p><b>Medium</b> Seven facilities are listed in the region with capacities exceeding 40,000 tonnes, with one of them at 135,000 tonnes. These larger existing facilities may consider options to implement other processes or technologies.</p>

Capacity needs to achieve waste strategy targets 2030	Consideration of infrastructure plan principles	Findings from working to achieve waste strategy 2030 targets (with assigned priority ranking)
	<p><b>Principle 4: We need to increase our capacity to recover resources from certain types of waste</b></p> <p>To achieve waste strategy targets, Western Australia needs to recover and process a large volume of organics. Expanding infrastructure to develop facilities that produce bioenergy expands capacity, diversifies options and reduces risk of failure to meet waste strategy targets.</p> <p><b>Principle 5: Waste facilities strive for better practice</b></p> <p>As volumes of organics are captured by large facilities in the region, there is potential to develop other processes. Better practice guidelines or regulatory requirements may change market activities and present an opportunity to utilise bioenergy more in Perth.</p>	
Landfill capacity risk assessment	<p><b>Principle 2: Waste infrastructure should be in suitable locations</b></p> <p>Based on current, planned and approved landfill capacity, the Perth region has sufficient landfill capacity to 2030. However, under a low-risk approach to landfill, Perth needs additional capacity to provide adequate options for residual waste disposal. Diversion of material to the adjoining Peel region could help alleviate capacity constraints.</p> <p><b>Principle 5: Waste facilities strive for better practice</b></p> <p>Consideration of principle 5 highlights there are six facilities that have a total lifetime capacity of 17,240,000 tonnes potentially at risk of noncompliance with better practice in Perth. The Perth region is likely to face capacity constraints for landfill by 2025 under a low-risk approach to landfill. In addition, 60 per cent of landfills also require post-closure planning, having not completed or updated a plan within the past 10 years.<sup>1</sup></p>	<p><b>High</b></p> <p>Options for more efficient inter-regional waste transfer infrastructure and contingency arrangements could alleviate short-term capacity constraints between the Perth and Peel regions. This is a high priority given the likelihood of capacity constraints by 2025 under a low-risk approach to landfill capacity lifetime.</p>

<sup>1</sup> Western Australia Waste Infrastructure Audit, ASK Waste Management Consultancy Services on behalf of the Department of Water and Environmental Regulation, (2021).

Capacity needs to achieve waste strategy targets 2030	Consideration of infrastructure plan principles	Findings from working to achieve waste strategy 2030 targets (with assigned priority ranking)
Community recycling centres	<p><b>Principle 1: Waste management is an essential service</b></p> <p>Community recycling centres will make up a crucial component of increasing source separation and improving material recovery rates for various waste types, particularly materials in specialised waste streams like batteries. Co-locating community recycling facilities with existing public transfer stations, depots or community facilities such as container refund points will mean more Western Australians have easy access to community recycling centres as an essential waste management service. The method for co-location and operation of a community recycling centre requires further investigation and consultation, noting the opportunity for community ownership and a community-led circular economy model.</p> <p><b>Principle 4: We need to increase our capacity to recover resources from certain types of waste</b></p> <p>Increasing the ability to recover material locally arises through consideration of principle 4 when working towards circular economy objectives. A comprehensive network of community recycling centres will help advance the circular economy if all communities have access to facilities to engage with and participate in local circular economy activities. Community recycling centres should work with local groups to provide spaces for reuse and upcycling of material. In addition, community recycling centres are an opportunity for Western Australians to drop off CDS items and materials for specialised recovery streams including batteries, solvents and paint or chemicals. There may be opportunity to further develop or incorporate existing sites that collect hazardous material under the Household Hazardous Waste program.<sup>2</sup> This program provides funding to assist with the storage, transport, treatment and recovery of Household Hazardous Waste collected by local governments and regional councils.</p> <p><b>Principle 5: Waste facilities strive for better practice</b></p>	<p><b>High</b></p> <p>Detailed assessment of the status of the current network and future need and the facilitation of consultation on the siting and operational model for community recycling centres in Western Australia would increase the scope of future infrastructure planning.</p>

<sup>2</sup> [Household Hazardous Waste program](#), Waste Authority, Department of Water and Environmental Regulation

Capacity needs to achieve waste strategy targets 2030	Consideration of infrastructure plan principles	Findings from working to achieve waste strategy 2030 targets (with assigned priority ranking)
	<p>Better practice guidelines will be particularly important to increase source separation and reduce contamination in community recycling centres, and to support management of specialised recovery streams. Co-location with product stewardship scheme collections allows access to existing infrastructure and administration support for certain waste streams.</p>	
E-waste	<p><b>Principle 1: Waste management is an essential service</b> E-waste is one of the fastest-growing waste streams in Australia and appropriate management of this waste is essential when considering principle 1. The growing volume, and Western Australia's upcoming ban on e-waste disposal to landfill, represents a huge resource recovery opportunity. A greater understanding of the infrastructure needs for e-waste is needed to plan for capacity needs.</p> <p><b>Principle 5: Waste facilities strive for better practice</b> A better practice guideline for the collection and processing systems of E-waste will assist in maximising resource recovery from this specialised waste stream.</p>	<p><b>Medium</b> Further review and auditing of collection systems and processing infrastructure to understand the state of e-waste recovery in Western Australia would support future infrastructure planning.</p>