

Household Hazardous Waste Program

Annual Report 2017/18



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Acknowledgements

WALGA administers the HHW Program on behalf of the Waste Authority.

Thank you to the Local Governments and Regional Councils who manage the Permanent facilities throughout WA for providing the staff and facilities to handle and store HHW.

Thank you to Toxfree who have delivered a highly professional collection and disposal service over the past year.

Thank you to the Minister for Environment (State Government), the Waste Authority and the Department of Water and Environmental Regulation for their ongoing support of the Household Hazardous Waste Program.

The HHW Program is funded by the Waste Authority through the Waste Avoidance and Resource Recovery Account.

Executive Summary

In the 2017/18 financial year a total of 548,987kg of Household Hazardous Waste (HHW) was collected through the Program from Permanent facilities. The total Program expenditure for 2017/18 was \$1,918,924*; this represents an expenditure of 95.9% of the Program budget. Paint (water and solvent based) made up 40% of material collected.

General Program expenditure was:

- 93% for HHW collection, testing, treatment and disposal/recycling from HHW Permanent facilities:
 - 74% from Metropolitan facilities,
 - 19% from Non Metropolitan facilities
- 7% for WALGA administration.

*All figures in this Report are exclusive of GST, there may be some minor discrepancies between figures due to numbers in the report being rounded.

1. Materials Collected through the Household Hazardous Waste Program

The Household Hazardous Waste (HHW) Program funds the collection and recycling/disposal of hazardous materials from residential sources. Material from commercial, industrial, agricultural or veterinary sources is not covered, nor are hazardous materials covered by other collection Programs. Householders can go to any of the HHW Permanent facilities and drop off any of the following products:

- Acids (note: some Permanent facilities do not accept hydrofluoric acid)
- Aerosols (CFC-based, paints, lacquers, pesticides etc.)
- Alkalis
- Batteries (household)
- Compact fluorescent lamps (CFLs) and fluorescent tubes
- Cyanides
- Engine coolants and glycols
- Fire extinguishers (non-halon only)
- Flammable liquids (e.g. hydrocarbons and fuels)
- Flammable solids
- Flares
- Gas cylinders
- General household chemicals (e.g. cleaning products)
- Heavy metal compounds
- Inorganic oxidising agents (e.g. pool chlorine)
- Low level radioactive substances (smoke detectors)
- Mercury (e.g. thermometers)
- Organic peroxides
- Paint
- PCB materials
- Pesticides (including Schedule X pesticides)
- Solvents

2. Permanent Facilities

The HHW Program provides thirteen Permanent facilities in Western Australian where householders can safely drop off their hazardous materials for free. All householders can dispose of HHW at any Permanent facility as it is not restricted to just residents of the Local Government/Regional Council which hosts the facility.

The Permanent facilities are managed and staffed by Local Governments and Regional Councils, and the HHW Program provides funding for the collection and recycling/disposal of the HHW collected. Each Permanent facility has an area where the public can drop off their unwanted HHW and a storage area where HHW is sorted into categories and stored until it is collected.

HHW Program funding covers the cost of collection, transport, identification and recycling/disposal of HHW from all thirteen sites. The Permanent facilities currently participating in the HHW Program are:

Metropolitan HHW facilities:

- Armadale Landfill and Recycling Facility (City of Armadale)
- Canning Waste Transfer Station (City of Canning)
- Henderson Waste Recovery Park (City of Cockburn)
- JRF (Jim) McGeough Resource Recovery Facility (Western Metropolitan Regional Council)
- Millar Road Landfill Facility (City of Rockingham)
- Recycling Centre Balcatta (City of Stirling)
- Red Hill Waste Management Facility
- Tamala Park Waste Minimisation Facility (Mindarie Regional Council)

Non-metropolitan HHW facilities:

- Hanrahan Road Waste Minimisation Facility (City of Albany)
- Mandurah Waste Management Centre (City of Mandurah)
- Meru Waste Disposal Facility (City of Greater Geraldton)
- Railway Road Transfer Station (Shire of Toodyay)
- Stanley Road Waste Management Facility (Bunbury-Harvey Regional Council)

3. HHW Program Budget 2017/18

In the 2017/18 financial year, the total Program expenditure was \$1,918,924 which represents an expenditure of 95.9% of the Program budget. The expenditure for this financial year is summarised in Figure 1 and shows the expenditure breakdown by activity. These expenses were distributed as follows:

- 93% was for collection, transport, testing and disposal/recycling of HHW materials from Permanent facilities:
 - 74% from the Metro
 - 19% from the Non Metro
- 7% was for WALGA administration.

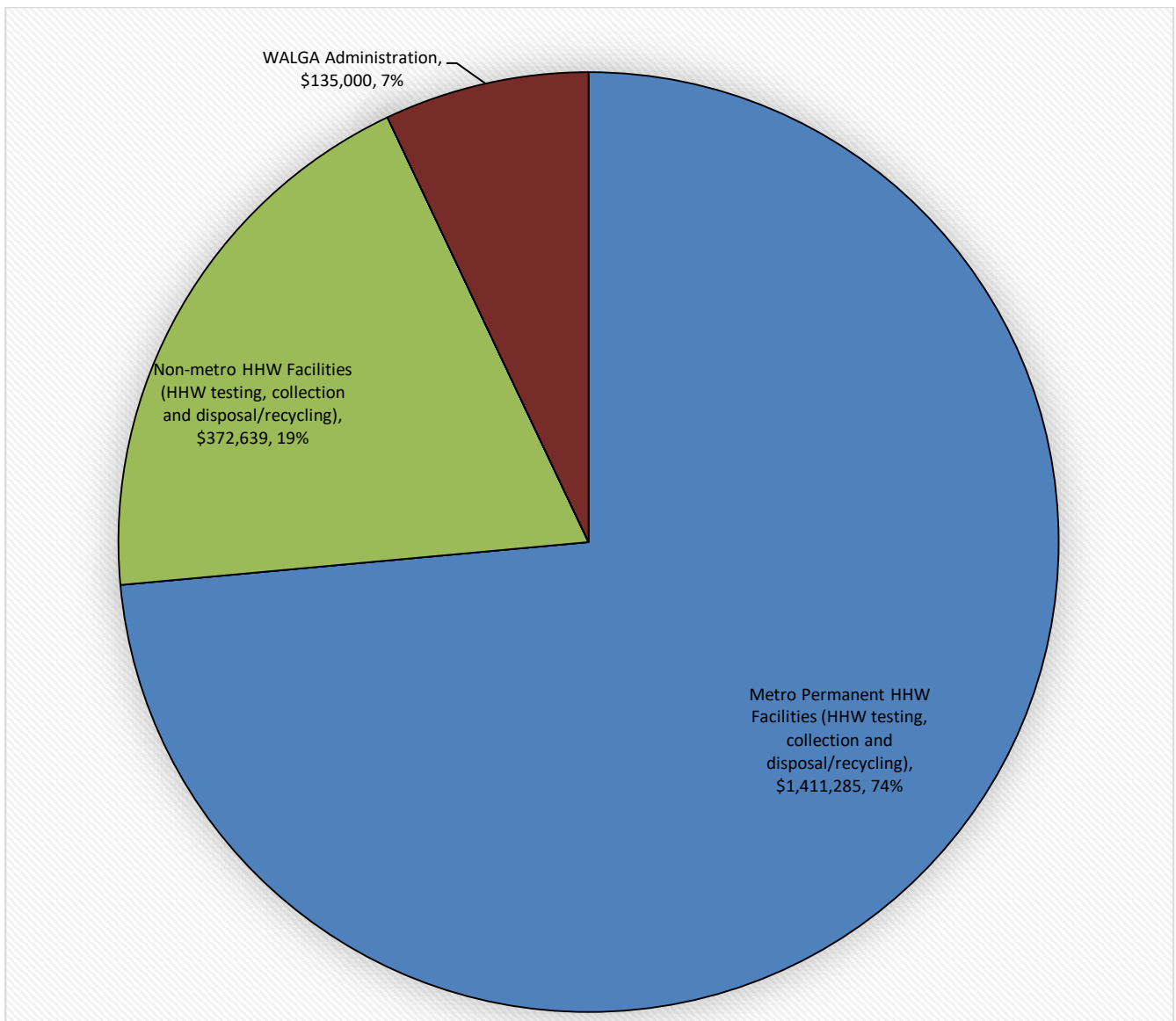


Figure 1. HHW Program expenditure by activity, for 2017/18 financial year.

4. HHW Program 2017/18 – HHW Collections

In the 2017/18 financial year, a total of 548,987kg of HHW was collected through the Program from Permanent facilities. The largest amount of material collected was Paint – water based (30%), Gas cylinders – propane (16%), Batteries – household (15%) and Paint – solvent based (10%). In the 2017/18 financial year, Paint (water and solvent based) made up 40% of the material collected by weight. Figure 2 gives a detailed breakdown of the total amount of material collected (by weight) and Figure 3 shows the disposal/recycling cost of the material collected during the 2017/18 financial year.

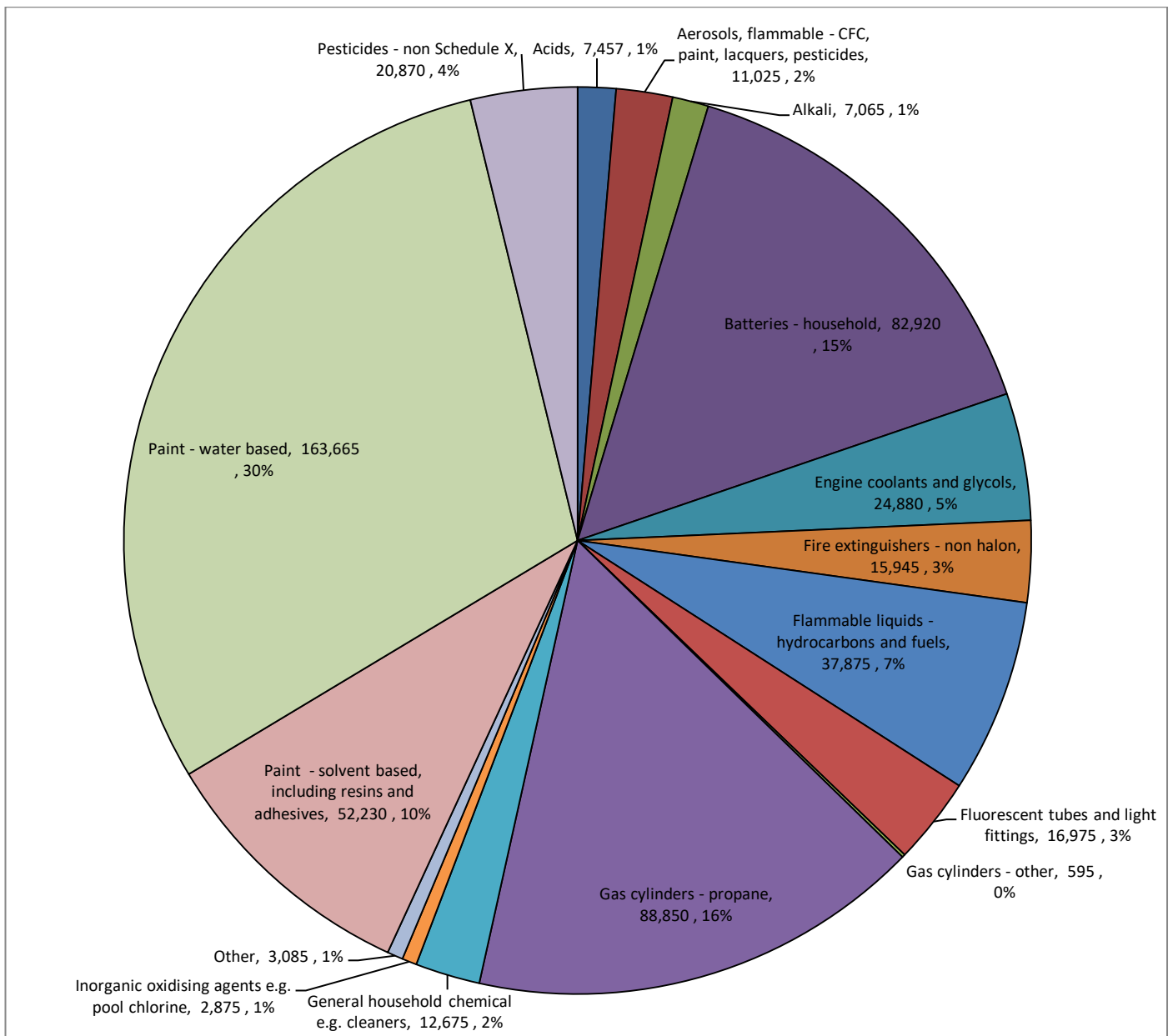


Figure 2: Weight of HHW (kg) collected from Permanent facilities in the 2017/18 financial year.

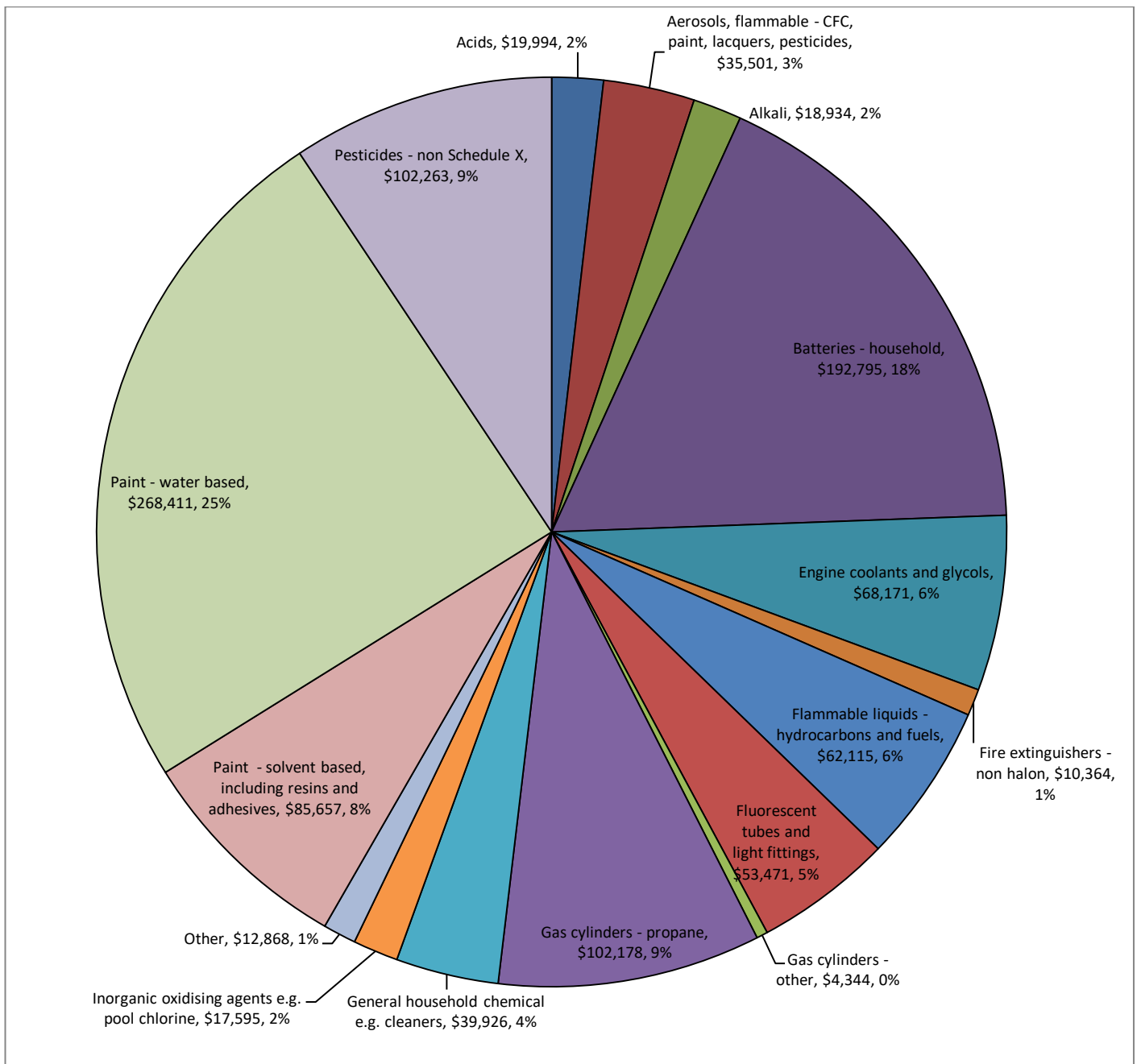


Figure 3: Costs of disposal/recycling the collected HHW from Permanent facilities in the 2017/18 financial year.

The total cost to the Program for collection, transport, testing and disposal/recycling of HHW through Permanent facilities this financial year was \$1,783,924 (see Figure 4 for the breakdown of the various expenditure areas to the Program from Permanent facilities).

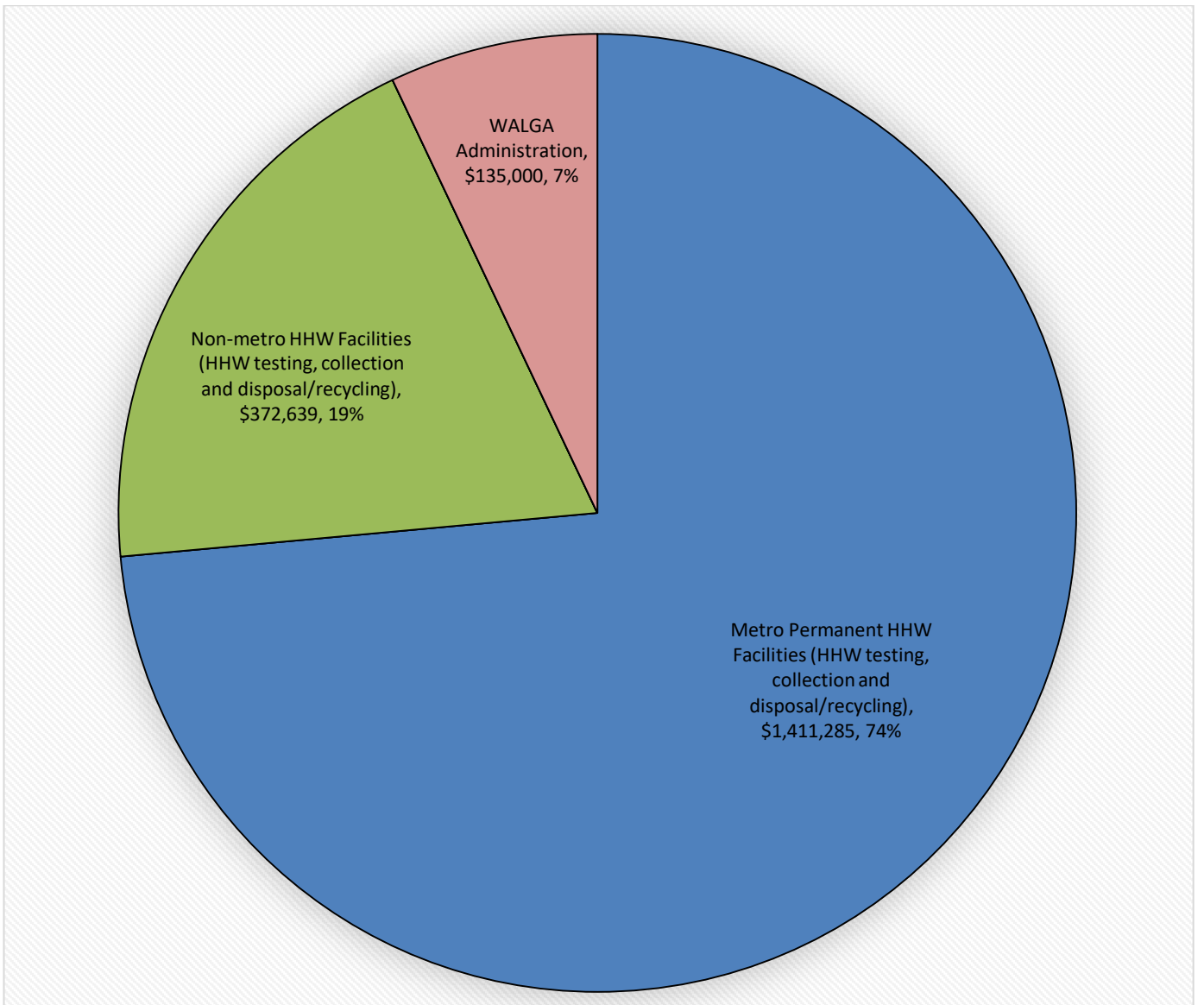


Figure 4: Expenditure breakdown for the HHW collected from Permanent facilities in 2017/18.

Local Governments and Regional Councils contribute to the costs of the Program, through staffing, managing, promoting and improving the Permanent facilities. This financial year Permanent facilities contributed \$741,248 to the HHW Program (see Figure 5 for a breakdown of the various expenditure areas for the Local Government co-contributions).

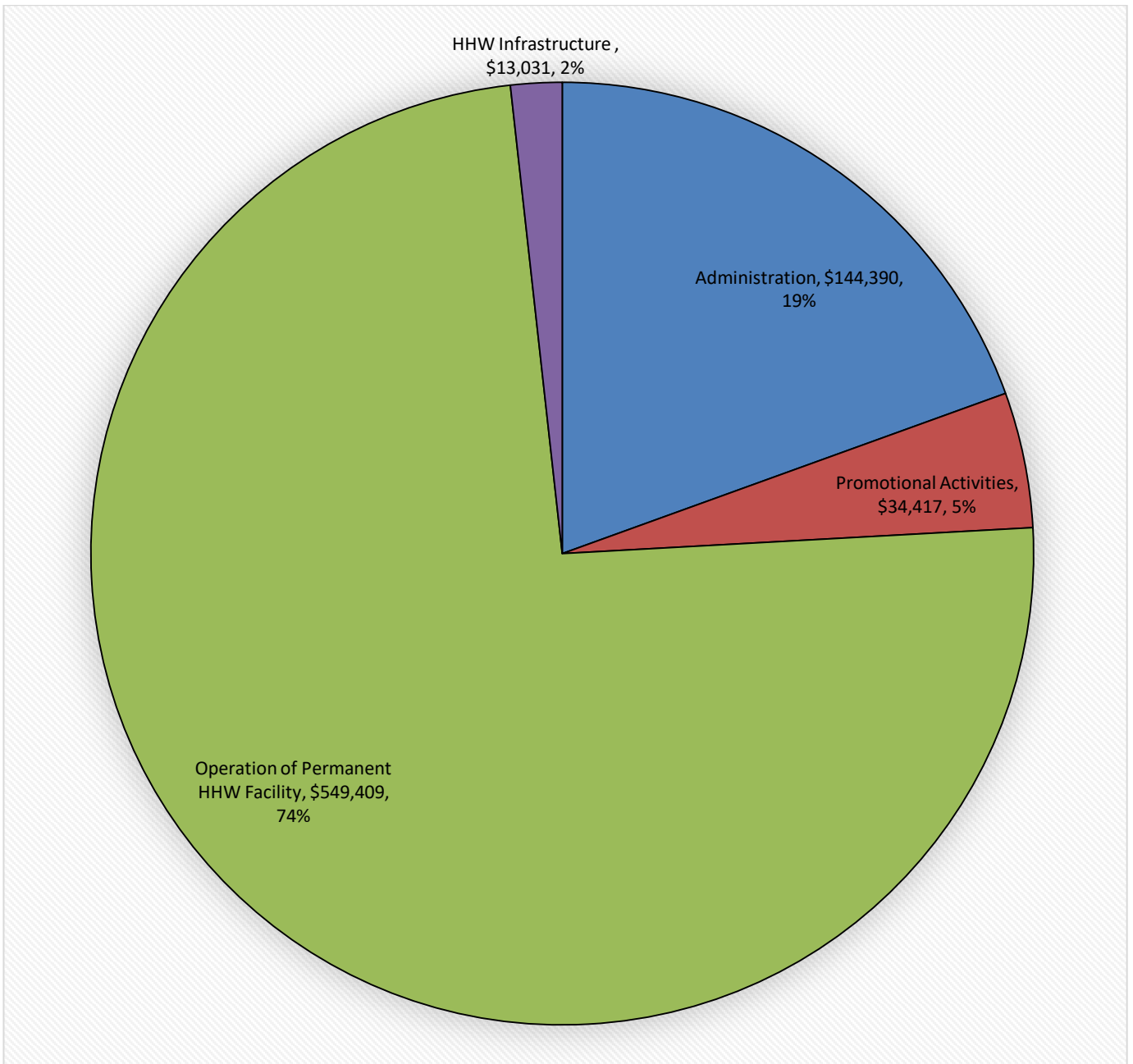


Figure 5: Local Government co-contribution expenditure breakdown for Permanent facilities in 2017/18.

Tamala Park collected the largest amount of material this financial year (17%), followed by Balcatta (16%), Henderson (15%), Armadale (11%) and Bunbury (11%). See Figure 6 for the weight and percentage of HHW each Permanent facility collected this financial year.

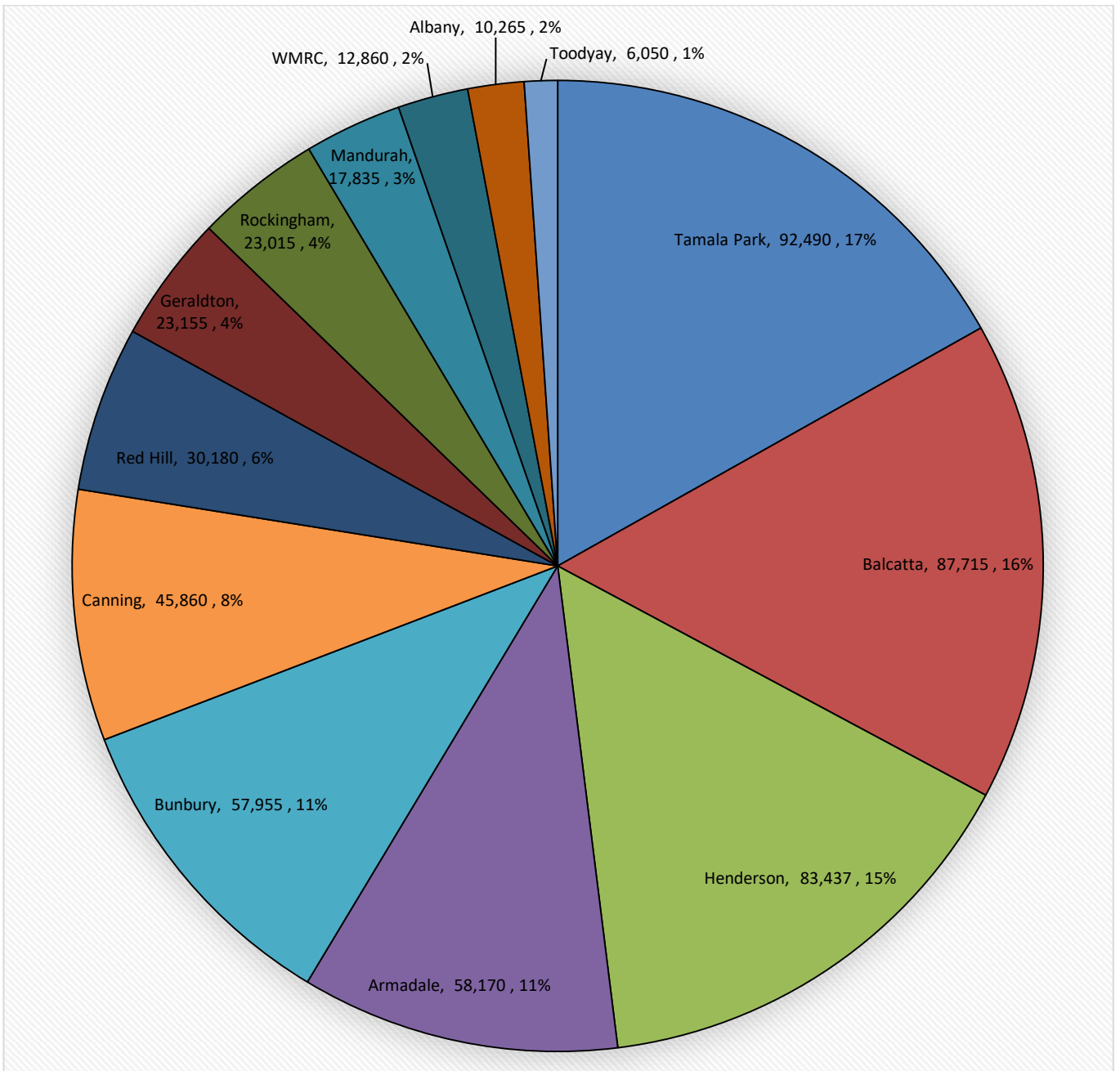


Figure 6: Weight of HHW (kg) collected by each HHW Permanent facility in 2017/18.

5. HHW Program Trends over Time

The HHW Program, in its current phase, has been running for seven years (2011/12 to 2017/18). The Program's total expenditure for all HHW activities is \$13,780,779, with a total of 4,098,039kg (4,098 tonnes) of HHW collected, from Permanent facilities and Temporary Collection Days. Overall, the main materials collected were Paint (water and solvent based) which makes up 59% of all materials collected, Gas cylinders – propane make up 12% and Batteries – household make up 10% of all materials collected. Figure 7 shows the total amount of HHW collected, along with the main material types and the total expenditure on all HHW activities for each financial year of this phase of the Program. The Graph clearly shows the impact of the Paintback Scheme, and consequent reduction in tonnage and cost of paint collected.

When comparing 2016/17 to 2017/18, the overall HHW collected has reduced, but the Program total expenditure remained similar. This was due to a number of sites (the majority in the Non-metropolitan area) needing more collections than the previous year because of an increase in materials being collected. These increases were from a combination of factors including changes to site management which ensured all accepted materials were being captured through the HHW Program (which may not have been previously), as well as increased usage of the Program from members of public. The increased collections, and associated transport costs for the Non-metropolitan area, outweighed the benefits of reduced paint collections through Paintback.

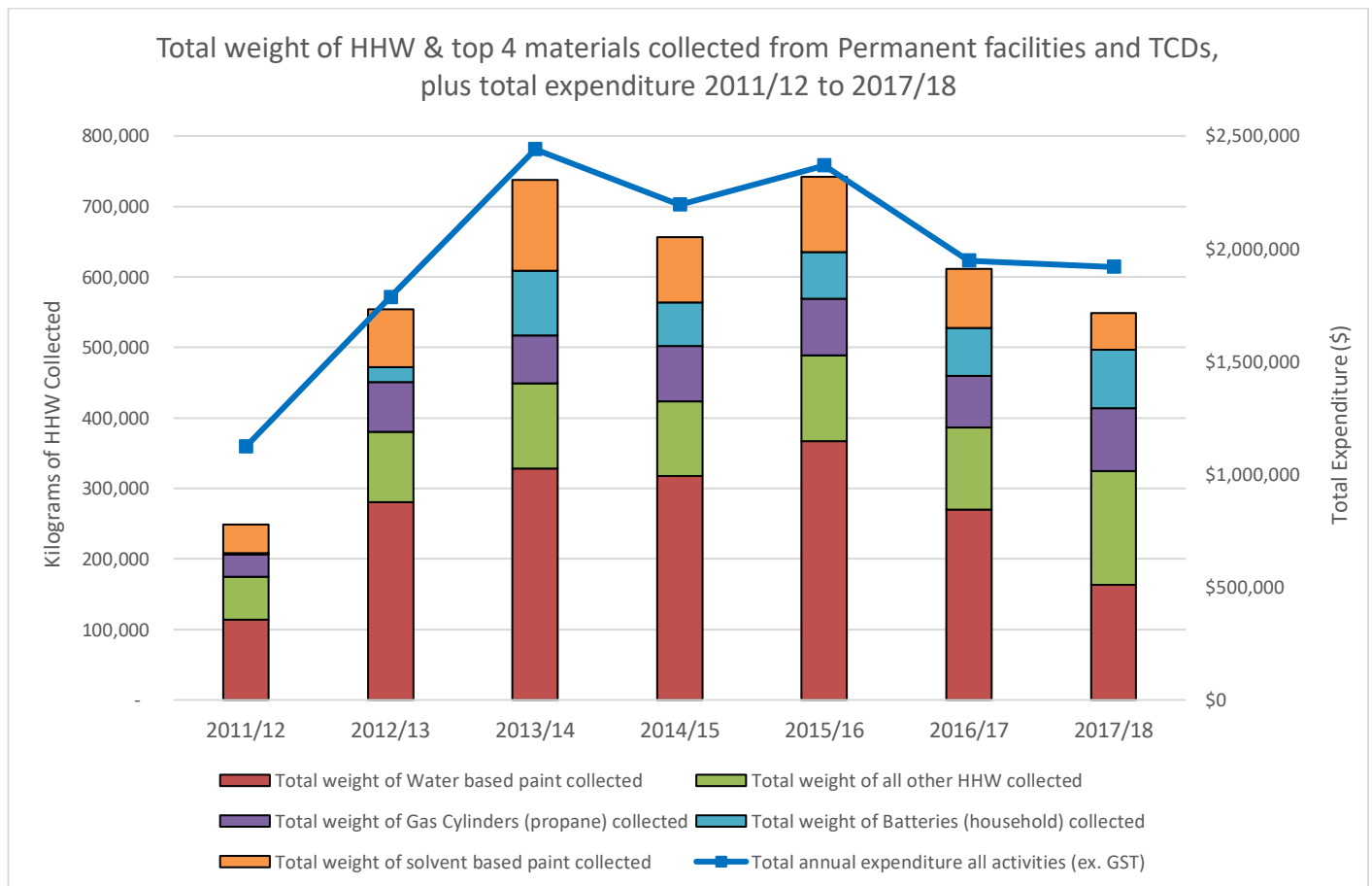


Figure 7: Total weight of HHW collected (kg), including the main materials by weight and the total Program expenditure for all activities, each financial year 2011/12 to 2017/18.

6. Disposal & Treatment Routes

The vast majority of materials collected through the HHW Program are diverted from landfill by being reused or recycled where possible, or treated to make safe and disposed of. The HHW collected is taken to the Toxfree facility in Kwinana where the treatment and disposal method for the materials is dependent on the type of material collected. For example:

- Paint and hydrocarbons are used as an alternative fuel source for cement and brick kilns.
- Materials such as acids, cyanides, inorganic oxidising agents and general household chemicals are treated and made safe through a trade waste plant.
- Flares are destroyed by an explosives expert.
- Fluoros are crushed and the separated materials are recycled.
- The gas from gas cylinders is extracted and reused, cylinders are recycled.

- PCB materials and Schedule X pesticides and CFC aerosols are treated and made safe through a pyrolysis process.
- Batteries are processed into steel, aluminium and copper.
- The only material that goes to landfill are smoke detectors, as they contain Americium, a radioactive substance. These are concrete-encapsulated before being landfilled, as there is currently no other safe alternative for disposal.

Figure 8 shows a breakdown of treatment methods for HHW collected in 2017/18.

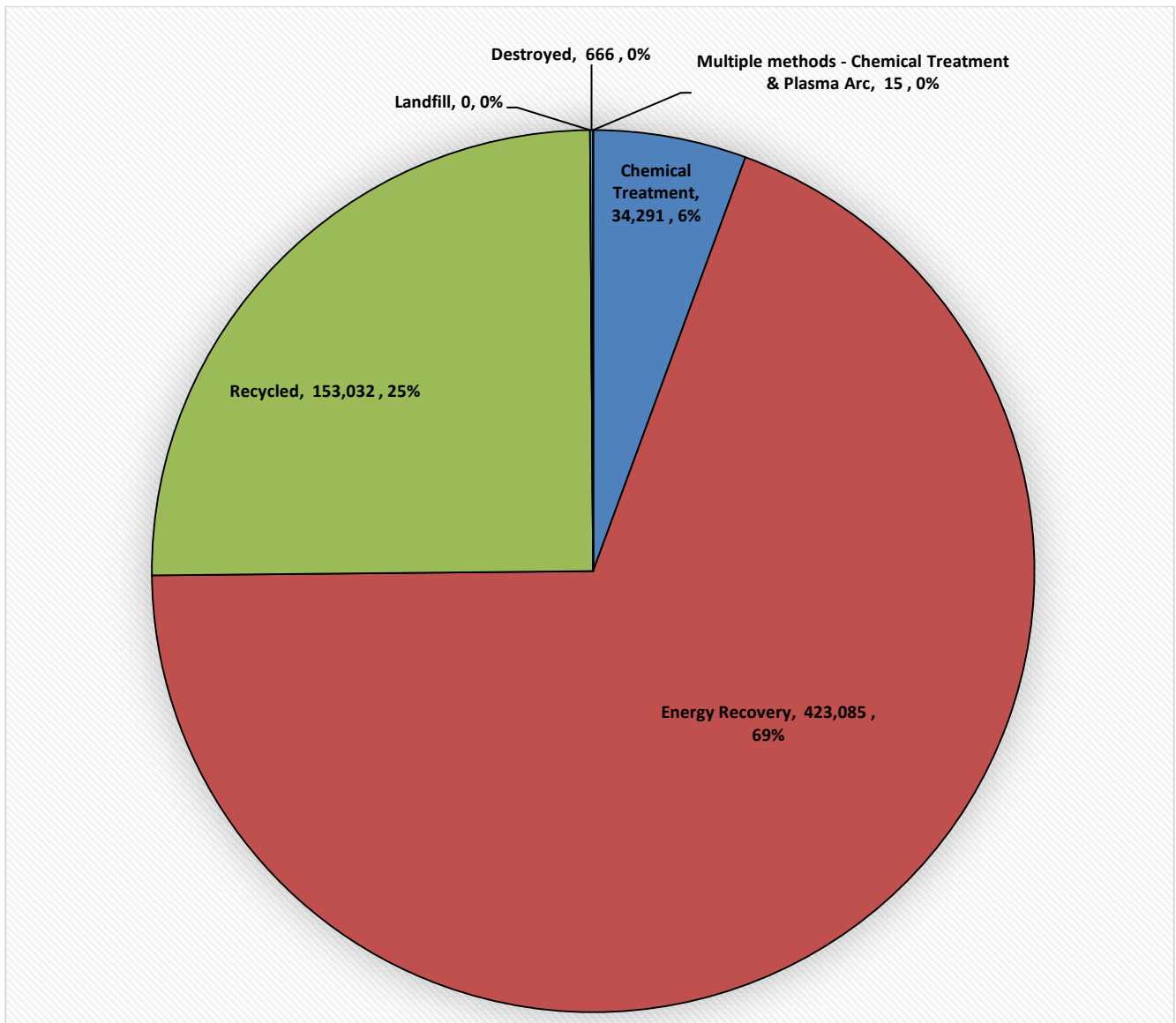


Figure 8: Weight (kg) and percentage of materials by treatment method for HHW collected in 2017/18.

7. Other Activities

7.1. HHW Program Costs – Budget Increase

The Waste Authority increased the funding for the 2017/18 financial year by \$400,000, to ensure the Program did not go over budget. This increased the total budget for this financial year to \$2M. At the end of the financial year, the Program had \$81,076 remaining.

7.2. Next Phase of the HHW Program

The Waste Authority renewed the HHW Program, with the next phase (Phase 3) to be for five years (2018/19 to 2022/23). WALGA went out to Tender for the HHW contractor for the next Phase in June, with the tender to be awarded early in 2018/19.

7.3. HHW Training

In the 2017/18 financial year, two training sessions were delivered to HHW Permanent facilities. Since this training course was developed, 24 training sessions have been held and 160 Local Government/Regional Council staff have completed the course. In the next financial year the current HHW Training will be reviewed and updated to ensure the material is the most relevant and targeted information that will help operators in their day-to-day HHW activities.

7.4. Product Stewardship – Paint and Batteries

7.4.1. Paint Product Stewardship – Paintback

Five HHW facilities are now part of the Paintback Scheme: Balcatta, Tamala Park, Rockingham, Red Hill and Mandurah (which became a Paintback site 20 February). These sites, through the Paintback Scheme, are collecting paint from domestic and commercial painters. People are able to drop off up to 100 litres of paint at a collection site per day for free.

Most products covered by Paintback are no longer going through the HHW Program at the five Paintback participating sites, which helps to reduce costs to the HHW Program. However, there are still 'paint products' which are covered by the HHW Program but not by Paintback.

Paintback have indicated they are interested in signing up more HHW facilities in the new financial year.

7.4.2. Battery Product Stewardship Scheme

The Battery Stewardship Council was launched in April 2018, with goal of establishing an Australian wide Battery Stewardship Scheme. The April Meeting of Environment Ministers discussed batteries and highlighted strong support for a national stewardship scheme. In addition, State and Local Governments have been consulted in recent months and there is a clear push to establish a scheme that addresses all batteries (not just rechargeable, which was the previous focus). The reasoning behind the drive for all battery chemistries to be included in the scheme is to make battery recycling easier for consumers.