



RECYCLING AND WASTE

IN QUEENSLAND

2020



Queensland
Government

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Introduction

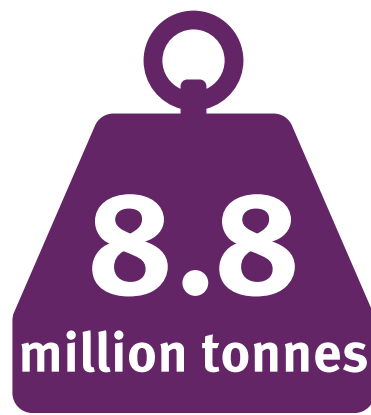
This report presents data on, and trends in, waste recovery and disposal in Queensland during the 2019–20 financial year.

The *Waste Reduction and Recycling Act 2011* places mandatory annual reporting requirements on reporting entities. The data in this report was derived from surveys submitted by 406 reporting entities, including local governments, state government departments, private landfill operators, recyclers, organic processors, waste

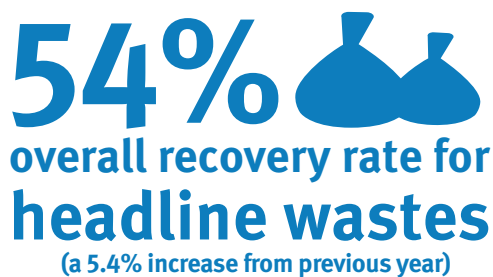
transporters, and operators of transfer stations, incinerators, and industrial and mining monofills. Additionally, with the implementation of the waste levy on 1 July 2019, this report now includes levy information as required under legislation.

More information about Queensland's waste management and resource recovery programs, policies and initiatives is available on the Queensland Government's waste and resource recovery website.

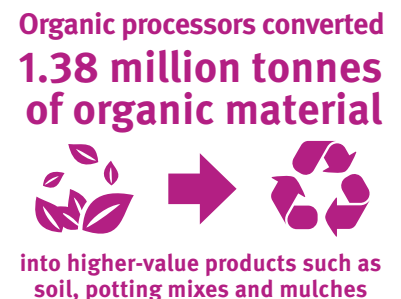
In 2019–20:



of headline wastes reported
(a 20.3% decrease from previous year)



81%
of materials recovered
were recycled in
Queensland



62%
less waste
from interstate sources
(447,000 tonnes received)

Key findings for 2019–20

Headline wastes

- A total of 8.8 million tonnes of headline wastes (municipal, commercial and industrial, construction and demolition) were handled by reporting entities—a decrease of 2,238,000 tonnes (20.3%) from 2018–19.
- During 2019–20, Queensland’s population grew by 1.7%¹ but the pandemic and related restrictions led to a -5.2%² contraction in economic activity (state final demand).
- The overall recovery rate increased by 5.4% from 48.7% in 2018–19 to 54.1% in 2019–20.
- Recovery rates for the headline waste streams were:
 - » 30.9% for municipal solid waste (the current target is 55% by 2025)
 - » 52.0% for commercial and industrial waste (the current target is 65% by 2025)
 - » 75.4% for construction and demolition waste (the current target is 75% by 2025).

Local governments

- In 2019–20:
 - » 1.27 million tonnes of domestic waste was reportedly collected from 1,999,700 households through the weekly red-lid bin kerbside services—a 0.6% decrease per capita from 2018–19 and a 15.7% decrease per capita since 2009–10.
 - » Thirty-two councils reported the provision of a fortnightly yellow-lid bin kerbside collection service for comingled paper and packaging materials to 1,807,000 households—a 1.8% increase from 2018–19.
 - » Councils reported sending 306,000 tonnes of paper and packaging for recovery—a 2.8% decrease per capita from 2018–19 and a 12.4% decrease per capita since 2009–10.
 - » Nine councils provided 268,000 Queensland households with a fortnightly green-lid bin green waste kerbside collection service—an increase of 28,000 households from 2018–19.
 - » Green-lid bin services collected 70,000 tonnes of organic waste (mostly garden waste)—a 13% increase per capita from 2018–19 and a 111% increase per capita since 2012–13.
 - » Local government diverted 2,856,000 tonnes of waste from disposal, including 1,488,000 tonnes of headline wastes (such as concrete, asphalt, paper and packaging, and green waste) and 1,368,000 tonnes of other wastes (such as biosolids, batteries and clean earth).
 - » 25,000 tonnes of waste were diverted from landfill through the operation of ‘tip shops’.
 - » 13,900 tonnes of litter and illegally dumped waste were cleaned up at a cost of \$28.7 million.
 - » \$143.5 million was provided to 43 councils to reduce household cost impacts from the application of the waste levy to municipal solid waste disposal in the levy zone.

Private sector disposal

- Private sector waste facilities handled 47% of the headline wastes sent for disposal—an 11% decrease from 2018–19. Of the headline waste, private sector facilities reported disposing of:
 - » 22% of the municipal solid waste
 - » 50% of the commercial and industrial waste
 - » 86% of the construction and demolition waste.

Materials recovered

- In 2019–20:
 - » A total of 4,761,000 tonnes of headline wastes (municipal, commercial and industrial; construction and demolition) were recovered—an 11.4% decrease from 2018–19.
 - » Over 650,000 tonnes of segregated green waste were recovered, of which 66% was from domestic sources and the remainder from commercial sources.
 - » Organic processors converted 1.38 million tonnes of inputs (such as green waste, timber, sawmill residues, biosolids, manure, grease trap waste, abattoir waste, drilling mud and ash) into products such as soil conditioners, manufactured soil, potting mixes and mulches.
 - » Approximately 971,000 tonnes of ash (17.1% of the 5.6 million tonnes reported) were recovered.
 - » 79,800 tonnes of waste (including timber, tyres, mineral oil and chemicals) were sent to energy recovery.

Movement of wastes

- Of the materials recovered in 2019–20:
 - » 81% were processed in Queensland
 - » 5% of diverted materials were sent interstate for further processing
 - » 14% of diverted materials were sent overseas for further processing
 - » Typically, recovered organics and building materials were fully processed in Queensland, while the majority of paper, cardboard, tyres, e-waste, ferrous and non-ferrous metals diverted from disposal were exported from Queensland for further processing.
- Close to 447,000 tonnes of waste was received from interstate sources by reporting entities in Queensland—a 62% decrease from the 1,188,000 tonnes reported in 2018–19.

1 ERP by LGA (ASGS 2019), 2001 to 2019
http://stat.data.abs.gov.au/Index.aspx?DataSetCode=ABS_ERP_LGA2019

2 ABS State Details, June quarter 2020
<https://www.qgso.qld.gov.au/issues/3386/national-accounts-state-details-202006.pdf>

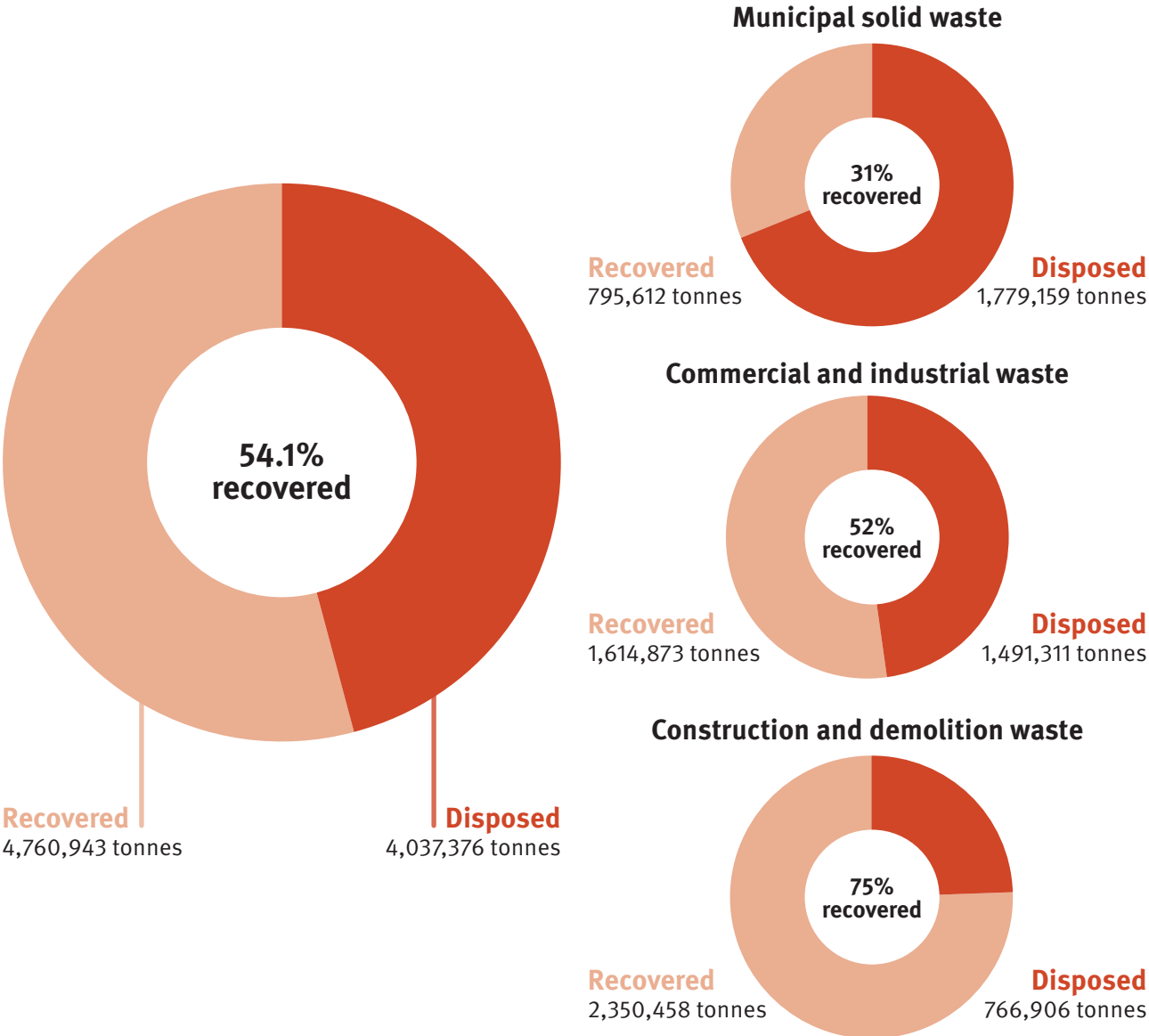
1. Summary account of municipal solid waste, commercial and industrial waste and construction and demolition waste generated in 2019–20

This section reports on the headline waste streams: municipal solid waste, commercial and industrial waste, and construction and demolition waste. These are general wastes arising from everyday household and business activities.

Reporting entities handled 8,798,000 tonnes of headline waste during the reporting period (Figure 1.1). This was 2,238,000 tonnes less than the total reported in 2018–19.

A total of 4,037,000 tonnes was disposed of in landfills, and 4,761,000 tonnes was recovered. The overall recovery rate for headline waste was 54.1%—an increase of 5.4% from the 48.7% achieved in 2018–19.

Figure 1.1: Headline wastes generated and recovery rates in Queensland during 2019–20



1.1 Municipal solid waste

In 2019–20, approximately 796,000 tonnes (or 30.9%) of the reported 2.6 million tonnes of municipal solid waste was recovered. This was an increase from the 28.4% recovery rate reported in 2018–19. The *Waste Management and Resource Recovery Strategy* sets a target of 55% by 2025.

Local government reported the clean-up and management of 13,900 tonnes of litter and illegally dumped waste at a cost of \$28.7 million. This includes waste collected from roads, parks, gardens and public places, beaches, waterways, gross pollutant traps and street sweeping. The costs include waste collection and disposal, report management, compliance actions and public education (Table 1.1).

Table 1.1 Local government management of litter and illegally dumped waste during 2019–20

Component	Amount (tonnes)	Cost
Roadside litter	1,716	\$3,995,610
Roadside illegal dumping	2,067	\$1,311,993
Public place litter	1,399	\$6,754,181
Public place illegal dumping	1,738	\$807,554
Beach cleaning	71	\$1,013,269
Street sweeping (pro rata litter)	4,953	\$4,849,900
Waterways and gross pollutant traps	1,951	\$2,280,311
Report management cost		\$1,942,218
Disposal cost		\$2,564,122
Compliance action cost		\$2,434,868
Public education cost		\$708,868
Total	13,895	\$28,662,894

1.2 Commercial and industrial waste

Approximately 1.6 million tonnes (or 52%) of the 3.1 million tonnes of commercial and industrial waste reported were recovered. This is an improvement on the 49.8% recovery rate reported in 2018–19. The *Waste Management and Resource Recovery Strategy* sets a target of 65% by 2025.

Scrap metal, paper and packaging materials, sawmill residues and green waste were the main materials recovered (Table 1.2).

1.3 Construction and demolition waste

Approximately 2.4 million tonnes (or 75.4%) of the 3.1 million tonnes of construction and demolition waste reported were recovered. This recovery rate is an increase from the 58% reported in 2018–19 and achieved the 2025 target of 75% in the *Waste Management and Resource Recovery Strategy*.

In 2019–20, the total amount of construction and demolition waste reported decreased by 2.1 million tonnes from 2018–19. This included a 602,000 tonne decrease in the amount received from interstate sources.

Concrete, scrap metal, asphalt and masonry materials were the main items recovered (Table 1.3).

Table 1.2: Commercial and industrial waste materials recovered during 2019–20

Material	Amount recovered (tonnes)
Paper and packaging	345,747
Non-packaging glass	7,679
Non-packaging plastic	8,314
Ferrous scrap metal	411,302
Non-ferrous scrap metal	75,767
Timber	95,773
Green waste	218,699
Sawmill residues	275,737
Cotton gin trash	6,108
Food waste	62,148
Drilling mud	54,711
Tyres	51,698
Other rubber	115
Private landfill tip shop	1,075

Table 1.3: Construction and demolition waste materials recovered during 2019–20

Material	Amount recovered (tonnes)
Concrete	1,652,636
Asphalt	246,608
Bricks and tiles	65,249
Fibre cement	6,535
Plasterboard	11,349
Timber	33,703
Non-packaging glass	7,679
Non-packaging plastic	924
Ferrous scrap metal	299,620
Non-ferrous scrap metal	19,447
Other construction and demolition material	6,708

2. Selected trends for headline waste streams

This section reviews the management of selected headline waste streams using a series of graphs to illustrate 11–13 year trends.

2.1 Kerbside domestic bin services

In 2019–20, local governments provided kerbside bin collection services:

- for domestic waste (red lid bin) to 2,000,000 households
- for recovering paper and packaging materials (yellow lid bin) to 1,807,000 households
- for recovering green waste (green lid bin) to 268,000 households.

In Queensland, 90.3% of households with a red lid bin service also had a yellow lid bin service, while 13.4% also had a green lid bin service. In 2019–20, 62,000 households had no kerbside bin collection service.

The numbers of waste and paper and packaging bin services have mostly kept pace with population growth in Queensland during the period 2009–10 to 2019–20, averaging 386 and 338 services per thousand people for red and yellow lid bin services respectively (Figure 2.1).

While still extremely modest in coverage, green lid bin services increased from seven services per thousand people (28,500) in 2008–09 to 53 services per thousand people (268,000) in 2019–20. In addition, Ipswich City Council collects food waste through its green lid bin service.

A breakdown of local government bin services (by region) is available in Appendix 1.

Compared with 2018–19, local governments recorded:

- a 13,000 tonne (1.1%) increase in the amount of domestic waste (red lid bin) sent to landfill
- a 400 tonne (0.7%) increase in the amount of domestic waste (red lid bin) sent to an alternative waste treatment facility for recovery³
- a 3,500 tonne (1.1%) decrease in the amount of paper and packaging sent for recovery
- a 8,900 tonne (14.6%) increase in the amount of green waste (green lid bin) collected.

The reduction in the amount of material arising from the yellow lid bin collections is likely linked to the operation of the container refund scheme, which commenced on 1 November 2018.

During 2019–20, local governments collected:

- an average of 635 kg of domestic waste per red lid bin service (a 2% decrease from 648 kg in 2018–19)
- 170 kg of paper and packaging materials per yellow lid bin service (a 3% decrease from 175 kg in 2018–19)
- 260 kg of green waste per green lid bin service (a 3% increase from 253 kg in 2018–19).

Figure 2.2 shows the trends in the management of wastes collected by local governments from households.

Between 2009–10 and 2019–20:

- the amount of domestic waste (red lid bin) decreased by 0.8% from 1,281,000 tonnes in 2009–10 to 1,270,000 tonnes in 2019–20
- the amount of red lid bin waste collected decreased by 15.7% on a per capita basis
- the amount of yellow and green lid bin material collected increased by 26.6% from 297,000 tonnes in 2009–10 to 376,000 tonnes in 2019–20
- the amount of yellow and green lid bin material collected increased by 7.5% on a per capita basis.

³ In the Cairns region, waste from some domestic red lid bin services is not sent direct to landfill but is sent to an alternative waste treatment facility for recovery of the organic fraction of the waste. The non-recoverable residuals from this process are sent to landfill.

Figure 2.1: Trends in the provision of kerbside bin services by local governments (2009–20)

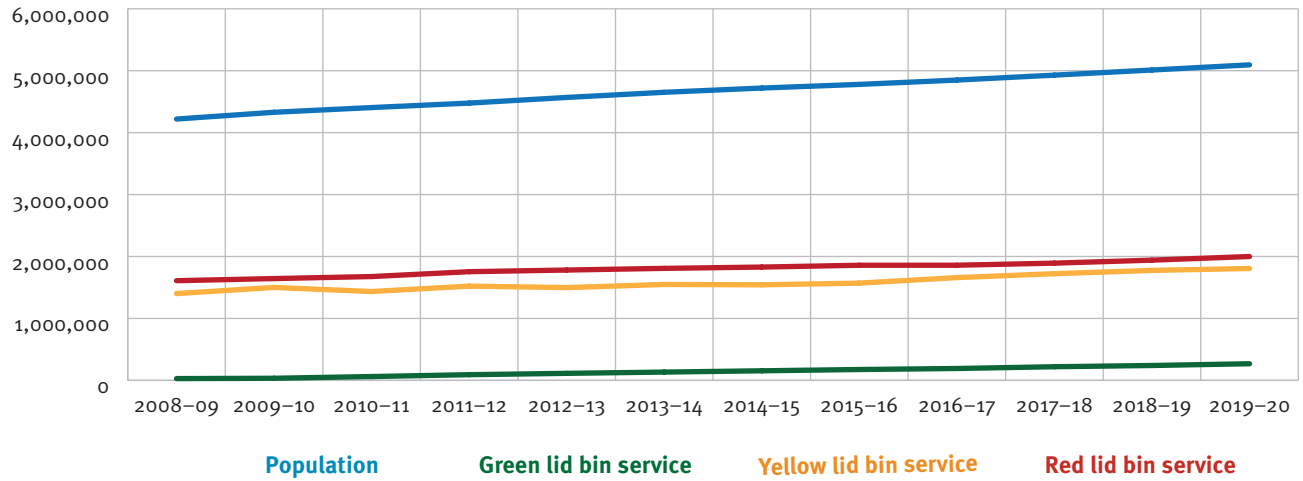
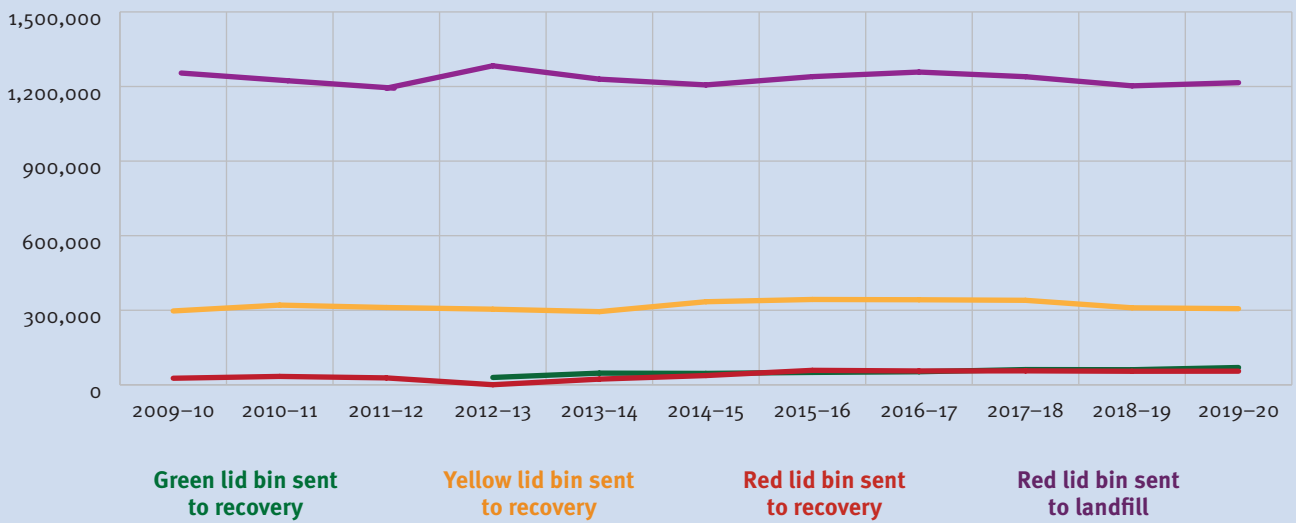


Figure 2.2 Trends in the disposal and recovery of domestic waste picked up by kerbside collections in Queensland (2010–20)



2.2 Segregated green waste and other domestic waste

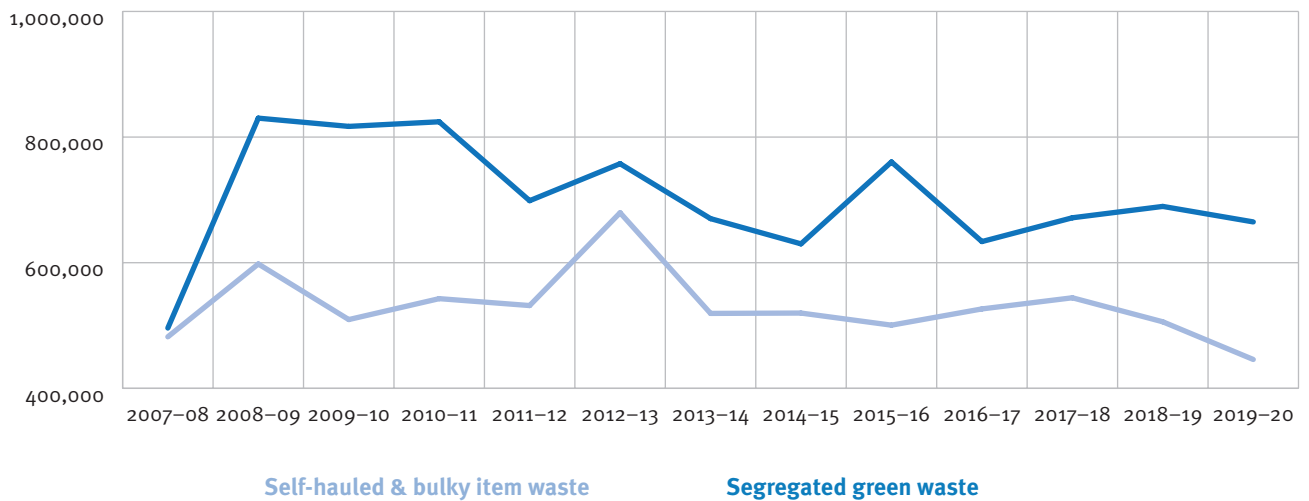
In 2019–20, 665,000 tonnes of segregated green waste was reported. This was a decrease of 25,000 tonnes (3.7%) from 2018–19 (Figure 2.3).

Green waste is generated from both domestic and commercial sources. Of the green waste recovered, 66% was received from domestic sources and is classified as municipal solid waste, with the remainder classified as commercial and industrial waste.

The 446,000 tonnes of domestic waste self-hauled by residents to council facilities or picked up by bulky item kerbside collections was 92,000 tonnes below the 2007–08 to 2018–19 average (Figure 2.3).



Figure 2.3: Trends in the amounts of segregated and other domestic self-hauled and bulky item waste in Queensland (2008–20)

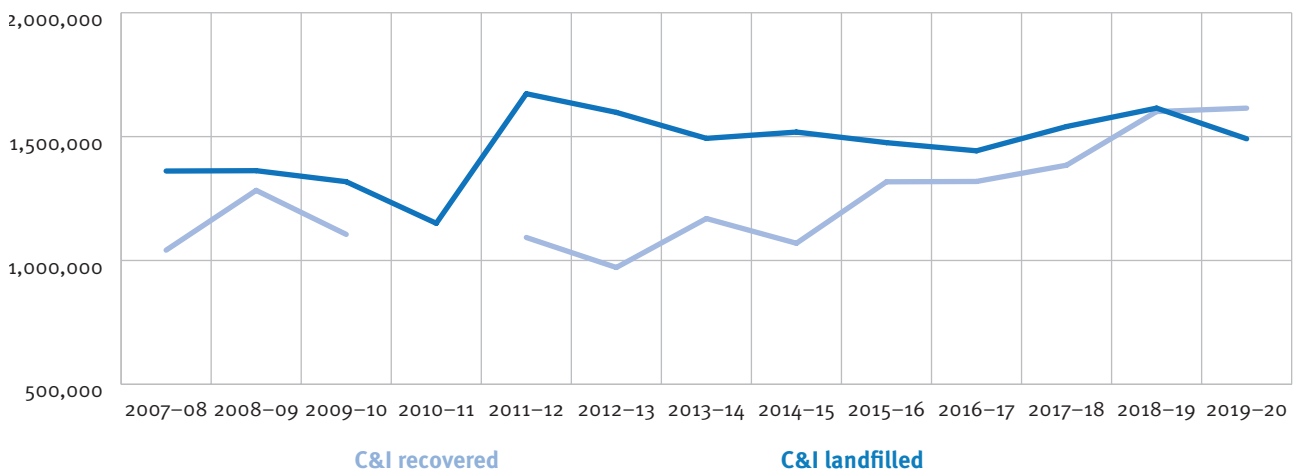


2.3 Commercial and industrial waste

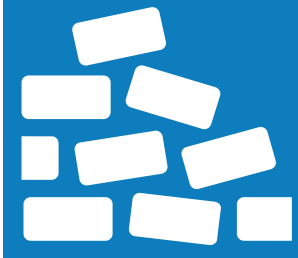
In 2019–20, 1,491,000 tonnes of commercial and industrial (C&I) waste was sent to disposal. This was a 124,000 tonne (7.7%) decrease from 2018–19 and 29,000 tonnes more than the 2008–19 average of 1,462,000 tonnes (Figure 2.4).

The 1,615,000 tonnes recovered in 2019–20 was a 14,000 tonne (0.9%) increase from 2018–19 and was 387,000 tonnes more than the 2008–19 average of 1,214,000 tonnes.

Figure 2.4: Trends in the management of commercial and industrial waste in Queensland (2008–20)



Note: Gap in C&I recovered in 2010–11 was due to limited data received from reporting entities.

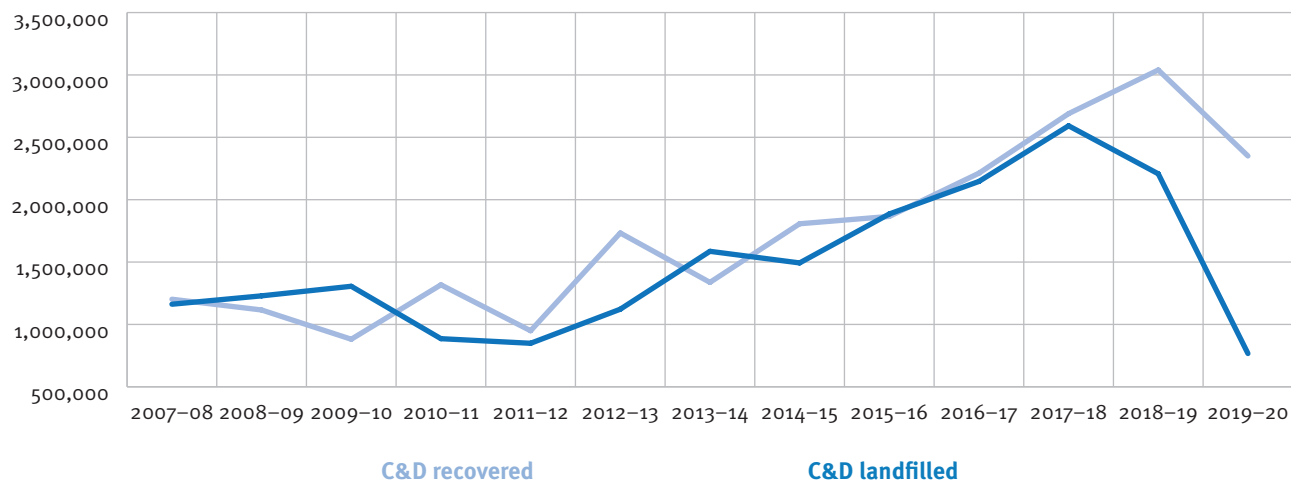


2.4 Construction and demolition waste

The amount of construction and demolition (C&D) waste reported fell by 2.1 million tonnes (40.6%) from 5.2 million tonnes in 2018–19 to 3.1 million tonnes in 2019–20 (Figure 2.5). The 767,000 tonnes landfilled was a 1,440,000 tonne (65%) decrease from 2018–19. A contributing factor was a 602,000 tonne decrease in the amount of construction and demolition waste received from interstate, which decreased from 855,000 tonnes in 2018–19 to 251,000 tonnes in 2019–20.

The 2,350,000 tonnes of construction and demolition waste recovered in 2019–20 was a 690,000 tonne (23%) decrease from 2018–19. This included decreases in the amounts of concrete, asphalt and ferrous metal recovered.

Figure 2.5: Trends in the management of construction and demolition waste in Queensland (2008–20)



3. Headline waste disposal by region

This section reports on the disposal of headline waste streams⁴ to landfill or via incineration without energy recovery in 2019–20. Of the 4,037,000 tonnes of headline wastes disposed of in Queensland, 44.3% went to privately-owned landfills, 53.3% went to local government facilities and the remainder were incinerated or were disposed of in industrial and mining monofills. Private landfills were responsible for the disposal of 22% of the municipal solid waste, 49% of the commercial and industrial waste and 84% of the construction and demolition waste in 2019–20.

In 2019–20, 2,151,000 tonnes of headline wastes were disposed of in local government landfills, a 203,000 tonne (8.6%) decrease from 2018–19 and 1,789,000 tonnes of wastes was disposed of in private sector landfills, a 1,486,000 tonne (45.4%) decrease from 2018–19. The main changes to the wastes received by private landfill included a 26,000 tonne increase in the amount of municipal solid waste received, a 121,000 tonne decrease in the amount of commercial and industrial waste received, and a 1,391,000 tonne decrease in the amount of construction and demolition waste received. Most of the waste disposed of in private facilities was landfilled in South East Queensland.

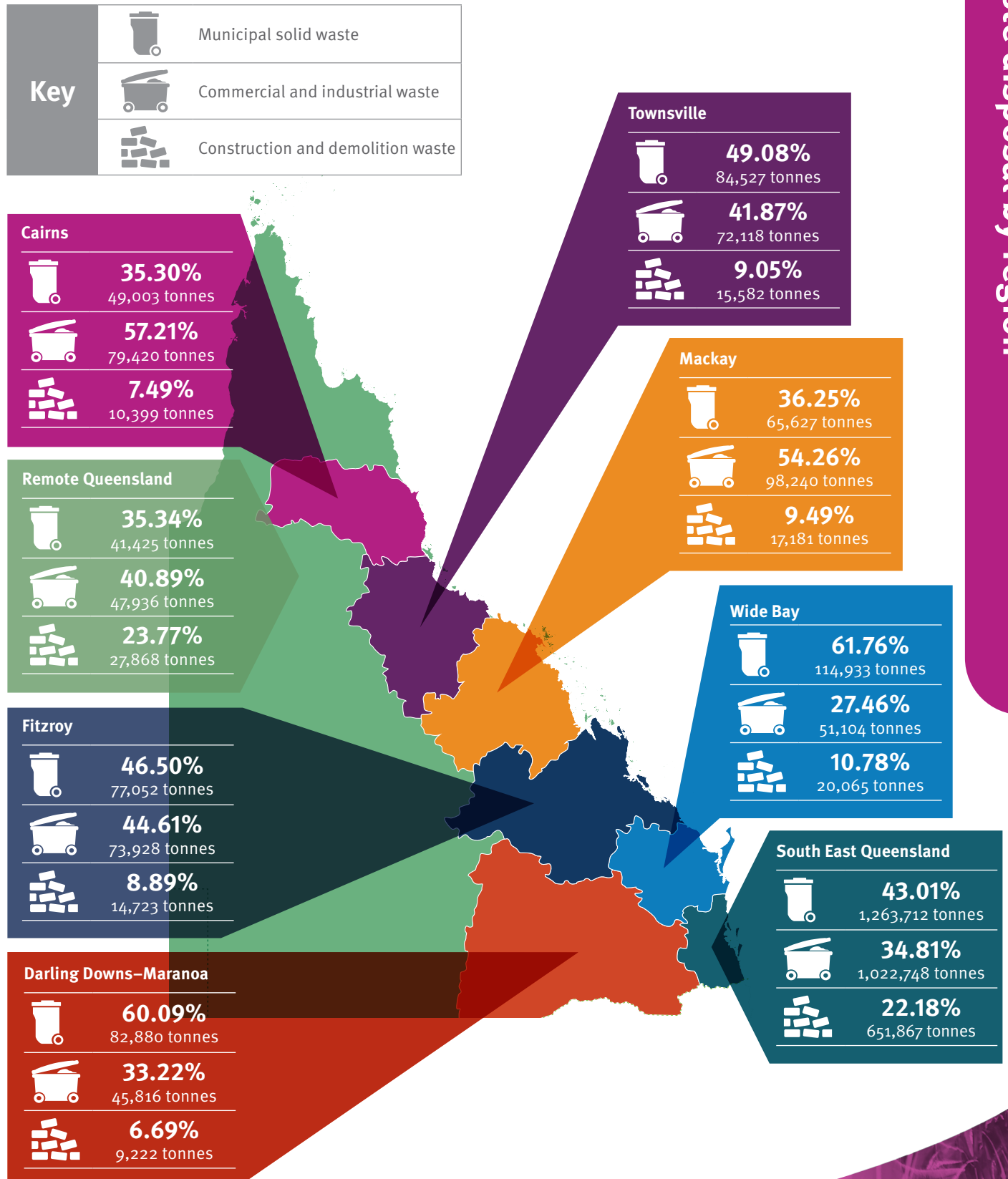
Figure 3.1 shows the amounts of the headline waste streams disposed of in each region during 2019–20. Landfills in South East Queensland received 71% of the municipal solid waste, 69% of the commercial and industrial waste and 85% of the construction and demolition waste sent to disposal.

With the reduction in the amount of construction and demolition waste disposal, the differences between South East Queensland and the rest of the state are not as pronounced as in previous years. In South East Queensland, 43% of waste disposed was municipal solid waste, 35% was commercial and industrial waste and 22% was construction and demolition waste. For the rest of Queensland, 47% of waste disposed was municipal solid waste, 43% was commercial and industrial waste and 10% was construction and demolition waste.

Note: the Cairns region has a relatively high proportion of commercial and industrial waste (57%). A number of councils sent putrescible municipal solid waste to an alternative waste treatment plant for processing, and the residual waste from that process is classified as commercial and industrial waste.

⁴ Headline wastes exclude ash, red mud, primary production wastes, contaminated soil, acid sulfate soil, clean earth, biosolids, and other regulated wastes.

Figure 3.1: Amounts of headline waste landfilled or incinerated in Queensland by region in 2019–20



4. Waste disposal levy

This section reports on the waste disposal levy and provides particular details on waste disposal sites that are subject to the levy, levy paid to the state and amounts of levyable and exempt waste. This is in line with s.154 of the *Waste Reduction and Recycling Act 2011*.

The waste levy commenced on 1 July 2019 and underpins Queensland's *Waste Management and Resource Recovery Strategy*.

It aims to:

- reduce the amount of waste going to landfill
- encourage waste avoidance
- provide a source of funding to enable better resource recovery practices
- provide certainty and security of feedstocks for advanced technology
- facilitate industry investment in resource recovery infrastructure.

Further information can be found on the Queensland Government website at www.qld.gov.au/wastedisposallevy.

As 2019–20 is the first year of the waste levy's operation, there are no prior year figures to provide comparisons or commentary. Future reports will provide this opportunity.

Total number of waste disposal sites that pay the levy

As at 30 June 2020, there were 53 active landfill operators with a total of 119 sites within the levy zone. Of these, 52 operators across 117 sites received waste on which the waste levy was paid to the state. The remaining operator reported receiving exempt waste only.

Total amount of waste levy paid to the state

The total revenue received from the waste disposal levy in 2019–20 was \$294.97 million.

Total amount of annual payments made to local governments

Under s.73D of the *Waste Reduction and Recycling Act 2011*, annual payments are made to local governments to mitigate any direct impacts of the waste levy on households in their areas.

For 2019–20, the total amount of annual payments to local governments was \$143.5 million.

Types and amounts of waste on which the levy was paid to the state

Waste type	Amount (tonnes)
Municipal solid waste	1,680,441
Commercial and industrial waste	1,193,374
Construction and demolition waste	652,984
Earth contaminated with a hazardous contaminant from land recorded on the environmental management register or contaminated land register	26,693
Recycling activity residue waste with an approved waste levy discount	178,590
Category 1 regulated waste, other than— <ul style="list-style-type: none"> earth contaminated with a hazardous contaminant from land recorded on the environmental management register or contaminated land register treated timber sawdust and shavings 	65,144
Category 2 regulated waste, other than— <ul style="list-style-type: none"> earth contaminated with a hazardous contaminant from land recorded on the environmental management register or contaminated land register treated timber sawdust and shavings 	82,129

Amount of waste on which the levy would have been paid if it were not exempt waste

Waste classification	Amount (tonnes)
Waste with a general levy exemption	1,709,816
Waste with an approved levy exemption	966,610

The waste levy legislation provides specific exemptions from the waste levy. These can be either exempt waste by definition and decided by landfill operators or exempt waste by application and approved by the Department of Environment and Science. Please refer to the Queensland Government's waste levy website for more information on exempt waste: <https://www.qld.gov.au/environment/pollution/management/waste/recovery/disposal-levy/operators/levy-zone/exempt-waste>.

- Figures in the above tables are sourced from waste levy data returns provided by landfill operators in accordance with waste levy reporting requirements. They are not directly comparable to other figures reported in this report due to differences in reporting requirements.
- Figures in the above tables were as of 23 November 2020 and are subject to change following approved adjustments of landfill operator waste levy data returns.

5. Waste recovery

This section reports on materials that were diverted from disposal through a variety of means, including recycling, organic processing and energy recovery.

5.1 Local government activity

Local government was the main collection point for domestic waste and for wastes generated outside of South East Queensland. In 2019–20, local government diverted 1.49 million tonnes of headline waste (40.4% of the 3.68 million tonnes received) from disposal.

5.1.1 Paper and packaging materials

Local government administers the domestic collection process for paper and packaging through the provision of 1,807,000 yellow lid bin kerbside collection services in urban areas and the provision of 3,630 public place recycling bins/drop-off points across the state.

In total, local government sent 306,000 tonnes of paper and packaging (cardboard and glass, plastic, steel and aluminium containers) for recovery in 2019–20 (down from 310,000 tonnes in 2018–19). Almost all of this material was forwarded to private sector recyclers for processing. The exceptions were small amounts of glass and cardboard which were recovered and used locally by councils.

The 184,000 tonnes of paper and cardboard sent for recovery was a 7,000 tonne increase compared to the previous year, while the 90,000 tonnes of packaging glass sent for recovery was an 8,000 tonne decrease (Figure 5.1).

The 2,136 tonnes of aluminium containers recovered was a 27% decrease from 2018–19. The 25,300 tonnes of packaging plastics recovered was a 1,100 tonne decrease (4.1%) compared to 2018–19. Similarly, the 4,900 tonnes of steel containers recovered was a 300 tonne (5%) decrease from 2018–19.

Population growth has a direct impact on the amount of waste generated and handled by reporting entities. Figure 5.2 provides an indexed comparison of the changes in collections for individual paper and packaging materials with that of the domestic waste (red lid bin) collection on a per capita basis.

In summary:

- The 249kg per capita of domestic (red lid bin) waste collected in 2019–20 was a decrease of 0.6% from 2018–19 and a 15.7% decrease from 2009–10.
- The 36.1kg per capita of paper and cardboard sent for recovery was an increase of 2.1% from 2018–19, and a 10.8% decrease from 2009–10.
- The 17.8kg per capita of packaging glass sent for recovery was a decrease of 9.3% from 2018–19 and a decrease of 22% from 2009–10.
- The 5.0kg per capita of packaging plastic sent for recovery was a decrease of 5.7% from 2018–19 and an increase of 44% from 2009–10.

- The 0.97kg per capita of steel cans sent for recovery was a decrease of 7% from 2018–19 and a decrease of 24% from 2009–10.
- The 0.35kg per capita of aluminium cans sent for recovery was a decrease of 40% from 2018–19 and a decrease of 49% since 2009–10.

The operation of the container refund scheme has been a significant contributor to the reduction in the amounts of plastics, glass and aluminium cans sent to recovery by local governments during 2019–20.

Local governments in South East Queensland cover 69.78% of the state's population and generated 74.1% of the paper and packaging sent for recycling by the sector in 2019–20 (Table 5.1). This region had disproportionately large shares of the packaging glass (79.6%) and packaging plastics (79.9%) segments. In contrast, Cairns and remote Queensland had comparatively large shares of aluminium cans sent for recovery, due in some part to transport costs.

5.1.2 Other materials

Other wastes sent for recovery by local governments in 2019–20 included:

- 560,400 tonnes of green waste
- 35,500 tonnes of timber
- 4,300 tonnes of e-waste
- 92,300 tonnes of other ferrous metal
- 3,700 tonnes of other non-ferrous metal
- 264,900 tonnes of concrete
- 138,200 tonnes of asphalt
- 25,000 tonnes of tip shop items.

Local governments played an important role in the collection and management of green waste, handling 86% of the total reported in 2019–20.

While local governments sent all e-waste to recyclers for processing, they typically processed most of the concrete and asphalt.

Table 5.2 provides a regional breakdown of selected wastes sent for recovery by local governments. South East Queensland recovered the largest amounts, particularly for concrete and asphalt, with 71% and 82% of the state totals collected.

Green waste was the largest material by weight recovered by councils in all regions except remote Queensland, where concrete was the largest. Concrete was typically the second or third largest material recovered.

Figure 5.1: Trends in the amounts of paper and packaging sent for recycling by local governments from 2004 to 2020 (tonnes)

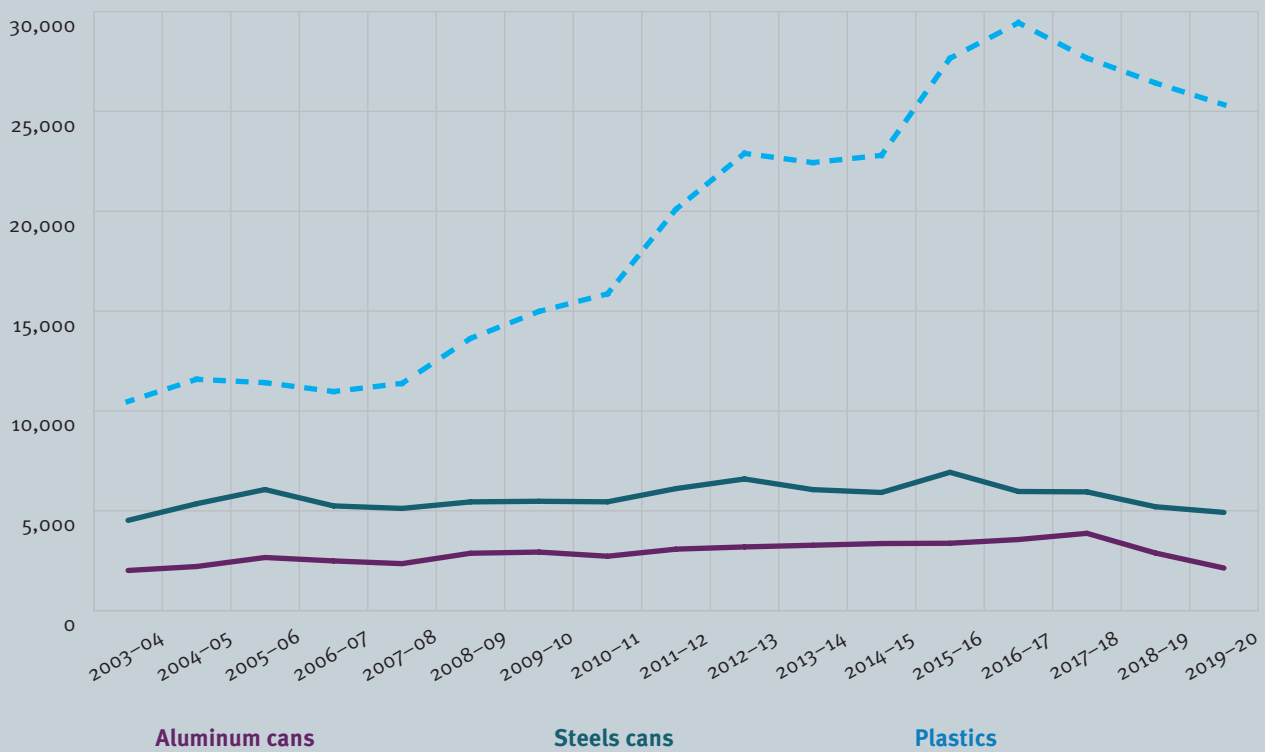
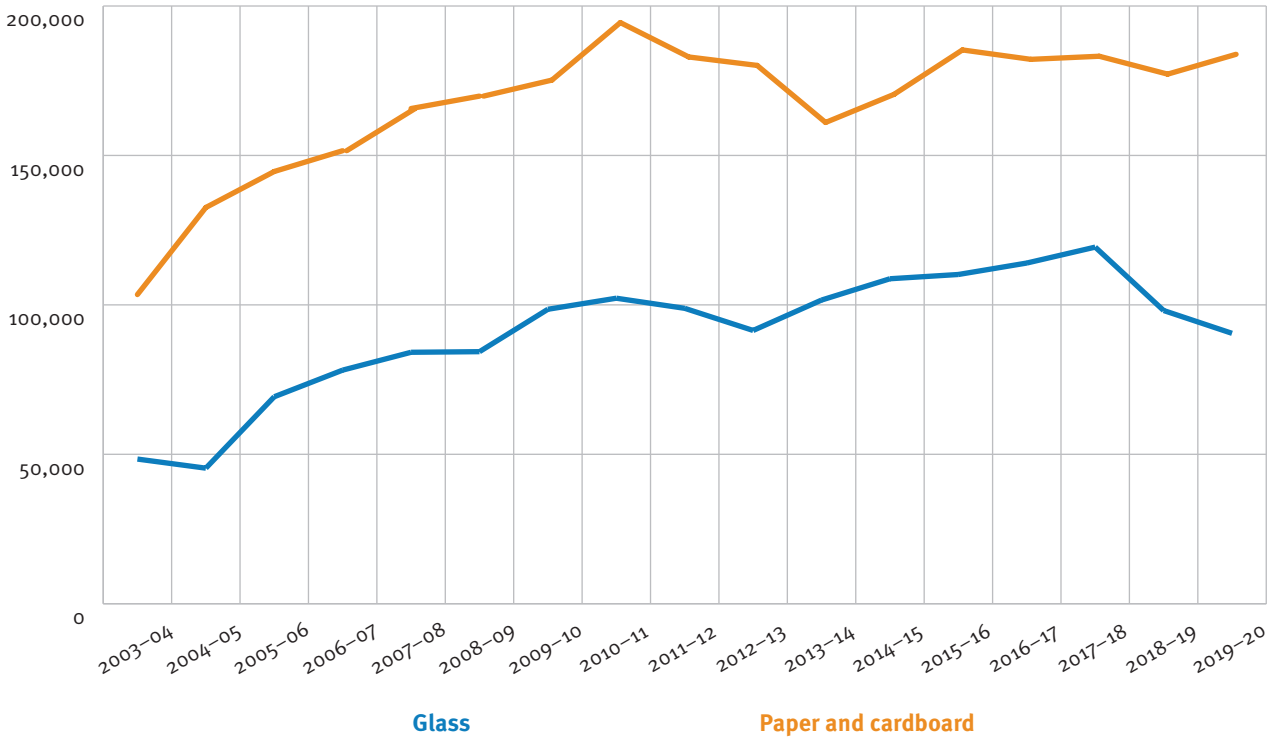


Figure 5.2: Indexed per capita rates for paper and packaging sent for recovery versus domestic kerbside waste collected by local governments (2009–10 = 1.00)

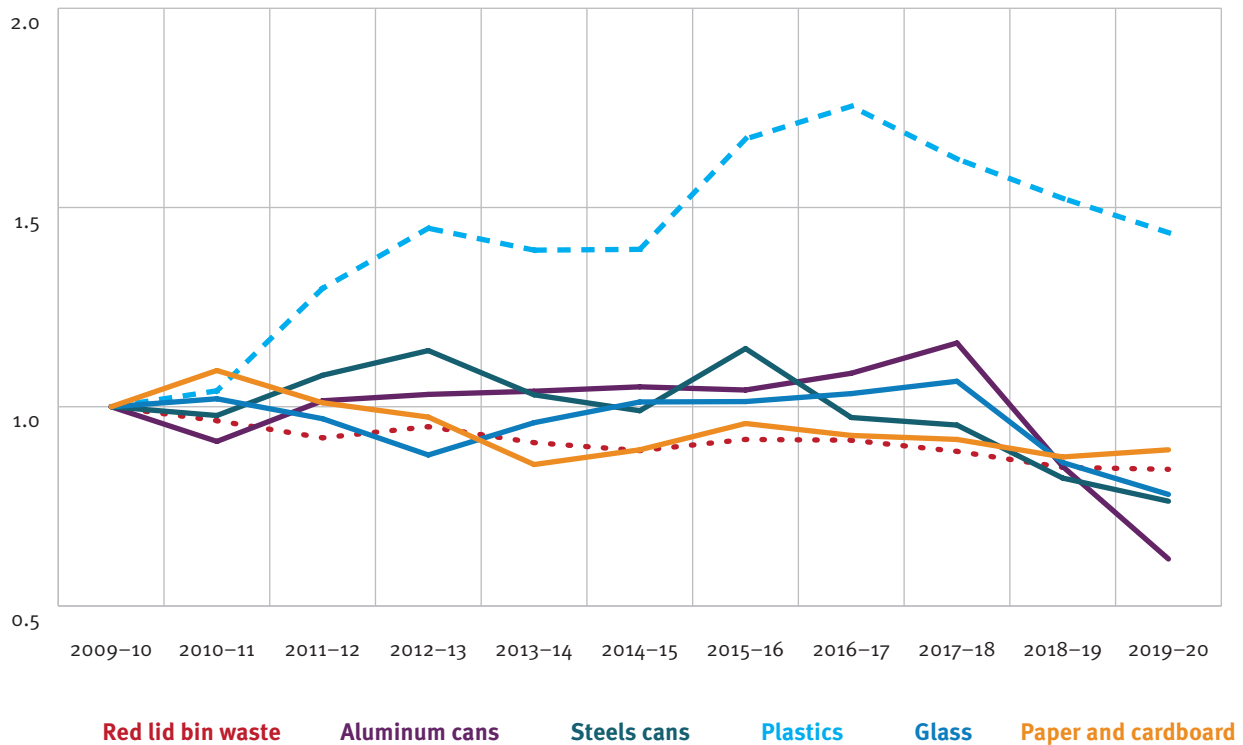


Table 5.1: Paper and packaging collected by local governments and sent for recovery in 2019–20 by region (tonnes)

Region	Paper and cardboard	Packaging glass	Packaging plastics	Steel cans	Aluminum cans	Regional total
South East Queensland	132,502	72,038	20,251	3,548	1,216	229,554
Darling Downs–Maranoa	4,020	5,006	1,215	234	130	10,605
Wide Bay	16,297	2,479	1,256	438	120	20,590
Fitzroy	8,127	3,880	821	300	83	13,211
Mackay	10,998	2,805	589	15	114	14,521
Townsville	6,555	2,675	668	359	66	10,324
Cairns	5,296	1,560	532	24	406	7,820
Remote Queensland	20	22	2	0	1	45
Subtotal	183,815	90,465	25,334	4,918	2,136	306,670

Table 5.2: Amounts of other selected wastes sent for recovery by local governments in 2019–20 by region (tonnes)

Region	Green waste	Timber	Concrete	Asphalt	Ferrous metal	Non-ferrous metal	E-waste	Tip shop sales
South East Queensland	351,159	20,318	187,409	113,743	51,451	1,896	2,959	19,072
Darling Downs–Maranoa	39,312	11,068	11,140	842	6,421	16	320	470
Wide Bay	42,836	3,678	8,671	1,677	8,380	385	344	821
Fitzroy	51,109	321	18,012	13,928	4,906	301	139	91
Mackay	10,441	0	2,726	1,000	4,383	220	53	3,228
Townsville	33,066	55	12,399	3,528	3,158	141	194	418
Cairns	31,146	2	19,743	3,451	10,173	111	227	846
Remote Queensland	1,323	37	4,824	0	3,384	596	44	9
Subtotal	560,392	35,480	264,924	138,168	92,256	3,666	4,279	24,955

* The flow of packaging glass during 2018–19 was disrupted by a technical issue at a major reprocessing facility and by residents accumulating containers following the commencement of the container refund scheme.

5.2 Organic processors

The 66 entities responding to the 2019–20 organic processing survey collectively processed:

- 400,600 tonnes of green waste
- 275,700 tonnes of sawmill residuals
- 58,500 tonnes of timber, wood and sawdust
- 53,800 tonnes of agricultural residuals
- 6,200 tonnes of cotton gin trash
- 54,300 tonnes of abattoir waste
- 178,900 tonnes of manure
- 31,800 tonnes of food waste
- 28,700 tonnes of food processing waste
- 75,900 tonnes of biosolids (dry solids equivalent)
- 131,800 tonnes of grease trap waste and other organic sludges
- 14,400 tonnes of drilling mud
- 15,800 tonnes of ash.

These organic processors collectively produced:

- 834,400 tonnes of manufactured soil
- 251,300 tonnes of soil conditioner
- 125,900 tonnes of potting mix
- 69,600 tonnes of organic fertiliser
- 221,300 tonnes of mulch
- 65,500 tonnes of direct land application
- 52,300 tonnes of composted manure
- 13,600 tonnes of playground surfacing
- 11,500 tonnes of other products.

Organic wastes were typically processed locally, in the region where they were produced (Table 5.3). South East Queensland processed the largest amounts of most materials. The exceptions were Darling Downs–Maranoa, which processed the most manure and drilling mud, Fitzroy processed the most cotton gin trash, and Wide Bay processed the most agricultural residuals, timber, wood and sawdust.

Table 5.3: Selected wastes processed by organic processors in 2019–20 by region (tonnes)

Waste material	Region								Organic processor subtotal
	SE Qld	Darling Downs–Maranoa	Wide Bay	Fitzroy	Mackay	Townsville	Cairns	Remote Qld	
Green waste	319,971	13,188	17,464	20,434	11,818	5,632	12,120	0	400,626
Timber, wood and sawdust	12,613	0	40,170	0	2,809	1,472	1,445	0	58,509
Sawmill residuals	202,805	10,299	62,633	0	0	0	0	0	275,737
Agricultural residuals	18,741	0	31,480	593	0	891	2,120	0	53,825
Manure	66,606	83,122	24,064	22	0	2,135	2,921	0	178,869
Abattoir waste	31,642	2,870	3,678	13,868	2,280	0	0	0	54,338
Cotton gin trash	0	2,500	0	3,668	0	0	0	0	6,168
Waste food	31,831	0	0	0	0	0	0	0	31,831
Food processing waste	23,637	1,144	600	88	0	86	3,129	0	28,684
Biosolids (DSE)	57,468	4,629	1,601	379	1,687	1,705	8,407	32	75,909
Grease trap & other organic sludges	109,872	4,493	0	11,467	1,566	2,500	1,897	0	131,795
Ash	11,237	319	0	4,039	120	60	0	0	15,775
Drilling mud	4,305	8,405	65	703	94	778	0	0	14,350
Regional subtotal	890,726	130,969	181,755	55,261	20,374	15,259	32,040	32	1,326,415

5.3 Overall recovery of materials

Many of the waste materials diverted from disposal are transferred more than once between agents in the waste and recycling sector. For example, skip bin operators may deposit materials at council transfer stations, councils may forward material to recyclers and organic processors, and recyclers may forward materials to other recyclers for further processing (in Australia or overseas). Table 5.4 provides an overall summary of materials recovered in 2019–20, distinguishing between material and energy recovery, as well as the last reported destination of the materials (Queensland, interstate or overseas).

Of the 6,456,000 tonnes of materials documented in Table 5.4, 81% were either fully recovered in Queensland or sent to another entity in Queensland, 5% were sent interstate, and 14% were sent overseas. Typically, building materials and organic wastes were recovered in Queensland, while the majority of ferrous and nonferrous metals, lead acid batteries, e-waste, paper, cardboard and plastics were sent either interstate or overseas for recovery.

Close to 79,800 tonnes of the tracked materials were sent to energy recovery in Queensland, interstate and overseas, including 32% of the timber, 6% of the mineral oil, 55% of the tyres, and 74% of the paint, solvents and chemicals reported.

Compared with the 2018–19:

- the amount of concrete recovered decreased by 310,000 tonnes (16%) to 1,618,000 tonnes
- the amount of asphalt recovered decreased by 192,000 tonnes (44%) to 247,000 tonnes
- the amount of ferrous metal (excluding steel cans) recovered decreased by 144,000 tonnes (16%) to 749,000 tonnes
- the amount of fly ash recovered decreased by 60,000 tonnes (6%) to 883,000 tonnes
- the amount of non-ferrous metal (excluding aluminium cans) recovered increased by 17,000 tonnes (22%) to 97,000 tonnes
- the amount sawmill residuals recovered increased by 111,000 tonnes (67%) to 276,000 tonnes *
- the amount of waste food recovered increased by 13,000 tonnes (16%) to 62,000 tonnes
- the amount of mineral oil recovered increased by 12,000 tonnes (12%) to 106,000 tonnes.

Table 5.4: Recovery methods and destinations for selected materials recovered by reporting entities in Queensland during 2019–20 (tonnes)

Material	Quantity recovered or sent for recovery in Queensland*	Quantity combusted for energy recovery in Queensland	Quantity sent interstate for further processing	Quantity sent interstate for energy recovery	Quantity sent overseas for further processing	Quantity sent overseas for energy recovery	Total reported in 2020	Change from previous year
Packaging glass	67,138		450				67,588	3,470
Non packaging glass	15,358						15,358	2,263
Paper	113,742		49,498		86,562		249,802	-16,545
Cardboard	99,441		108,193		64,165		271,799	-28,770
PET plastic (1)	8		179		738		925	-6,551***
HDPE plastic (2)	8,791		176		1,152		10,119	-5,326
PVC plastic (3)			30				30	14
LDPE plastic (4)	2,806		340		4,841		7,987	-2,555
PP plastic (5)	1,154		10				1,164	-2,121
PS plastic (6)	332						332	-69
Other/mixed plastic	902		926		12,003		13,831	4,615
Steel cans			576		3,743		4,319	1,705
Other ferrous metals	5,322		143,966		599,761		749,049	-143,934
Aluminium cans	419		6		7,962		8,387	701
Other nonferrous metals	4		5,750		91,570		97,324	17,419
Lead acid batteries	17,283		17,114				34,397	2,879
Other batteries			15				15	-184
E-waste NEC**	30		903		677		1,610	410
Catalysts	102		54				156	49
Concrete	1,617,992						1,617,992	-309,509
Concrete washout	34,725						34,725	
Asphalt	246,608						246,608	-191,613
Bricks and tiles	65,249						65,249	-8,029
Plasterboard	11,349						11,349	4,018
Fibre cement	6,535						6,535	-11,269
Timber	88,323	41,153					129,476	-14,209
Green waste	650,386						650,386	-25,654

Material	Quantity recovered or sent for recovery in Queensland*	Quantity combusted for energy recovery in Queensland	Quantity sent interstate for further processing	Quantity sent interstate for energy recovery	Quantity sent overseas for further processing	Quantity sent overseas for energy recovery	Total reported in 2020	Change from previous year
Sawmill residuals	275,737						275,737	111,073
Agricultural residuals	53,825						53,825	18,238
Manure	178,869						178,869	-6,002
Abattoir waste	69,301						69,301	7,088
Cotton gin trash	6,168						6,168	-2,279
Vegetable oil	21,824				426		22,250	1,473
Waste food	62,148						62,148	12,821
Food processing waste	28,684						28,684	-6,195
Mineral oil	88,391	4,508	11,148	1		2051	106,099	11,596
Biosolids (DSE)	74,836						74,836	-2,784
Grease trap waste and sludges	133,202						133,202	10,195
Oily water	25,617						25,617	8,664
Fly Ash	882,749						882,749	-59,785
Bottom/other ash	88,238						88,238	-9,169
Red mud	200						200	-50
Drilling mud	54,711						54,711	-44,768
Foundry sand	180						180	-320
Tyres	21,420		784		1809	28,887	52,900	1,225
Other rubber	115						115	24
Paint, solvents and chemicals	401	1915	698	1242			4,256	-227
Tip shop	26,030						26,030	9,083
Comingled recycling NEC			279				279	
C&D NEC	6,708						6708	
Destination subtotal	5,153,353	47,576	341,095	1,243	875,409	30,938	6,449,614	-662,343

* Recovered in Queensland means the material was either fully recovered by the reporting entity or was sent to another (non-reporting) operator in Queensland for further processing. It is possible that materials last tracked to a Queensland site were subsequently sent interstate or overseas.

** Residual amount not reported elsewhere (such as ferrous metal, non-ferrous metal, non-packaging glass, non-packaging plastic).

*** Additional quantities of PET plastic were recovered under the Containers for Change program.

5.4 Recycling residuals

Recycling residuals are materials passing through a recovery process that are sent to disposal (typically landfill). Reasons for the non-recovery of materials include contamination, process breakdowns, technical issues, lack of demand for the recovered materials and practical recovery of the materials.

For example, contamination is a significant problem for local government kerbside recycling programs. The contamination rates reported by councils for yellow lid bin collections in 2019–20 ranged from 1% to 30% (average 15%).

Entities completing the recycling and organic processing data collections were surveyed about recycling residuals. As some entities did not provide data, the reported figure of 316,000 tonnes is likely to underestimate the true value. Some liquid residuals, such as oily water, were disposed to sewer as trade waste and not included in the landfill data.

6. Other data and trends

This section reports on data and trends from other waste streams and cross border movements as well as mandatory government planning for waste minimisation.

6.1 Other waste streams

Data on other (non-headline) wastes generated during 2019–20 are shown in Figure 6.1. Some of these streams (such as asbestos) had zero recovery, while others (such as biosolids) had very high rates of recovery.

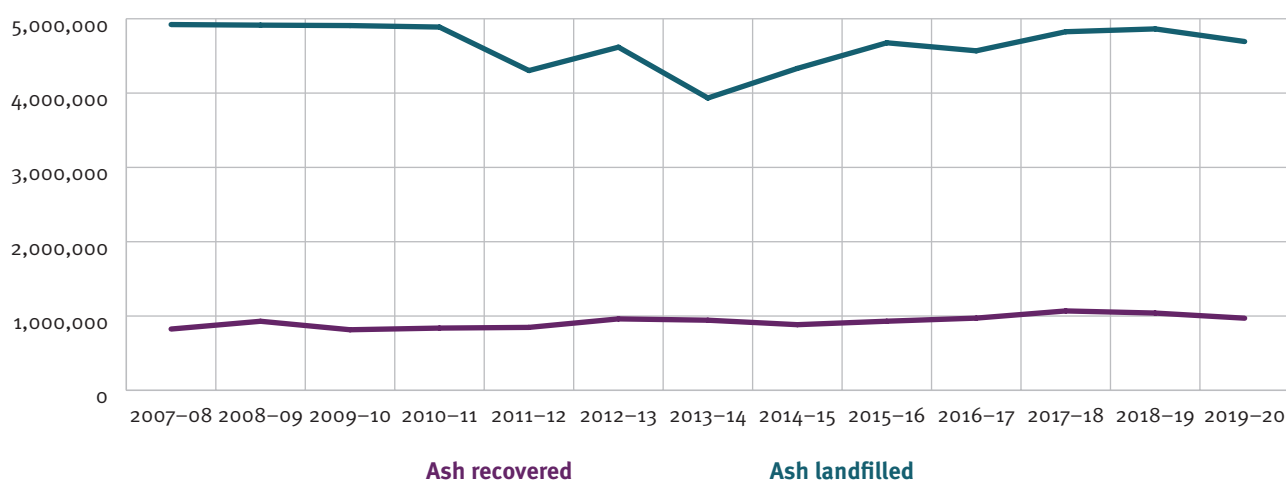
Table 6.1: Other (non-headline) wastes generated in Queensland during 2019–20

Waste stream	Amount generated (tonnes)	Amount disposed of (tonnes)	Amount recovered (tonnes)	Recovery rate
Asbestos	121,587	121,587	0	0.00%
Biosolids (DSE)	85,664	10,828	74,836	87.36%
Contaminated soil	373,586	354,179	19,407	5.19%
Potential/acid sulphate soil	23,329	0	23,329	100.00%
Fly ash	4,896,347	4,073,598	822,749	16.80%
Bottom/other ash	708,291	620,053	88,238	12.46%
Red mud	4,794,145	4,793,945	200	< 0.01%

The 5,665,000 tonnes of ash generated in 2019–20 was a 299,000 tonne (4.0%) decrease from 2018–19 and was approximately 97,000 tonnes more than the 12-year average of 5,567,000 tonnes (Figure 6.1).

The 971,000 tonnes of ash recovered in 2019–20 was above the 12-year average of 921,000 tonnes, and the recovery rate of 17.1% was also above the 12-year average of 16.6%, although it was lower than the peak recovery rate of 19.4% achieved in 2013–14.

Figure 6.1: Amounts of ash landfilled and recovered in Queensland during 2008–20 (tonnes)



6.2 Cross-border movements of waste

During 2019–20, wastes moved both into Queensland, and from Queensland into other states or overseas.

Table 5.4 shows that 342,000 tonnes of the materials listed were sent interstate for recovery, while 906,000 tonnes were sent overseas.

There are increasing trends for the amounts of aluminium cans, ferrous and non ferrous metal and tyres sent overseas, and a declining trend for the amount of paper being exported. The declining trend for cardboard was interrupted in 2018–19, while there are no clear trends for plastics, steel cans, vegetable oil and mineral oil.

In the case of plastics, PET, LDPE and mixed plastics tend to be exported, while HDPE, PP and PS plastics are more likely to be recycled in Australia.

Table 6.2 lists the amounts of selected materials sent overseas for recovery from Queensland from 2016 to 2020.

Table 6.2: Five-year trends in the amounts of materials sent overseas for recovery

Material	2016	2017	2018	2019	2020
Paper	143,894	138,565	111,495	99,708	86,562
Cardboard	136,501	88,332	73,903	104,603	64,165
Plastics	28,916	21,322	26,814	27,030	18,734
Steel cans	6,145	3,201	2,302	2,218	3,743
Other ferrous metal	403,283	550,892	534,495	744,605	599,761
Aluminium cans	3,745	5,144	5,549	7,319	7,962
Other non-ferrous metal	57,109	77,606	75,409	77,570	91,570
Vegetable oil	2,077	5,970	4,876	5,630	426
Mineral oil	9,219	3,623	21,549	443	2,051
Tyres	9,853	19,713	24,500	33,880	30,696

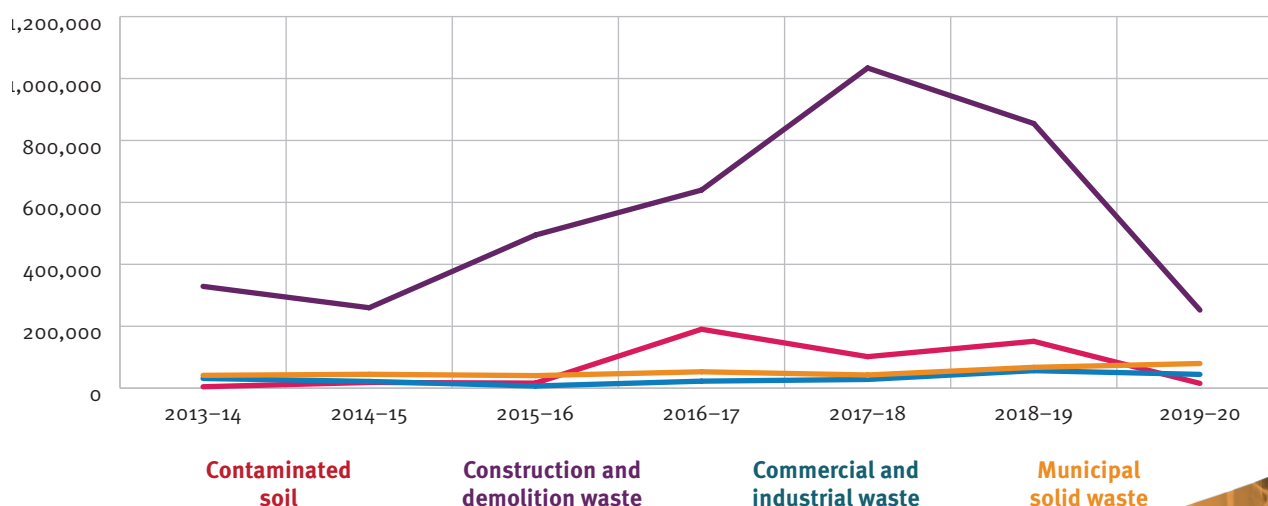
Domestically, the 447,000 tonnes of waste received from interstate sources in 2019–20 was a 741,000 tonne (62%) decrease from 1,188,000 tonnes in 2018–19. Approximately 83% of the interstate waste was reported by private landfills, 16% was reported by recyclers and 1% by local governments and waste handlers.

The waste coming from interstate included:

- 80,000 tonnes of municipal solid waste
- 45,000 tonnes of commercial and industrial waste
- 252,000 tonnes of construction and demolition waste
- 16,000 tonnes of contaminated soil
- 53,000 tonnes of regulated waste
- 1,900 tonnes of acid sulfate soil.
- 600 tonnes of clean earth.

Compared with 2018–19, the amount of municipal solid waste increased by 12,000 tonnes (18%), the amount of commercial and industrial waste decreased by 12,000 tonnes (21%), the amount of construction and demolition waste decreased by 602,000 tonnes (70%), the amount of contaminated soil decreased by 136,000 tonnes (90%), and the amount of regulated waste decreased by 2,600 tonnes (5%) (Figure 6.3).

Figure 6.3: Seven-year trend in wastes received by Queensland waste operators from interstate sources



6.3 Waste management by government departments

State government departments and associated entities generate a variety of wastes in the course of doing their work. For most departments, these include wastes such as paper and packaging materials, and food and other organic wastes. In addition, some departments generate motor vehicle wastes, construction and demolition wastes, and collect litter and illegally dumped waste.

Actions taken by departments to reduce the amount of waste generated include reducing paper consumption (by reducing printing), bulk ordering or using bulk containers, purchasing and maintaining durable products, reusing surplus/aging equipment, minimising the use of disposable products, using items before they deteriorate, and providing staff education.

In the process of diverting waste from disposal, state government bodies may provide internal collection points for paper and packaging materials, food organics, batteries and e-waste. They may facilitate stationery reuse, furniture and equipment reuse and recovery, mineral oil and tyre recycling and the recovery of construction and demolition wastes. They may also undertake staff education and information sharing, and include waste recovery in contract arrangements.

To support industry, state entities may source and use recycled office paper. In addition, specifications for road construction materials now include recyclable materials including crumb rubber materials and recycled concrete to facilitate the use of recycled content in infrastructure.

7. How this report was compiled

Local government and private sector waste and recycling entities are required by the Waste Reduction and Recycling Act 2011 to report to the Department of Environment and Science (DES) by 31 August each year on the wastes they have managed during the preceding financial year.

DES collects the data using surveys administered through the Queensland Waste Data System.

DES validates the data as it is submitted, checking to ensure it is correctly formatted and comparable to amounts reported in previous years. Where potential issues are identified (e.g. data entered as kilograms rather than tonnes), DES contacts the respondent, and if warranted, amends the data in the system.

When the validation process has been completed, the data is compiled for analysis. Wastes are counted at the final point of disposal or recovery in the reporting chain (to avoid double-counting for wastes that are transferred between respondents).

Wastes sent to disposal are aggregated by source stream (municipal solid waste, commercial and industrial waste, construction and demolition waste) and waste type (clean earth, contaminated soil, acid sulfate soil, asbestos, ash, red mud, other regulated waste).

Wastes sent to recovery are aggregated by material type (such as asphalt, concrete, paper, packaging glass, non-packaging plastics, ferrous metal, green waste, mineral oil, or tyres).

Recovered materials are assigned to source streams for the purpose of calculating recovery rates:

- Green waste, paper and packaging materials, and scrap metal collected by local governments from households are deemed to be municipal solid waste, as are items sold via council tip shops and domestic waste recovered by alternative waste treatment.
- Concrete, asphalt, plasterboard, bricks and tiles, as well as building-related ferrous metal, non-ferrous non-packaging metal, timber, non-packaging glass and non-packaging plastic are deemed to be construction and demolition waste.
- Food waste, cotton gin trash, tyres, other rubber, drilling mud, the remaining paper and packaging materials, green waste, timber, sawmill residuals, non-packaging plastic, and non-packaging glass are deemed to be commercial and industrial waste.

The regions used in this report are broadly aligned with the Australian Bureau of Statistics SA4 regions. However, because local government areas are the fundamental building blocks for the reporting regions, this report uses local government boundaries for its regions rather than the ABS framework (where the SA4 boundaries cut through local government areas). As a result, Toowoomba Regional Council is included in the Darling Downs-Maranoa region and Mareeba Shire Council is included in the Cairns region.

The other difference to the ABS regions is that this report uses a combined South East Queensland region. This combines elements of 12 ABS SA4 regions and largely matches the local government membership of the area covered by the Council of Mayors, South East Queensland (excluding Toowoomba).

Glossary

Alternative waste treatment includes a range of processes that convert unsorted waste streams that would otherwise be landfilled into useful products such as compost, fuel or biogas.

Ash is a residue resulting from the combustion of coal and other materials. It contains silica and lime, and can be used in concrete production, organic processing and waste fixation, etc. Fly ash is collected from exhaust gases, while bottom ash is collected from the bottom of boilers, etc.

Biosolids are organic solids derived from biological wastewater treatment processes that are in a state where they can be used as nutrients and soil conditioning agents, as a source of energy or for some other use. Sewage treatment plants are the main source of biosolids in Queensland.

Clean earth is sand, soil, loam, clay, gravel, rock or any other natural substance found in the earth that is not contaminated by waste or hazardous materials.

Commercial and industrial waste (C&I) is produced by business and commerce, and includes waste from schools, restaurants, offices, retail and wholesale businesses, and manufacturing industries. In this report, it includes green waste arising from commercial activities and is a *headline waste stream*.

Construction and demolition waste (C&D) is non-putrescible waste arising from construction or demolition activity. It may include materials such as concrete, asphalt, bricks, treated timber and steel. It is a *headline waste stream*.

Disposal is the process of getting rid of wastes by landfilling or incineration without energy recovery and is the least acceptable option under the waste management and resource recovery hierarchy.

Domestic waste or household waste is waste resulting from the ordinary domestic use or occupation of a house, flat, apartment, unit, boarding house, hostel or guesthouse. It does not include waste discharged to a sewer. Domestic waste includes the material that householders place in their kerbside red, yellow and green bins, the waste they self-deliver to landfills and transfer stations, and council bulky item collections.

Drilling mud is a viscous fluid mixture used by the drilling industry to protect drill bits and to transport rock cuttings to the surface.

E-waste comprises waste electrical and electronic products, such as end-of-life computers, televisions, and kitchen appliances etc.

Energy recovery involves the conversion of waste materials into usable heat, electricity or fuel through processes such as combustion, gasification, pyrolysis and anaerobic digestion etc.

Green waste includes grass clippings, tree, bush and shrub trimmings, branches and other similar material resulting from domestic or commercial gardening, landscaping or maintenance activities. For the purposes of this report, the green waste data referred to relate to separated material delivered directly to local government facilities and organic processors, and does not include garden waste mixed with other materials in household red lid waste bins.

Headline or general waste streams (municipal solid waste, commercial and industrial waste, and construction and demolition waste) are wastes generated from everyday household and business activities. These wastes form the basis of state and federal waste targets and reporting. This category does not include hazardous or regulated wastes.

Illegal dumping is the unlawful disposal of large volumes (greater than 200 litres) of waste.

Litter is made up of scattered items of rubbish (less than 200 litres) such as cigarette butts, discarded food wrappers and beverage containers.

Monofills are landfills or long-term storage facilities that receive only one type of solid waste (such as tyres, sewage sludge or fly ash) or receive waste from a single source (such as a power station, refinery or mining operation).

Municipal solid waste (MSW) is a combination of domestic waste and other wastes arising from council activities (such as the management of parks and gardens, and the collection of litter and illegally dumped waste). It is a *headline waste stream*.

Organic processing involves the recovery of putrescible wastes through activities such as anaerobic digestion, mulching, composting or vermiculture.

Packaging material includes paper, cardboard, glass containers, plastic containers, aluminium containers and steel containers.

Recycling is the process of extracting materials found in waste and converting them into useful products. For example, concrete may be extracted from the construction and demolition waste stream and converted into recycled aggregate suitable for use in road base as a virgin material substitute.

Recycling residuals are the left-over materials from recovery and recycling processes that are sent to disposal.

Recovered material is waste that has been diverted from landfill. It includes material that has been recycled or stockpiled for future use.

Recovery rate is the proportion of a waste stream that is recovered.

Red mud is a caustic residual from the refining of bauxite into alumina.

Regulated waste includes hazardous wastes listed in Schedule 7 of the Environmental Protection Regulation 2008. This category includes asbestos, pesticides, a range of waste chemicals and chemical compounds, and other industrial wastes.

Tip shops are sales outlets at waste facilities (such as local government transfer stations) for items that have been salvaged prior to landfill.

Appendix 1: Local government waste services in 2019–20

Council	Population at 30 June 2019	Number of red lid bin services	Number of yellow lid bin services	Number of public place recycling bins	Number of non-residential recycling services	Number of green lid bin services	Number of tip shops	Waste plan published on web
South East Queensland Region	3,554,819							
Brisbane City Council	1,253,982	487,341	487,341	942	1,388	106,378	2	yes
Gold Coast City Council	620,518	244,718	187,775	146	3,106	39,722	2	yes
Ipswich City Council	222,307	79,973	79,973	26	656	19,609	0	yes
Lockyer Valley Regional Council	41,731	15,369	15,369	8	305	0	8	yes
Logan City Council	334,358	117,603	115,344		539	52	1	yes
Moreton Bay Regional Council	469,465	174,241	166,829	174	5,580	0	2	yes
Noosa Shire Council	55,873	54,000	24,500	139	220	16,000	1	yes
Redland City Council	158,815	62,039	62,039	97	2,188	16,238	1	yes
Scenic Rim Regional Council	43,123	14,083	14,083	30	415	0	0	yes
Somerset Regional Council	26,219	9,294	1,830	4	38	0	4	yes
Sunshine Coast Regional Council	328,428	131,637	127,579	279	6,558	35,153	5	yes
Darling Downs Maranoa Region	266,869							
Balonne Shire Council	4,360	2,110	2,110	0	100	0	0	yes
Goondiwindi Regional Council	10,799	3,485	3,211	9	712	0	17	
Maranoa Regional Council	12,665	3,845	0	0	0	0	0	
Southern Downs Regional Council	35,452	11,847	11,783	163	12	0	10	yes
Toowoomba Regional Council	169,008	63,899	63,899	449	1,574	29,029	8	yes
Western Downs Regional Council	34,585	10,699	10,699	35	1,144	0	5	
Wide Bay Burnett Region	299,465							
Bundaberg Regional Council	95,856	40,374	40,374	36	3,283	0	10	yes
Cherbourg Aboriginal Shire Council	1,331	315	0	0	1	0	0	
Fraser Coast Regional Council	106,712	44,765	44,323	81	2,185	0	2	yes
Gympie Regional Council	52,446	21,395	21,395	40	799	0	3	yes
North Burnett Regional Council	10,599	3,198	0	10	0	0	4	
South Burnett Regional Council	32,521	12,098	0	0	0	0	1	yes

Council	Population at 30 June 2019	Number of red lid bin services	Number of yellow lid bin services	Number of public place recycling bins	Number of non-residential recycling services	Number of green lid bin services	Number of tip shops	Waste plan published on web
Fitzroy Region	226,875							
Banana Shire Council	14,156	4,522	0	2	33	0	1	yes
Central Highlands Regional Council	28,701	10,528	10,361	31	631	0	1	yes
Gladstone Regional Council	63,412	24,040	24,040	299	4,289	0	11	yes
Livingstone Shire Council	38,078	13,411	13,411	50	394	0	1	yes
Rockhampton Regional Council	81,512	32,754	32,754	62	2,238	0	3	yes
Woorabinda Aboriginal Shire Council	1,016	354	0	0	0	0	0	
Mackay Region	173,006							
Isaac Regional Council	20,886	7,906	7,873	36	476	0	9	yes
Mackay Regional Council	116,763	48,064	48,064	105	859	0	1	yes
Whitsunday Regional Council	35,357	15,154	11,616	4	400	0	0	
Townsville Region	237,100							
Burdekin Shire Council	16,971	7,105	7,105	69	438	5,833	3	yes
Charters Towers Regional Council	11,739	4,072	0	0	0	0	0	yes
Hinchinbrook Shire Council	10,687	5,621	5,621	38	0	0	1	yes
Palm Island Aboriginal Shire Council	2,671	510	0	0	0	0	0	
Townsville City Council	195,032	80,426	78,708	129	717	0	2	yes
Cairns Region	260,229							
Cairns Regional Council	166,862	73,541	66,559	58	117	0	1	yes
Cassowary Coast Regional Council	29,794	11,998	0	7	0	0	3	yes
Douglas Shire Council	12,367	7,485	7,485	31	555	0	2	yes
Mareeba Shire Council	22,730	6,754	0	11	0	0	0	yes
Tablelands Regional Council	25,575	12,500	12,500	6	393	0	1	
Yarrabah Aboriginal Shire Council	2,901	474	0	0	0	0	0	

Council	Population at 30 June 2019	Number of red lid bin services	Number of yellow lid bin services	Number of public place recycling bins	Number of non-residential recycling services	Number of green lid bin services	Number of tip shops	Waste plan published on web
Remote Queensland Region	76,147							
Aurukun Shire Council	1,418	350	0	0	0	0	0	
Barcardine Regional Council	2,849	1,278	0	0	0	0	0	
Barcoo Shire Council	266	133	0	0	0	0	0	
Blackall - Tambo Regional Council	1,868	640	0	0	0	0	0	
Boulia Shire Council	423	151	0	8	0	0	0	yes
Bulloo Shire Council	325	100	0	0	0	0	0	yes
Burke Shire Council	354	120	0	0	0	0	0	
Carpentaria Shire Council	1,977	769	0	0	0	0	0	
Cloncurry Shire Council	3,047	1,065	0	0	0	0		
Cook Shire Council	4,549	1,258	0	9	0	0	1	yes
Croydon Shire Council	284	85	0	0	0	0	0	
Diamantina Shire Council	291	122	0	0	0	0	2	
Doomadgee Aboriginal Shire Council	1,526	299	0	1	0	0	0	
Etheridge Shire Council	793	137	0	0	0	0	0	
Flinders Shire Council	1,505	533	0	0	0	0	1	yes
Hope Vale Aboriginal Shire Council	1,117	293	0	0	0	0	0	
Kowanyama Aboriginal Shire Council	990	304	0	0	0	0	0	
Lockhart River Aboriginal Shire Council	800	190	0	0	0	0	0	
Longreach Regional Council	3,470	1,400	0	0	0	0	0	
Mapoon Aboriginal Shire Council	333	118	0	0	0	0	0	
McKinlay Shire Council	818	290	0	0	0	0	0	
Mornington Shire Council	1,230	400	0	0	0	0	0	
Mount Isa City Council	18,595	6,594	0	0	0	0	0	
Murweh Shire Council	4,295	2,092	0	0	0	0	0	
Napranum Aboriginal Shire Council	1,077	254	0	1	0	0	0	
Northern Peninsula Area Regional Council	3,163	1,000	0	5	0	0	0	
Paroo Shire Council	1,562	350	0	0	1	0	0	
Porpuraaw Aboriginal Shire Council	845	226	0	0	0	0	0	

Council	Population at 30 June 2019	Number of red lid bin services	Number of yellow lid bin services	Number of public place recycling bins	Number of non-residential recycling services	Number of green lid bin services	Number of tip shops	Waste plan published on web
Quilpie Shire Council	778	386	0	0	0	0	0	
Richmond Shire Council	810	317	0	0	0	0	0	yes
Torres Shire Council	3,887	1,130	0	0	0	0	0	
Torres Strait Island Regional Council	5,104	1,215	0	0	0	0	0	
Weipa	4,333		0	0	0	0	0	
Winton Shire Council	1,153	435	0	0	0	0	0	
Wujal Wujal Aboriginal Shire Council	312	99	0	0	0	0	0	

3 ABS ERP by LGA (ASGS 2019), 2001 to 2019—Data last updated 25 March 2020