



GOVERNMENT OF
WESTERN AUSTRALIA



Household Hazardous Waste Program Annual Report 2018/19

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Acknowledgements

The Western Australian Local Government Association (WALGA) administers the Household Hazardous Waste (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 Cleanaway 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 2018/19 financial year a total of 518,585kg of Household Hazardous Waste (HHW) was collected through the Program from thirteen Permanent facilities and five Temporary Collection Days (TCDs).

The total Program expenditure for 2018/19 was \$1,734,332*; this represents an expenditure of 96.4% of the Program budget.

General Program expenditure was:

- 74% was for the collection, transport, testing and disposal/recycling of material from HHW Permanent facilities
 - 59% Metropolitan facilities
 - 15% Non-Metropolitan facilities
- 16% was for running, promoting and recycling/disposal of HHW collected from five Temporary Collection Days
- 8% was for WALGA administration
- 1% was for HHW Program promotional activities
- 1% was for Permanent facility staff training.

* All figures in the Report exclude GST and there may be some minor discrepancies between figures due to numbers in the Report being rounded.

1.0 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

2.0 Permanent Facilities

The HHW Program provides thirteen Permanent facilities in Western Australia 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)
- Millar Road Landfill Facility (City of Rockingham)
- Recycling Centre Balcatta (City of Stirling)
- Red Hill Waste Management Facility (Eastern Metropolitan Regional Council)
- Tamala Park Waste Management Facility (Mindarie Regional Council)
- West Metro Recycling Centre (Western Metropolitan 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)

3.0 HHW Program Budget

In the 2018/19 financial year, the total Program expenditure was \$1,734,332 which represents an expenditure of 96.4% 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:

- 74% was for collection, transport, testing and disposal/recycling of HHW materials from Permanent facilities:
 - 59% from Metropolitan facilities
 - 15% from the Non-Metropolitan facilities
- 16% was for running, promoting and disposal/recycling of HHW collected from five Temporary Collection Days
- 8% was for WALGA administration
- 1% was for HHW Program promotional activities
- 1% for Permanent facility staff training.

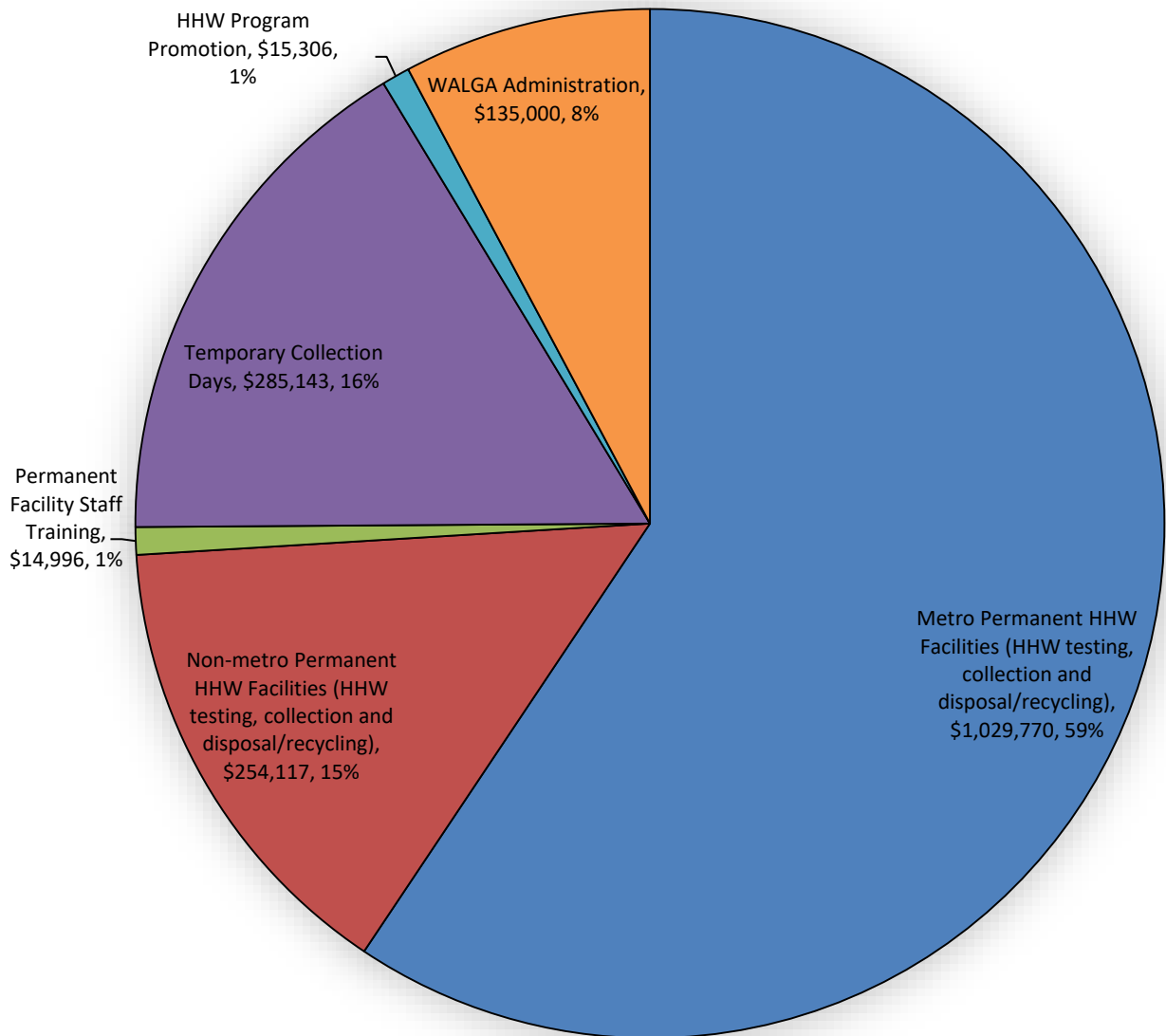


Figure 1. HHW Program expenditure by activity, for 2018/19 financial year.

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 \$859,357 to the HHW Program (see Figure 2 for a breakdown of the various expenditure areas for the Local Government co-contributions).

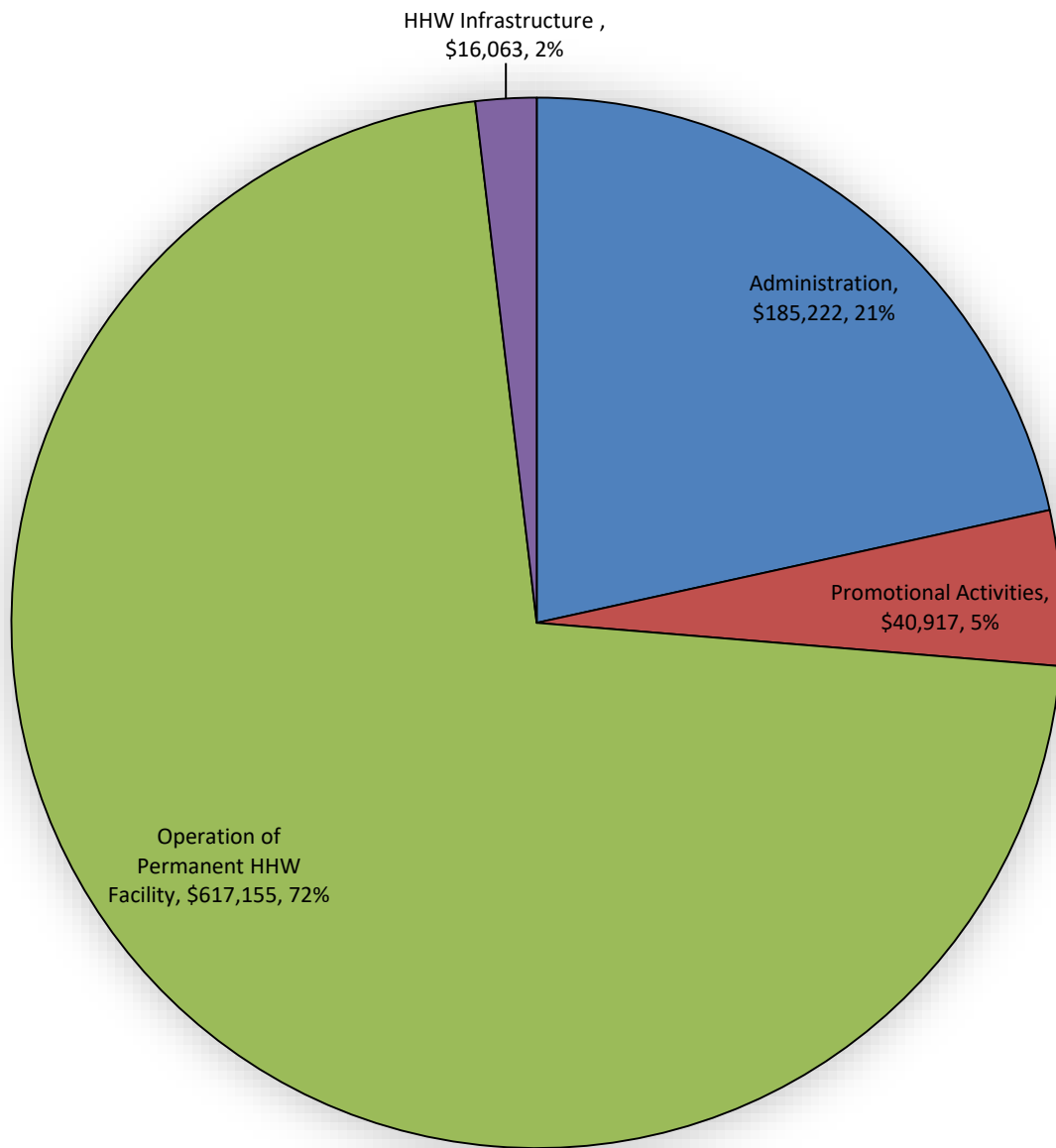


Figure 2: Local Government co-contribution expenditure breakdown for Permanent facilities in 2018/19.

4.0 HHW Program Collections Overall

In the 2018/19 financial year, a total of 518,585kg of HHW was collected through the Program, 443,042kg from Permanent facilities and 75,543kg from TCDs.

The largest amount of materials collected through the Program from all collection methods was Gas cylinders - propane (22%), Paint – water based (21%) and Batteries- household (16%).

Figure 3 gives a detailed breakdown of the total amount of material collected (by weight) and Figure 4 shows the disposal/recycling cost of the material collected from Permanent facilities and Temporary Collection Days.

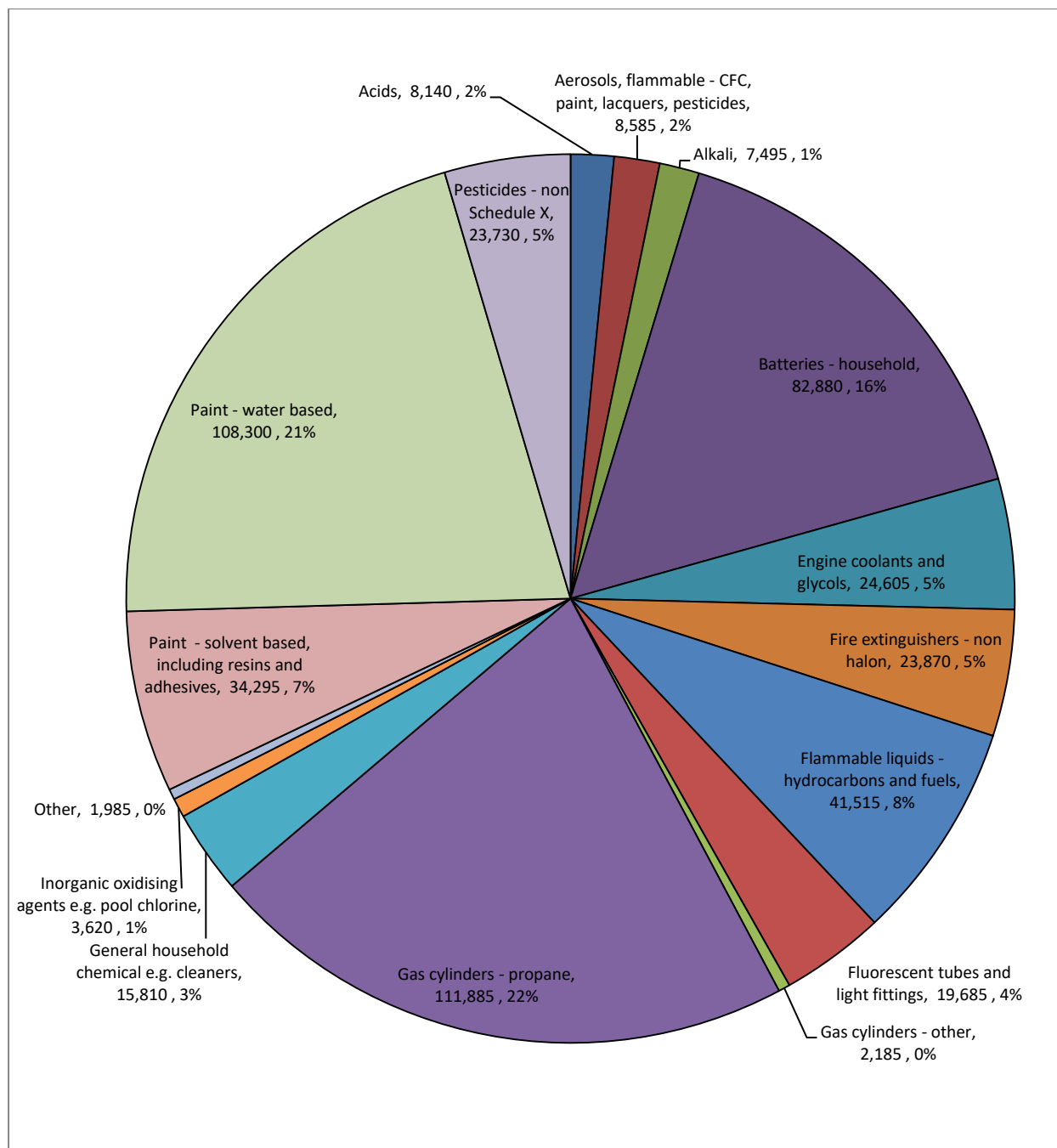


Figure 3: Amount of materials (kg) collected from Permanent facilities and Temporary Collection Days through the HHW Program, 2018/19.

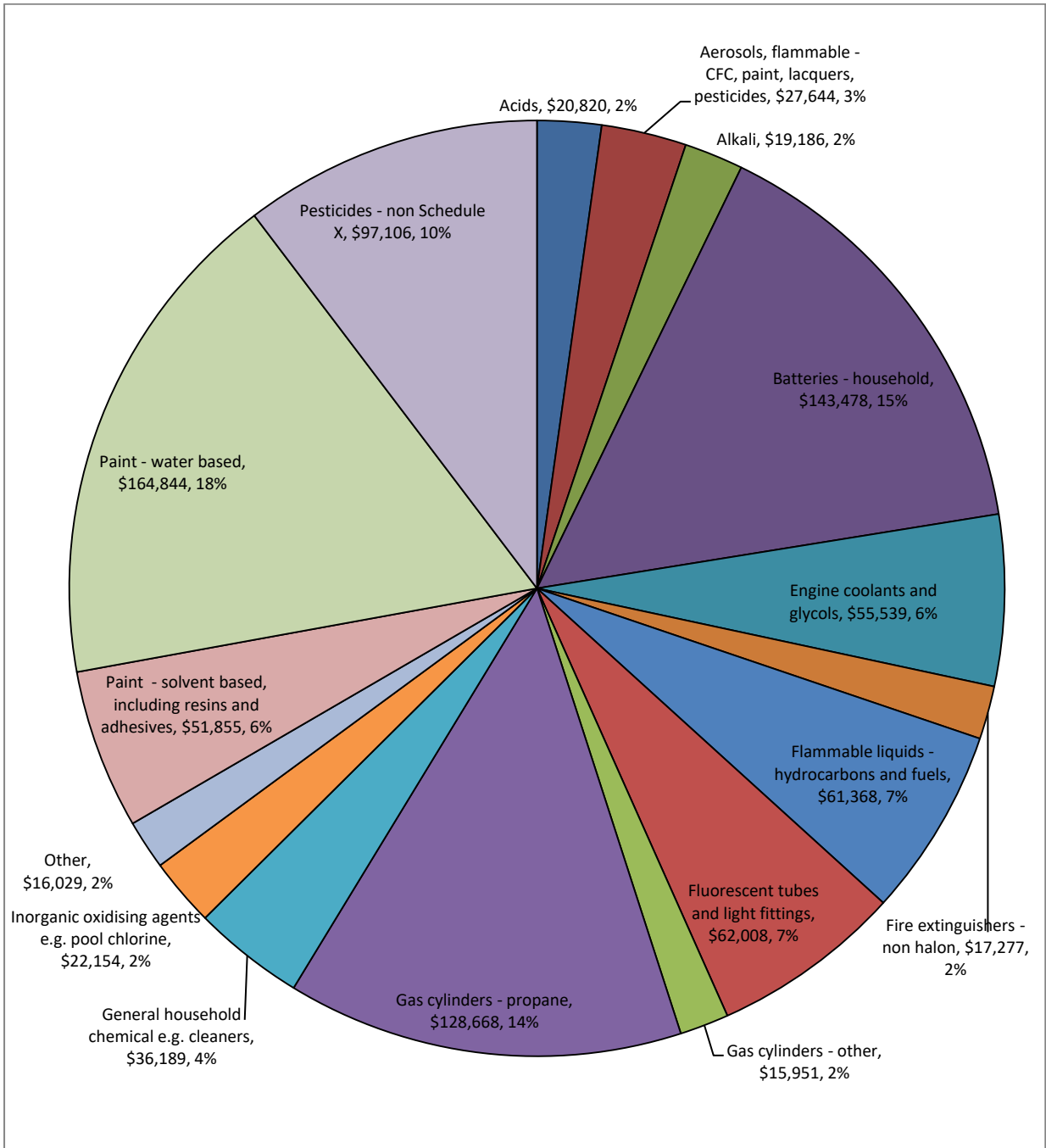


Figure 4: Disposal/recycling cost of HHW collected at Permanent facilities and Temporary Collection Days through the HHW Program, 2018/19.

5.0 HHW Permanent Facilities Summary

In the 2018/19 financial year 443,042kg of HHW was collected from thirteen Permanent facilities. The total cost for testing, collection, transport and disposal/recycling of HHW from Permanent facilities in 2018/19 was \$1,283,888.

The largest amount of material collected by weight through the Permanent facilities was Gas cylinders – propane (23%) followed by Batteries – household (18%), Paint – water based (16%) and Flammable liquids (9%). Figure 5 shows a detailed breakdown of the amount of material collected from Permanent facilities, by weight and Figure 6 shows the breakdown of the disposal/recycling cost of the material collected from Permanent facilities.

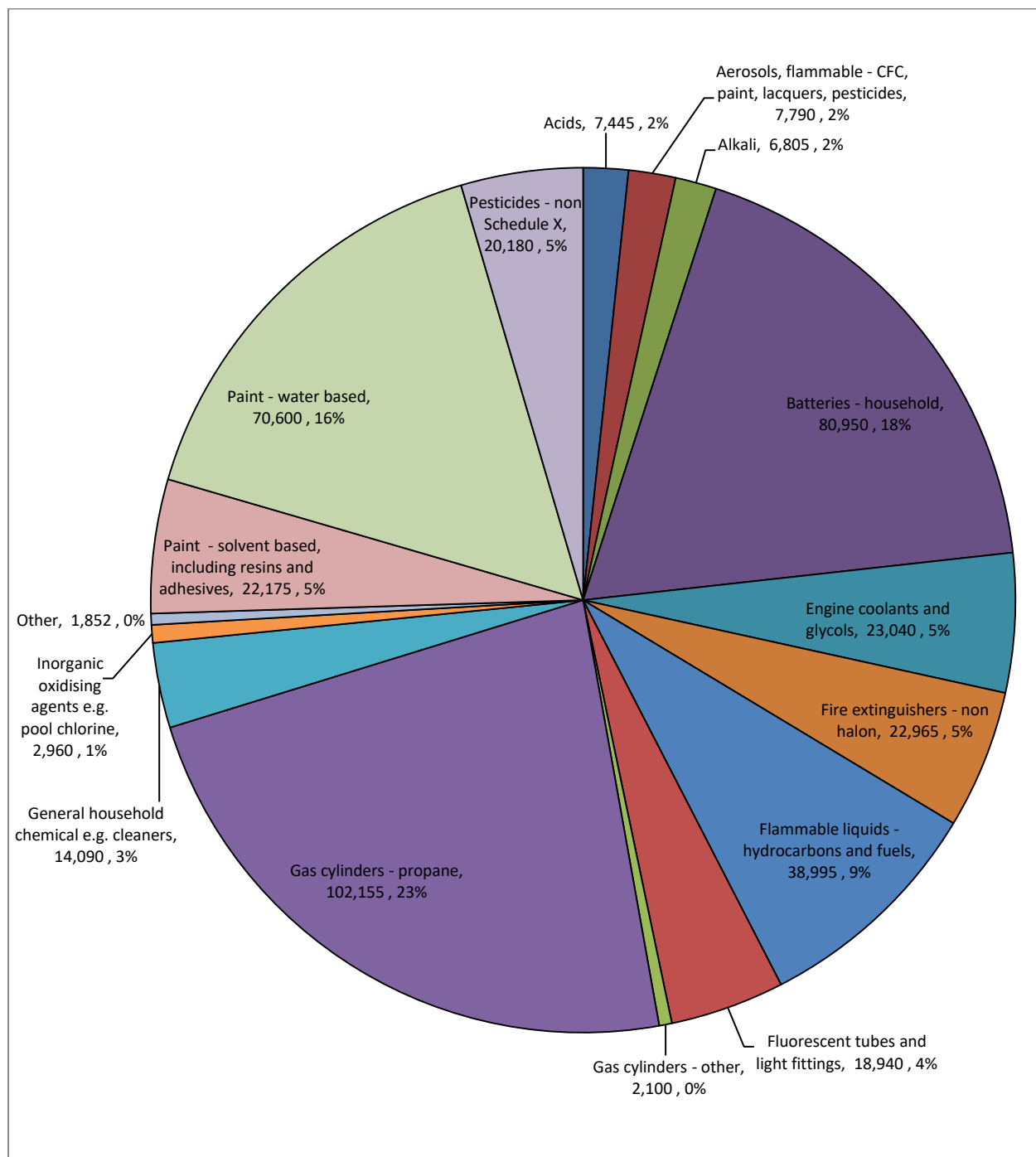


Figure 5: Amount of materials (kg) collected at Permanent facilities through the HHW Program, 2018/19.

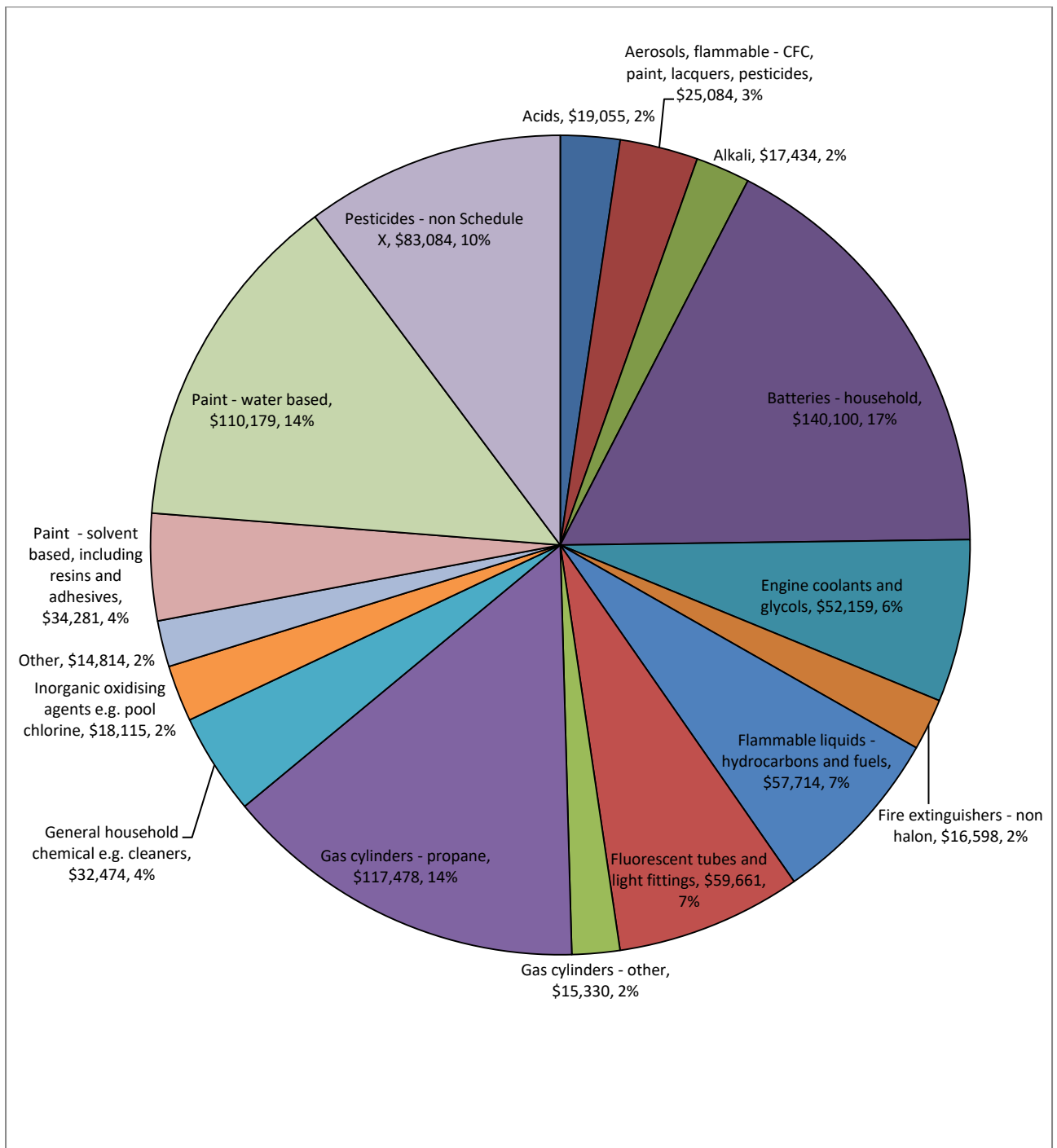


Figure 6: Disposal/recycling cost of HHW collected at Permanent facilities through the HHW Program, 2018/19.

Figure 7 shows a breakdown of the total kilograms of HHW collected and the percentage of HHW each Permanent facility collected this financial year. Tamala Park collected the largest amount of material (21%), followed by Balcatta (16%), Henderson (10%), Armadale (10%), then Bunbury and Rockingham (both at 8%).

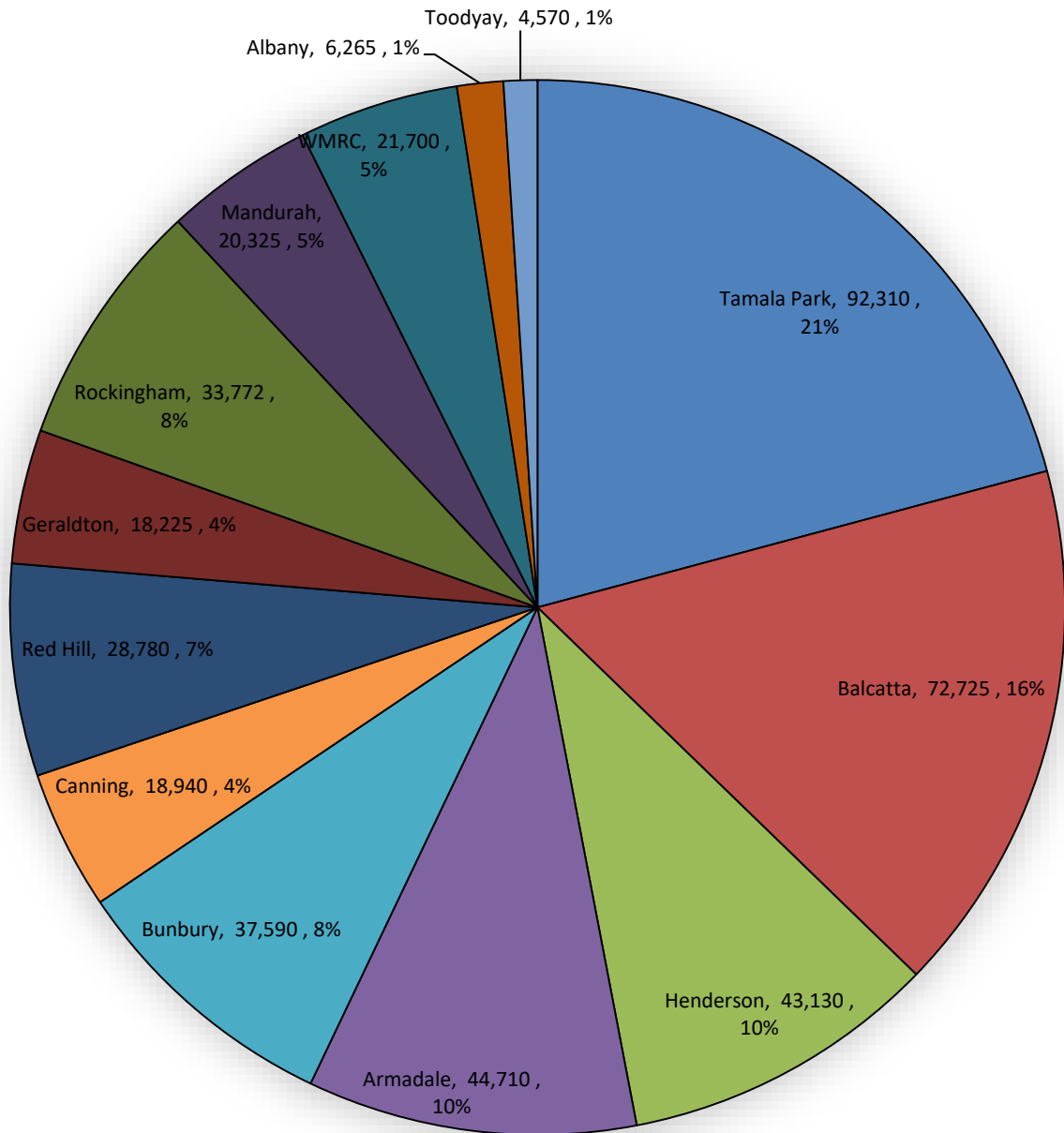


Figure 7: Weight of HHW collected (kg) and the percentage of total each HHW Permanent facility made up in 2018/19.

6.0 Temporary Collection Days Summary

In the 2018/19 financial year a total of 75,543kg of HHW was collected from five Temporary Collection Days (TCDs). The total cost to the Program for running and promoting the TCDs, plus the collecting and disposal/recycling of the HHW was \$285,143.

The five events were held in the following locations:

- City of Wanneroo – Saturday 1 June 2019
- City of Gosnells – Saturday 8 June 2019
- City of Melville – Saturday 15 June 2019

- City of Belmont – Saturday 22 June 2019
- City of Busselton – Saturday 29 June 2019.

The largest amount of material collected by weight through the TCDs was Paint – water based (50%), Paint – solvent based (16%), Gas cylinders – propane (13%) and Pesticides – non Schedule X (5%).

Figure 8 shows a detailed breakdown of the amount of material collected from the TCDs, by weight and Figure 9 shows the breakdown of the disposal/recycling cost of the material collected from the TCDs.

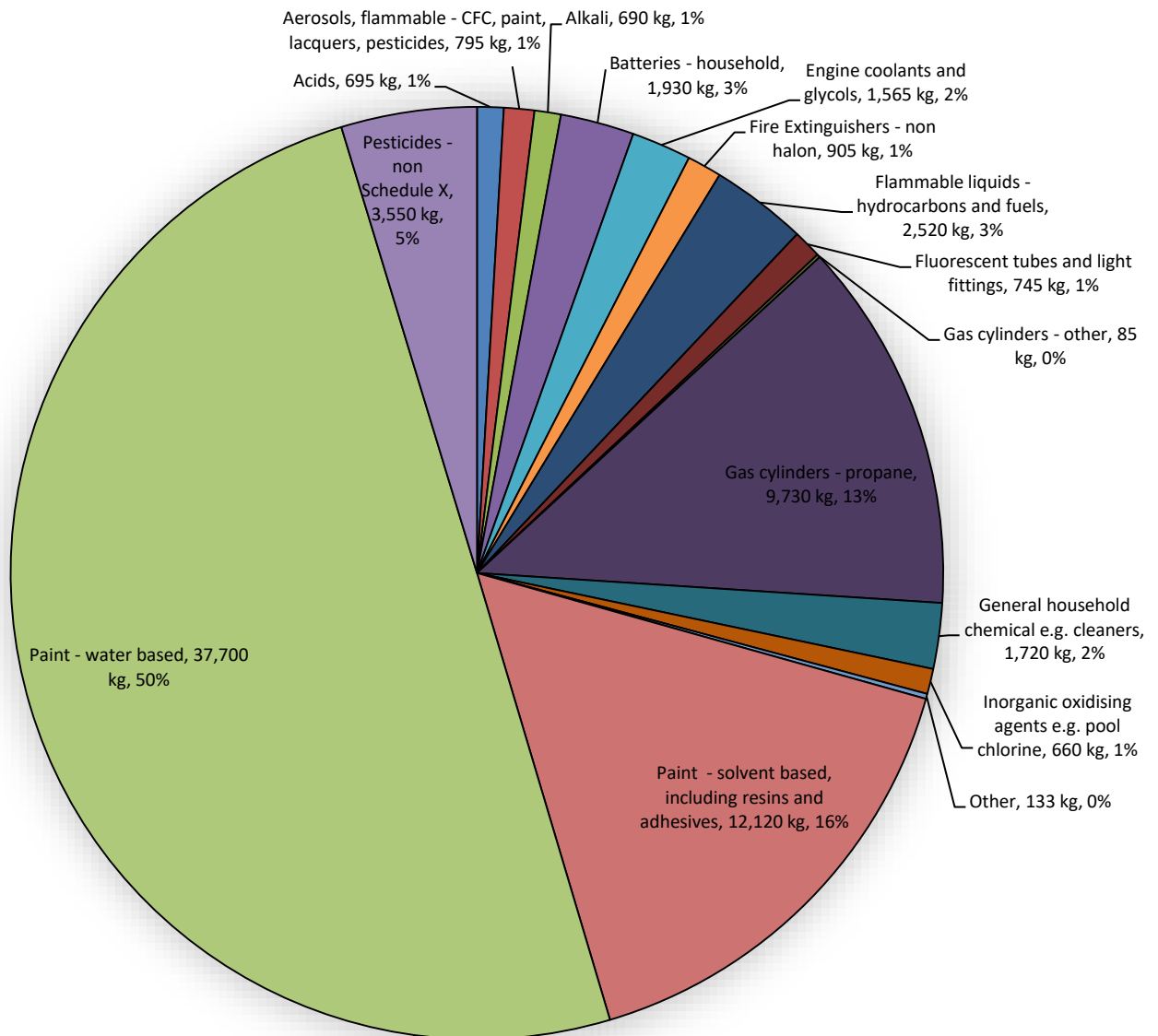


Figure 8: Amount of materials (kg) collected at TCDs through the HHW Program in the 2018/19 financial year.

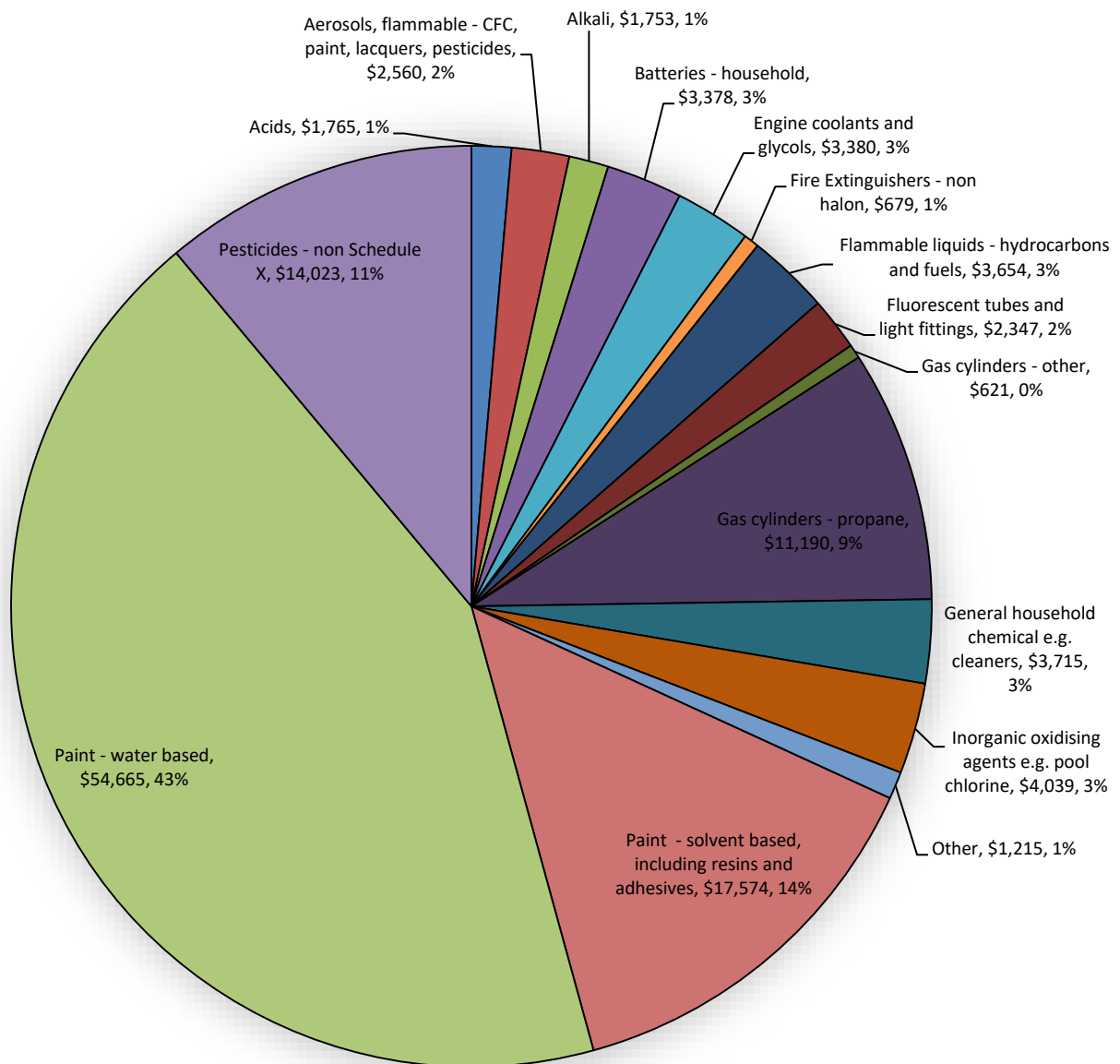


Figure 9: Disposal/recycling cost of HHW collected at TCDs through the HHW Program, in the 2018/19 financial year.

The main method for promoting the five TCD events was through direct mail out flyers to residents of the host Local Government areas, as well as Facebook boost advertising. The majority of people heard about their event through the flyer in the mail. A total of 2,659 vehicles attended the events to drop off HHW, making them the most successful TCD events the Program has held so far. On average people travelled 8-12 minutes or 6-10km to get to one of the events.

7.0 Disposal and Treatment Methods

All materials collected through the Program this financial year were 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 Cleanaway 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
- Fluoros are crushed and the separated materials are recycled
- The gas from gas cylinders is extracted and reused, cylinders are recycled
- Flares are destroyed by an explosives expert
- PCB materials and Schedule X pesticides and CFC aerosols are treated and made safe through a pyrolysis process
- Batteries are processed by Envirostream Australia in Victoria where they process batteries into steel, aluminium and copper, which is sold into Australian markets and a mixed metal compound is sent to a battery manufacturer in Korea for the use of manufacturing new batteries
- The only material that is landfilled 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. No smoke detectors were collected through the Program this year.

Figure 10 shows a breakdown of the treatment methods used for the collected HHW in 2018/19.

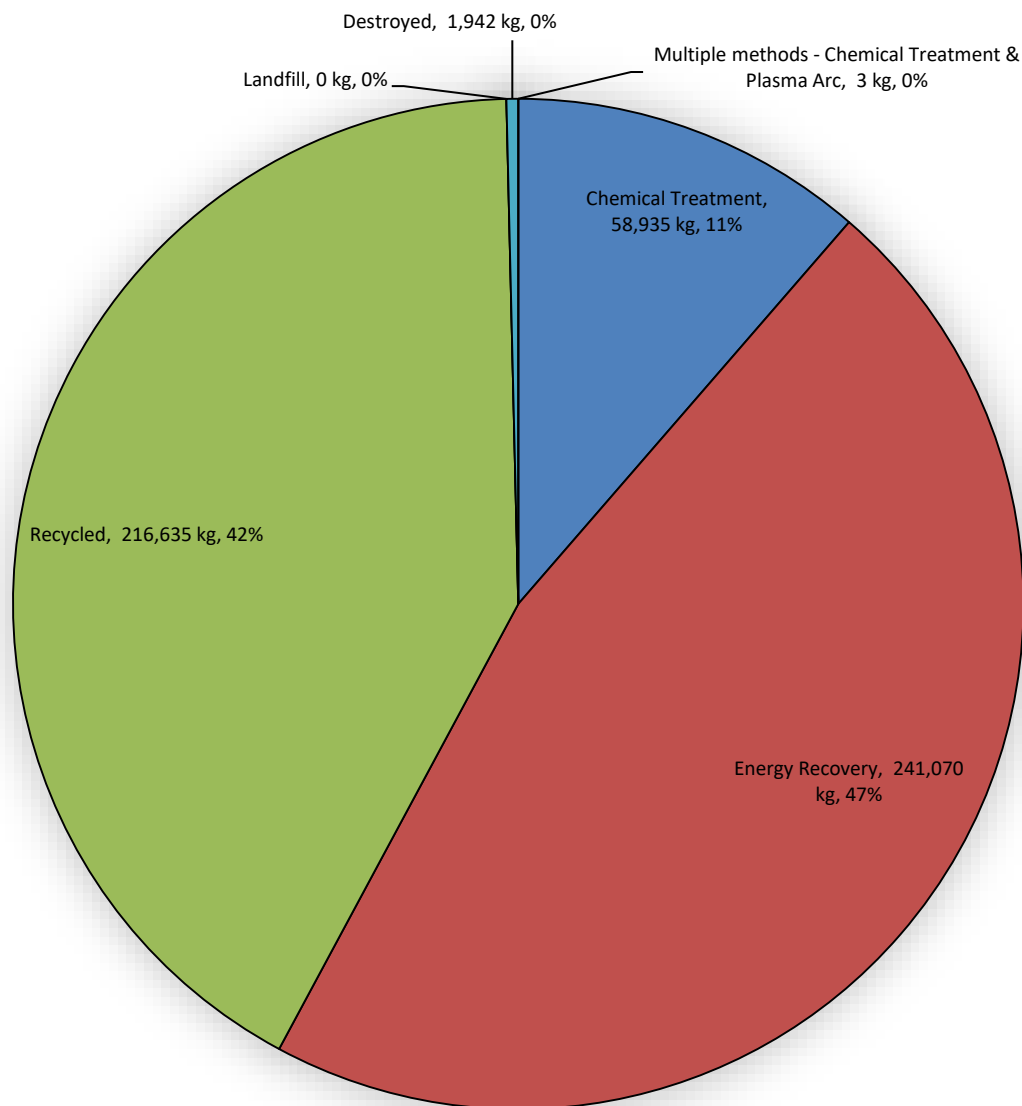


Figure 10: Treatment methods by weight (kg) for HHW collected in 2018/19.

8.0 Other Activities

8.1 Promotional Activities

8.1.1 HHW Flyer Printing

This financial year, 60,000 HHW Program flyers were printed and distributed to Local Governments and Regional Councils. Flyers were circulated to residents through various methods, including as handouts at administration centres, waste facilities and events, or posted to households with waste calendars or rates notices.

8.1.2 Perth Royal Show Booth

The HHW Program was promoted at the Perth Royal Show (22 – 29 September), through a stand inside the Mindarie Regional Council's Face Your Waste tent. The HHW stand displayed a range of HHW materials to show visitors examples of what can go through the HHW Program. WALGA staff and other Local Government staff and volunteers engaged with visitors to fill out a survey on HHW. During the display approximately 200 HHW flyers were given out to visitors, promoting the Program and 105 surveys were completed, finding out information on what HHW materials people have and how they dispose of it.

8.2 Product Stewardship Schemes

8.2.1 Paintback Scheme

The Paintback scheme is now operating at nine of the thirteen HHW Permanent facilities; Armadale, Balcatta, Bunbury, Canning, Henderson, Mandurah, Red Hill, Rockingham and Tamala Park. Currently a reduction of 80% in paint disposal/recycling costs to the Program has been seen, when compared to the 2015/16 financial year (before Paintback).

8.2.2 Battery Product Stewardship

WALGA has provided Submissions to the Battery Stewardship Council on the various iterations of the proposed Scheme, however there has been no further progress regarding implementation of the Scheme. If a Battery Product Stewardship Scheme was introduced there would be the potential to save the Program at least \$140,000 annually.

8.2.3 Gas Cylinder Product Stewardship

WALGA is investigating options for developing a local Product Stewardship program for gas cylinders that are collected through the HHW Program. Gas cylinders (propane and other gas types) make up around 24% of materials collected through the Program's Permanent facilities by weight and 16% of the cost of disposal/recycling HHW materials.

8.3 Training

Seven HHW training sessions were held in the 2018/19 financial year, training 58 attendees. Fire and Spill training was delivered to eight facilities in 2018/19, training 58 attendees.