

City of Greater Dandenong

Waste and Litter Strategy

2015-20





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J.J. RICHARDS
WASTE SERVICE

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Executive Summary

The Waste and Litter Strategy has been developed as part of Council's commitment to provide sustainable waste management services to the community and create a clean city to be proud of. This five-year operational strategy guides Council's approach toward the collection, recovery and disposal of waste generated by the community and the prevention of litter.

In 2013-2014, City of Greater Dandenong residents generated a total of 57,746 tonnes of household waste; comprising 11,758 tonnes of recycling, 13,439 tonnes of garden waste and 31,174 tonnes of garbage. In addition, a total of 3,369 tonnes of hard waste was collected from households through the at-call hard waste collection service.

The prevention and management of illegal rubbish dumping remains an ongoing challenge for the City of Greater Dandenong. In 2013-14 Council collected over 472 tonnes of illegally dumped rubbish and anticipates spending approximately 3.2 million dollars on litter management, dumped rubbish and street cleansing services in 2015-16.

Consistent with Victorian trends the overall generation of household waste within Greater Dandenong continues to increase. With environmental, economic and social factors at play, the planning for and delivery of sustainable waste management services to the community presents a number of opportunities and challenges.

Greater Dandenong Council is conscious of the environmental impacts faced in regard to landfill management, resource consumption and climate change, and seeks to identify sustainable solutions for the management of waste and litter generated by the community. The provision of affordable services that meet the needs of the community as well as litter prevention and management are key considerations in the planning and delivery of waste management services by Council.

This strategy sets out Council's waste and litter management vision and goals for the next five years and provides supporting action plans that will guide Council in its mission to achieve these goals. Within this strategy Council's key goals have been categorised into five key themes, each of which is underpinned by a set of priorities identified as necessary to help Council achieve their goal, as outline below.

Key themes and associated goals:

Waste minimisation - Reduce the amount of waste sent to landfill

Waste management - Deliver sustainable waste services to the community

Waste education - Increase community awareness of resource recovery and waste minimisation

Litter prevention and management - Create clean and litter free public places

Closing the Loop on recycling - Increase the amount of material that is recovered for re-use and rec

1. Background

This strategy articulates Council's waste and litter management strategic direction and priority goals over the next five years. Waste management services, including kerbside and hard waste collection and disposal, street sweeping and litter prevention are a significant component of Councils annual budget and require appropriate management and planning.

The aim of the strategy is to ensure that future waste management activities are aligned with relevant state and federal government policy and legislation; consistent with Council and community expectation; and planned and resourced to meet future growth and development. Emerging issues and new opportunities identified within the strategy include:

- current volatility of the recyclables market and fluctuating contract rates
- future waste infrastructure planning in response to state-wide waste policy reform e.g. new waste technologies and service options
- local issues such as illegal rubbish dumping, increasing medium to high-density development and food waste in the household garbage stream.
- the 2017 implementation of a ban on e-waste to landfill

1.1 Scope of strategy

This strategy is primarily concerned with the collection, disposal and resource recovery of municipal solid waste generated by households within Greater Dandenong and litter in the public domain. Direct services including waste and recycling collection services, street cleansing services, provision of infrastructure, education services and future planning; and indirect services including facilitation and advocacy, relating to waste minimisation, recycling and litter prevention, are within the scope of the strategy.

The strategy also includes a review on the provision of waste and recycling services for commercial properties within the municipality.

1.2 Council context

Waste and litter management is a major responsibility of local government and is embedded into both the City of Greater Dandenong Council Plan and current Environmental Sustainability Strategy.

Council Plan 2013 – 2017

The City of Greater Dandenong Council Plan 2013-2017 vision is as follows:

“Greater Dandenong is a City of Opportunity with quality buildings, places and facilities, and where people of all ages, cultures and backgrounds can reach their potential to live secure, happy and fulfilling lives.”

The Council Plan’s strategic priorities applicable to the Waste and Litter Strategy are:

- Priority 1.5: Ensure Public Health standards are maintained
- Priority 3.3: Best Practice Waste Management and Recycling
- Priority 4.8: Create a clean and attractive city we can all be proud of

The development of the Litter and Waste Strategy is a key priority action identified within the Council Plan.

Environmental Sustainability Strategy 2010

The goals and strategic objectives in the current Environmental Sustainability Strategy that relate to waste and litter prevention are:

Goals: An integrated approach to manage waste across the municipality.

Strategic Objectives:

Waste & Recycling

- 3.1 - A reduction in the waste generated by the residential community
- 3.2 - Increase waste diverted from landfill
- 3.3 - Consider appropriate responses to changes in Federal and State Government policies and strategies that affect Council's management of waste
- 3.4 - An integrated approach to waste minimisation through advocacy to other levels of government and agencies
- 3.5 - Work with the non-residential sector to reduce waste generated and increase recycling

Reduce litter

- 3.6 - Work with the community to reduce littering

Integrated approach across Council's operations

- 3.7 - Increase the reuse of materials across Council's operations
- 3.8 - Promote opportunities to improve waste management across Council's operations

Once finalised the current Environmental Sustainability Strategy is to be replaced with the Environment Plan, which is currently in the drafting phase.

Related strategies

The Waste and Litter Strategy has synergies with other Council strategies, including the Community Safety Strategy which addresses some hazardous waste items such as sharps and the Graffiti Management Plan for the management of graffiti, commonly associated with litter.



1.3 State and federal policy context

State and Federal Policy

The future direction of waste management within the City of Greater Dandenong needs to align with current state and federal legislation and policies. This strategy has therefore been developed in the context of the relevant legislation and policies at both the State and Federal Level. Key legislation and policies reviewed, which are further detailed in Appendix A, include but are not limited to:

- National Waste Policy: Less Waste and More Resources 2009
- Carbon Pricing Repeal
- State-wide Waste and Resource Recovery Infrastructure Plan (SWIRRP)
- Draft Metropolitan Waste and Resource Recovery Strategic Plan (MWRRSP)
- Plan Melbourne
- Victorian Litter Strategy

Metropolitan Waste and Resource Recovery Group

The Metropolitan Waste and Resource Recovery Group (MWRRG) is a state government agency, established under the Victorian Environment Protection (Amendment) Act 2006. MWRRG is responsible for coordinating municipal waste management activities in Melbourne on behalf of 31 metropolitan councils.

The role of the MWRRG includes but is not limited to:

- advising metropolitan Councils on best practice in municipal waste management and resource efficiency
- facilitating and managing contracts and arrangements to develop waste management services for metropolitan Councils
- Assessing and planning for municipal waste management infrastructure and landfills in metropolitan Melbourne.

1.4 Evaluation and reporting

A series of Action Plans will underpin this strategy to ensure it is successfully implemented. The Action Plans will be reviewed annually by the Waste and Cleansing Services Unit and a formal review of the Strategy will be undertaken in 5 years. The progress of the Action Plans will be reported via council's corporate reporting channels.



2 Our Municipality

2.1 Community profile

The City of Greater Dandenong is located in Melbourne's south east and covers an area of 129 square kilometres. The municipality includes the suburbs of Springvale, Springvale South, Noble Park, Noble Park North, Keysborough, Dandenong, Dandenong South and Bangholme.

The municipality is valued for its cosmopolitan and multicultural lifestyle, and is renowned for its shopping and food experiences in the retail precincts including the Dandenong Market, as well as state of the art cultural and sporting facilities. There are over 50 primary and secondary schools in the city, as well as early learning centres and TAFE institutes.

Population

In 2013, the population of Greater Dandenong was estimated to be 144,000. In the past twenty years, this number has risen by 20% and is predicted to increase by a further 16% to 2023. Over half of the population (56%) were born overseas, with residents coming from 156 different birthplaces. This makes Greater Dandenong the most culturally diverse municipality in Victoria. Birthplaces include Vietnam, Cambodia, Sri Lanka, India, China, Italy, Greece, Bosnia, Afghanistan, New Zealand and Britain.

In Greater Dandenong, half of the resident population (51%) come from countries where English is not the main language spoken, compared with the Metropolitan Melbourne average of 24%. Many residents speak fluent English however 14% of the population have limited fluency in spoken English, compared to the Melbourne average of 7%. In 2012/13, 2,240 recently-arrived migrants settled in Greater Dandenong, the highest number of settlers in any Victorian municipality.

Similar to nation-wide trends, Greater Dandenong has an aging population. In 2011, 11% of the population were aged 65 and over. The number of older people in Greater Dandenong is expected to increase significantly over the next 15 years.

Housing

Housing in Greater Dandenong comprises of 69% houses, 21% flats, 8% semi detached dwellings and 2% other. Greater Dandenong's proportion of flats is higher than the metropolitan Melbourne average of 15%. Overall levels of housing ownership are comparable with metropolitan Melbourne, where 34% of occupied private dwellings are fully owned, 31% are being purchased and most of the remainder are rented.

Greater Dandenong is predicted to have an additional 16,700 new households by 2031, a 36% increase on 2001 levels. The majority of residential development is forecast to be within strategic redevelopment sites and within residential areas. Council is actively encouraging multi storey, higher density development in central Dandenong and other major activity centres such as Springvale and Noble Park as a component of mixed use functions within those areas.

Income

In 2011, the median weekly gross income among Greater Dandenong residents was \$395 - the lowest in Melbourne, and 67% of the metropolitan average of \$592. The unemployment rate was 12% in March 2015, substantially higher than the metropolitan rate of 6.6%.

Industry

There are approximately 12,525 businesses in Greater Dandenong. Almost 94 per cent of businesses in Greater Dandenong employ 19 or less employees, and more than 6 per cent of businesses employ between 20 and 199 employees. There are 39 large businesses that employ more than 199 employees. Manufacturing is the largest industry in Greater Dandenong, and employs 30 per cent of the total workers.

The industrial sector has a firm foundation in Greater Dandenong and supports the local economy, providing employment and investment opportunities locally and within Melbourne's south east. Plan Melbourne 2030 identifies Dandenong South as a state-significant industrial precinct. Waste and Resource Recovery Plan recognises the same precinct as a 'hub of importance' for waste and resource recovery infrastructure.



3. Waste and Litter Management

3.1 The waste context

What is waste?

Waste is defined by the Environment Protection Act 1970 as any matter, whether solid, liquid, gaseous or radioactive, which is discharged, emitted or deposited in the environment in such volume, constituency or manner as to cause an alteration of the environment.

Generally waste refers to any materials that a person no longer has a use for and wants to discard. Many items are considered waste including household rubbish, garden waste, packaging, old computers, unwanted couches, paint tins etc. During our day to day activities we can produce a range of waste items in a variety of locations such as at home, at work or in public places.

Managing our waste

Waste management systems were originally established to address hygiene and public health issues in municipal areas. In the 1960's and 1970's, a shift in thinking started to occur to consider the impact human activity and development was having on the environment. From the 1970's governments started to introduce formal programs to reduce the impact of waste generation on the environment such as the collection of recyclables, drop off recycling facilities and restrictions to backyard burning off.

Over the past twenty years, Melbourne's waste management and collection systems have undergone a significant transformation. Kerbside recycling collection systems are now standard practice and are well supported by the community. According to Sustainability Victoria's Local Government Survey 2010-2011, the state average diversion rate (incorporating recyclables and green organics) has increased from 44% in 2009-10 to 45% in 2010-11.

The focus of Council/s over the past twenty years has been identifying ways to achieve best practice waste management across the municipality in order to improve diversion rates and maximise recovery of resources for recycling. A key driver of increasing diversion rates and improving resource recovery opportunities has been the increase in landfill costs across the state.

Whilst Local Government still largely relies on landfill to help with the management of household waste, land filling practices have greatly evolved from the early days where waste was simply dumped, buried, and in some cases burnt. Landfills are currently licensed and regulated by the EPA to minimise their environmental impacts, including strict guidelines for landfill pocket or 'cell' construction and the storage and treatment of leachate. In addition, landfill gas collection and use for energy production is now common practice in south east Melbourne.

The focus of waste management into the future is still based on further maximising opportunities for resource recovery and reducing environmental impacts, whilst continuing to drive diversion of waste from landfill.

Minimising our waste

To date, current waste management systems have been effective in managing waste produced by the community. Recycling rates continue to increase and waste to landfill is decreasing; however with increasing population growth and high consumption of products, overall waste generation continues to increase. The more waste that is produced, the more energy and resources required to collect, process and dispose of the waste. Therefore continued increases in overall waste generation are not sustainable long term.

This reality highlights the need to focus on waste minimisation, which involves reducing the amount of waste created in the first place. The benefits of waste minimisation include less waste going to landfill, reduced use of natural resources including energy for reprocessing, less pollution and efficient production processes. Maintaining a focus on waste minimisation is key to curbing overall waste generation long term.

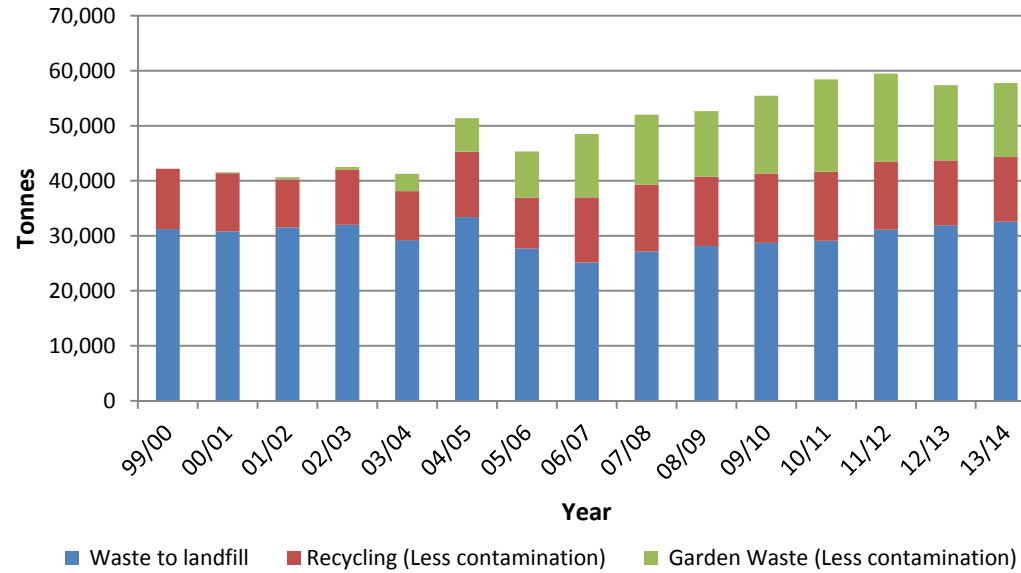
Waste generation in Greater Dandenong

In 2013-14, Greater Dandenong residents generated a total of 57,746 tonnes of waste, comprising 11,758 tonnes of recycling, 13,439 tonnes of garden waste and 31,174 tonnes of garbage. In addition, 3,369 tonnes of hard waste were collected from households through the at-call hard waste collection service. Overall, 44% of household waste generated by Greater Dandenong is diverted from landfill through the recycling and garden waste collections. This is slightly lower than the Council target of 47% waste diversion.

The waste diversion rate has decreased in recent years, as a result of reduced tonnages of recycling and garden waste, as indicated in Figure One. This trend is consistent with most metropolitan Councils and it is suspected that lighter weighted packaging material is a contributing factor, as well as a reduction in newspapers being purchased.

In order to monitor waste collection rates and to better understand local waste and recycling trends over time, Council plans to perform regular kerbside waste audits. The data obtained from these audits will be used to guide waste management decisions and community education campaigns.

Figure One: Annual household waste generation data for the City of Greater Dandenong 1999 – 2014



A compositional breakdown of household garbage and recycling streams, obtained from segregation audits performed in 2012 and 2013 respectively, is detailed in Appendix B.

3.2 Litter and illegal dumping

Litter is a visible sign of pollution in the natural environment and a major environmental concern. Litter dropped in the street can travel down waterways, through stormwater systems and enter and pollute the ocean and surrounding landscape. Litter can also have broader impacts on liveability and community safety. The presence of litter contributes to the perception of an area being unsafe and some littered items can cause health risks. Taking action to prevent and minimise littering can have broad reaching benefits beyond the visual impacts of litter, creating a positive perception of the city and a sense of pride throughout our community.

What is litter?

The Environment Protection Act 1970 (the Act) defines litter in the State of Victoria as;

Any solid or liquid domestic or commercial waste, refuse, debris or rubbish and, without limiting the generality of the above, includes any waste glass, metal, plastic, paper, fabric, wood, food, soil, sand, concrete or rocks, abandoned vehicles, abandoned vehicle parts and garden remnants and clippings, but does not include any gases, dust or smoke or any waste that is produced or emitted during, or as a result of, any of the normal operations of the mining, building or manufacturing industry or of any primary industry;

Simply put, litter refers to any item that is not disposed of in the correct manner. Littering can occur indirectly such as leaving an unsecured trailer load of rubbish or presenting an overfull bins, or directly such as throwing cigarette butts outside a car window or food packaging on the ground.

Victoria's litter profile

Cigarette butts are the most littered item in Victoria. The Victorian Litter Report 2011 found that cigarette butts accounted for 54% of all litter, followed by beverage containers (29%) and then paper (6%). Other frequently littered items include food wrappers, plastic bags and polystyrene. The report indicated an improvement in littering behaviour for the first time in 2011 and attributes this to efforts that have been made to improve bin infrastructure, location, signage and cleaning regimes. Littering behaviours are complex and efforts to continue to reduce and manage litter are required into the future.

Illegal dumping

Illegal dumping is an act of littering and typically refers to littering of larger sized items or quantities. As indicated in Figure Two, illegal dumping can be categorised as small, medium and large scale. Both small and medium scale dumping are the responsibility of state and local government.

Figure Two: Types of illegal dumping

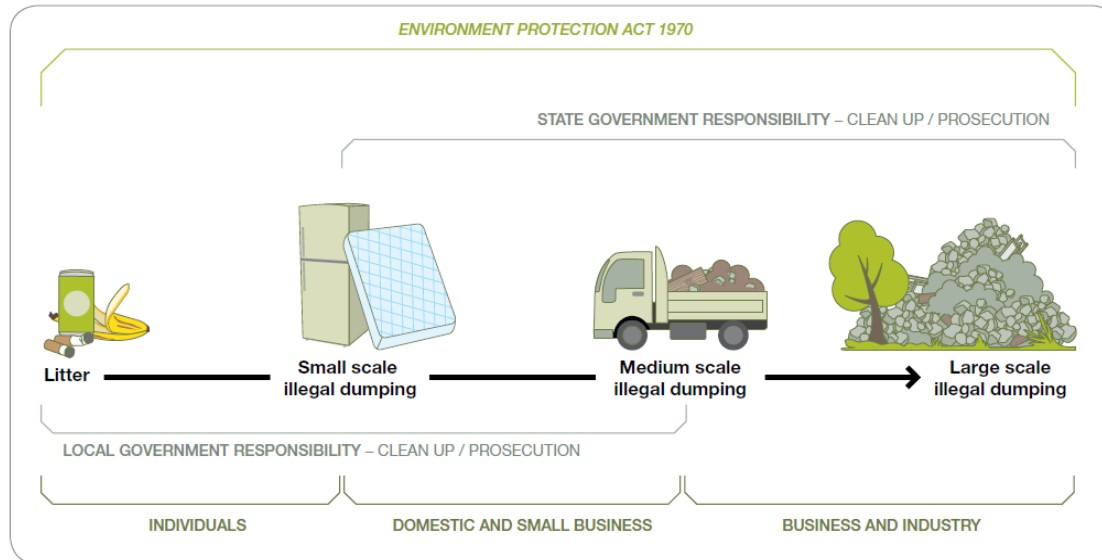


Diagram courtesy of the Department of Sustainability and Environment

Role of local government

Greater Dandenong Council, like majority of local governments, play a pivotal role in local litter management, through the provision and collection of litter bins, emptying of litter traps, street cleansing services and removal of illegally dumped rubbish and delivery of targeted litter education programs. In 2010-11, Victorian Council's collectively spent in excess of \$83 million on providing street sweeping and litter clean up services (litter bin servicing and maintenance and illegal dumping) Other organisations such as Vic-Roads, Parks Victoria and Melbourne Water, also have significant costs for cleaning up and disposing of litter, which are ever increasing.

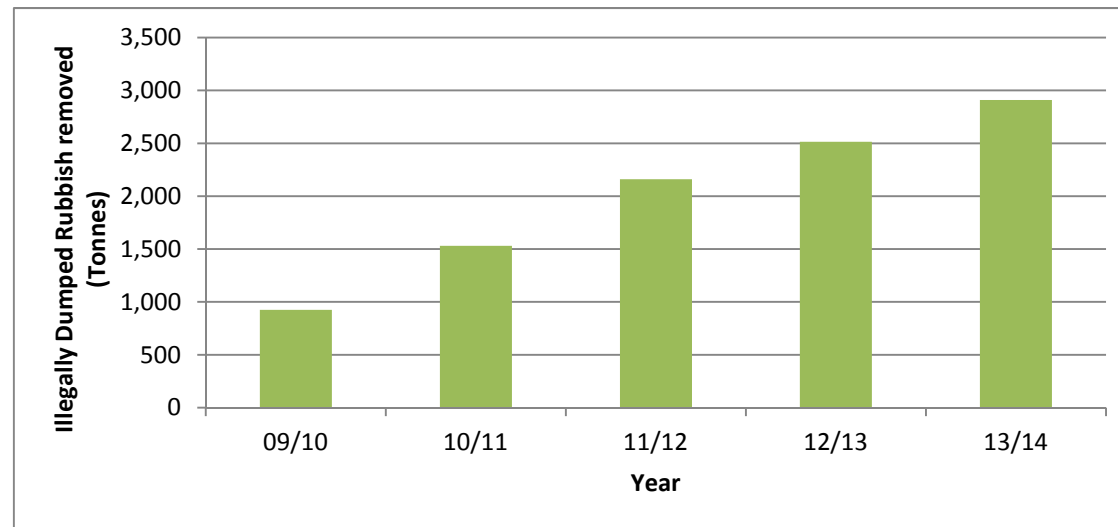
In partnership with state government and other agencies, Greater Dandenong Council is active in delivering local litter and illegal dumping prevention education campaigns and initiatives to discourage littering and increase community awareness. The Environment Protection Act 1970 prohibits and regulates the deposit of litter in the environment, regulates the distribution of materials that may become litter and also allows for the removal of detrimental or disorderly objects. Littering is illegal and both the EPA and Council (listed as a Litter Authority) can enforce against littering

Litter and Illegal Rubbish Dumping in Greater Dandenong

In 2013-14 City of Greater Dandenong collected over 472 tonnes of illegally dumped rubbish, triple the amount collected in 2009/10. Illegally dumped rubbish is prevalent in areas such as nature strips outside of multi unit dwellings and rural / industrial locations within Greater Dandenong. With instances of illegally dumped rubbish having increased over the past five years (See Figure Three), taking steps toward prevention is a key priority for Council

Based on current collection tonnages and patterns of expenditure, Council's anticipates spending approximately 3.2 million dollars on litter management, dumped rubbish and street cleansing services in the 2015-16 financial year.

Figure Three: Illegally dumped rubbish removed by Council annually over the past 5 years



Litter Action Taskforce (LATF)

Greater Dandenong has an established Litter Action Taskforce to drive and coordinate Council's litter prevention programs. The Taskforce comprises staff from numerous teams across Council including Residential Amenity, Waste and Cleansing, Parks, Planning and Communications teams. The taskforce has been instrumental in developing partnerships with state and federal government organisations, attracting external funding opportunities, facilitating cross Council collaborations and supporting a coordinated approach to litter prevention within Council.

Recent initiatives of the LATF include: 'Dob in a Dumper' Campaign, Roadside Litter Prevention Program, Illegal Rubbish Dumping Education and Enforcement, Cigarette Butt Litter Campaign and monitoring of litter hotspots.

Enforcement

As a Litter Authority, Greater Dandenong Council actively undertakes the pursuit and prosecution of litter and illegal dumping offenders. In conjunction, the consequences of and penalties associated with such actions are regularly communicated to residents at public events and through targeted education programs and materials, to reinforce resident's understanding that littering and illegal dumping are not acceptable.



3.3 Council services, programs and activities

City of Greater Dandenong provides a kerbside waste, recycling and garden waste collection service to all residents and some commercial and non-rateable properties, as well as street litter collections and illegal dumping removal throughout the municipality.

An overview of Council's key waste and litter service achievements can be found in Appendix C.

Household Waste Collection Services

Kerbside collection

Greater Dandenong residents have the choice of a 2 or 3 bin kerbside services consisting of a weekly collection service for garbage and an alternating fortnightly collection service for recycling and garden waste. Residents also have the option of variable bin sizes as shown in Table One.

Table One: household bin options

Option	Garbage	Recycling	Garden Waste
A	120L	240L	240L
B	80L	240L	240L
C	120L	240L	120L
D	80L	240L	120L
E	120L	240L	Nil
F	80L	240	Nil

Council promotes Option D as the most sustainable bin combination (for an average household) and provides a cost incentive to residents who nominate to have this combination. Residents also have the option to upgrade to a larger 360L recycling bin for a one off purchase cost, or request additional bins, which attract an additional service fee.

At-Call Hard Waste Collection Service

An 'At-Call' Hard Waste Collection Service is available for all residential properties year round. Households receive one at call service per financial year equalling a maximum collection of 3m³ plus two mattresses. Residents may also have additional quantities of materials collected and/or additional collections on a "user pays" basis via a simple credit card transaction over the phone.

Items accepted in the hard waste collection service include mattresses and bed bases, scrap metal, metal car parts, household items, televisions, stereo equipment, appliances, glass, (mirrors and china must be wrapped and marked), timber in pieces no longer than 1.5 metres, carpet, metal tools and equipment, hot water systems, lawn mowers, whitegoods including fridges (remove door), washing machines, air conditioners and stoves. All Council's waste management collection rates and service levels are outlined in Appendix D.

Street Cleansing and Public Litter Bin Collection Services

Street cleansing and litter bin collection services keep public streets and open spaces clean and free from litter. Services provided by Council include but are not limited to:

- street and footpath sweeping
- emptying & maintenance of public litter and recycling bins
- collection of illegal dumped waste including hard waste and rubbish dumped beside litter bins
- collection of waste and recycling at local Festivals and Events including Waste Wise Events.

More details of Council's cleansing services are provided in Appendix E.

Public Place Recycling

Council provides Public Place Recycling facilities within the municipality to enable residents to recycle when away from home. An example of this is the Public Place Recycling bins located within the Dandenong, Noble Park and Springvale Central Business Districts (CBDs), Council's Leisure and Aquatic Centres, sporting club pavilions and the Dandenong Market. Public place is progressively being expanded across all shop fronts.

Other Recycling Services

Council partners with other organisations such as Sustainability Victoria to provide other recycling services on a periodic basis, as detailed below. Further details about current waste management service levels are provided in Appendix D.

- Detox your Home - a free drop off service for household chemical disposal
- Mobile Muster – free disposal of mobile phones at council’s customer service centres
- De-clutter events (Council offices)
- E-waste collections - via the “At Call” Hard Waste Collection Service and one off special events

Transfer Stations

City of Greater Dandenong does not own or operate a landfill site or transfer station, however there are a number of facilities near Greater Dandenong that residents have access to, including:

- SITA Australia / Outlook Waste Transfer and Recycling Centre, 274 Hallam Road, Hampton Park
- Monash Waste Transfer Station and Recycling Centre, 390 Ferntree Gully Road, Notting Hill
- Clayton Regional Transfer Station, 654–718 Clayton Road, Clayton
- Knox Transfer Station and Recycling Centre, George Street, Wantirna South
- Frankston Transfer Station – 20 Harold Road, Skye

These facilities provide the opportunity to dispose of other materials not readily accepted through, or which exceed the capacity of Council’s kerbside collection service, inclusive of but not limited to: Tyers, car batteries, oil, electronic waste (TV’s and computers), builder rubble and concrete, scrap metal and whitegoods and garden waste.

There is however acknowledgement across the waste sector that increased numbers of transfer stations and broader scope of the type and volume of materials they will accept is needed. As outlined in Sustainability Victoria’s State-wide Waste and Resource Recovery Infrastructure Plan, released in June 2015, it is the responsibility of the Metropolitan Waste & Resource Recovery Group (MWRRG) to develop metropolitan Melbourne’s Regional Waste and Resource Recovery Infrastructure Plan (RWRRIP), which includes assessing the need for and potential location of transfer stations. The draft RWRRIP is due to be released in late 2015.

Waste Education

A comprehensive waste education program is delivered to local schools and the community, to encourage waste minimisation and recycling and to support Council's waste management services. The program is supported through combined funding from Council's recycling receivables contractor and kerbside collection contractor, allowing for specialised industry input into all waste education.

Council is also an active participant in applying for and undertaking grant projects focusing on community education. The majority of grant programs are awarded, administered and funded by either the Metropolitan Waste & Resource Recovery Group or Sustainability Victoria, who draw on the income generated by the Environmental Protection Landfill Levy applied to all waste going to landfill.

The key aim of waste education within Greater Dandenong is to promote the adoption of sustainable waste practices within the community, through the provision of innovative and engaging education programs which foster a better understanding of:

- Council's kerbside recycling service and other recycling opportunities
- Council's hard waste collection service and public place recycling programs
- waste minimisation and sustainable lifestyle choices
- home composting and worm farming principals.

Education about the management and prevention of litter and illegal dumping is another key Council priority, supported through:

- promotion and facilitation of the litter report line
- litter and illegal dumping hotspots monitoring and investigations
- litter prevention education at schools, with community and at events.
- municipal-wide litter prevention education campaigns and initiatives (See section 3.2)

Further details of City of Greater Dandenong's waste education and communication activities are outlined in Appendix F.

3.4 Contractual arrangements – waste management

Council's waste management services including the kerbside collection, resource recovery and disposal, and Council's hard waste services are provided by waste contractors. Council's current contractual arrangements are outlined in Appendix G.



3.5 Partners and stakeholders

Council works in partnership with a range of stakeholders including the community, government and private organisations, contractors and industry to plan for and deliver waste management and litter prevention services and programs. Our key partners and stakeholders are outlined in Table Two.

Table Two: Greater Dandenong Council's current key partners and stakeholders

Group	Partner and stakeholders
Community	Residents Schools, kindergartens and children's services Businesses
Contractors / Service providers	JJ Richards Polytrade SITA Landfill Natural Recovery Systems (NRS) Gateway Services Corrections Victoria
State and Federal Government	Environment Protection Authority (EPA) Victoria Sustainability Victoria Metropolitan Waste and Resource Recovery Group National Packaging Covenant Victorian Litter Action Alliance
Organisations	Keep Australia Beautiful Tox Free (Detox your Home)

4. Guiding principles

4.1 Waste management hierarchy

The waste management hierarchy (Figure Four) is an internationally accepted model for prioritizing waste management practices in environmentally preferred order from most to least preferable. The most preferred actions are highlighted as avoidance and reduction of waste. Disposing of waste to landfill is considered the least preferable option and should only be used when materials cannot be avoided, re-used, recycled or recovered in any other way.

The principles of the waste hierarchy can be applied by both individuals and organisations when making decisions about waste generation and disposal. Council's waste management practices are guided by this model as well as quantitative data regarding trends in disposal behaviours and overall waste generation rates.

4.2 The principle of product stewardship

Producers and users of goods and services have a shared responsibility with Government to manage the environmental impacts throughout the life cycle of the goods and services, including the ultimate disposal of any wastes.

4.3 Best practice litter prevention model

There has been a focus in Australia on the delivery of best practice litter prevention behaviour change programs which combine elements of education, infrastructure and enforcement to target a specific problem. This approach is supported by research, communications, and program evaluation. This litter prevention best practice model is illustrated in Figure Five.

Figure Four: The Waste Hierarchy

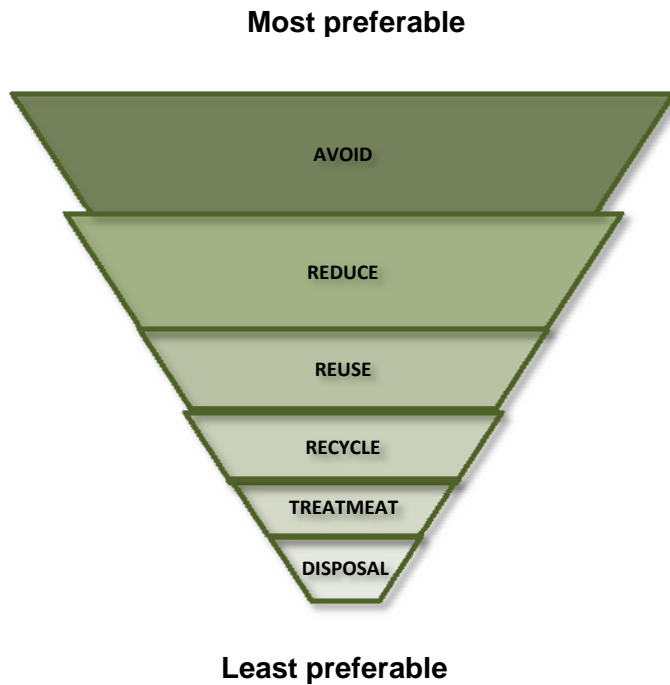
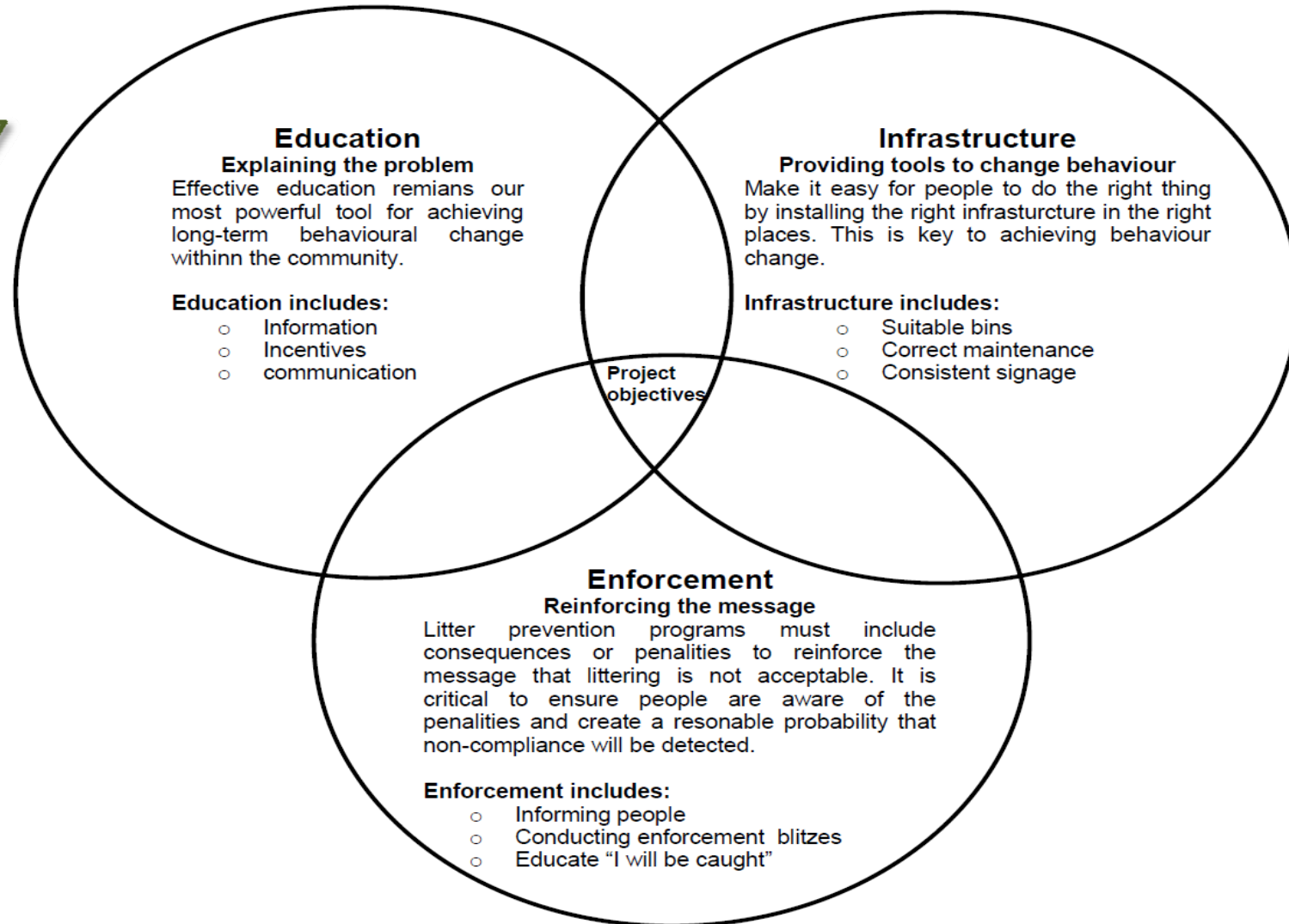


Figure Five: Best practice litter prevention model



5. Opportunities and challenges

At the state level the *Statewide Waste and Resource Recovery Infrastructure Plan* and supporting strategies sets the strategic framework for waste and resource recovery in Melbourne and are key influences on the strategic direction of waste management in Greater Dandenong. The key impacts of the states new policy reform for Greater Dandenong are as follows.

5.1 Waste infrastructure planning

In the next 5 years, several landfills in Melbourne's south east will be closed. South east Melbourne has therefore been identified at the state level as the highest priority for investment in waste and resource recovery infrastructure, where it leverages existing and emerging markets. The Ordish Road Precinct in Dandenong South has been identified as one of the hubs of importance for waste and resource recovery infrastructure, particularly for organics, C & D reprocessing and commingled C & I recovery.

This site is within Greater Dandenong's state significant Industrial 2 Zone, one of only three Industrial 2 Zones within the state and has well established transport links The Greater Dandenong Industrial 2 Zone accomodates industries that require significant buffers from sensitive land uses.

With the release of Melbourne 2030, acheiving the balance between providing for increased population, supporting robust activity centres and protecting key industries is becoming increasingly challenging. The industrial sector has a firm foundation in Greater Dandenong and supports the local economy, providing employment and investment opportunities locally and within Melbourne's south east.

The challenge for the Greater Dandenong Industrial 2 Zone is to protect this zone for its intended purpose and to manage the interface between this zone and other zones. The development of waste infrastructure in Dandenong South, will have implications to Council's future waste management planning, its access to infrastructure and the affordability of services, particularly with regards to transport costs.

5.2 Group procurement

A key policy reform is market driven resource recovery, where infrastructure planning and investment is influenced by demand for materials and end products. There has been a shift in policy focus from sector based resource recovery to materials based resource recovery. To attract investment, a secure supply of materials are required in significant quantities over the long term. To acheive this, a new approach to Council procurement is emerging, known as facilititated group procurement.

Council is a participant with other Melbourne metropolitan councils in group procurement contracts facilitated by the Metropolitan Waste & Resource Recovery Group, via a 10 year Landfill Services Contract which commenced in 2011 and the South-East Melbourne Metropolitan Green Organics Processing Contract due to commence in April 2016. It is likely that Council will participate in further group procurement contracts in the future, to secure investment in new infrastructure and support economies of scale.

5.3. Advanced Resource Recovery Technology (ARRT)

Waste to energy facilities of a sufficient scale to process Melbourne's organic or residual waste have not proceeded to date, due to these technologies being cost prohibitive compared to conventional methods of waste disposal and energy generation. However, the State Government recognises that with the imminent closure of landfills within the South East region, there is a need for policy and planning to support investment in ARRT technologies, because ultimately they offer a more sustainable resource recovery solution than disposal of waste to landfill.

To attract investment in ARRT facilities and to meet the financial and feedstock requirements, Council's will need to procure these services as a collective.

5.4 Food waste and organics processing and collection

Three potential scenarios for the recovery of Melbourne's organic waste has been identified at the state level:

- A business as usual approach with the kerbside collection
- Diverting food waste using the garden waste bin
- Recovering and treating food and organics from the residual waste bin

The State Government acknowledges that extending the service beyond business as usual will be subject to Councils appetite for change, the effectiveness of economic and environmental policy drivers and recognising the importance of diverting waste from landfill. If these factors are realised, then further processing capacity may need to be procured prior to 2019.

Whilst Greater Dandenong has a strong commitment to diverting waste from landfill and will be affected by a reduction in conveniently located landfill services, we will need to consider the financial implications, as well as community and Council expectations in considering ARRT in future waste planning, including Council's preferred approach for food waste collection and processing. This will be reliant on suitable data capture and analysis contributing to a cost-benefit analysis study commissioned by the State Government.

5.5 Local impacts on waste management planning

Factors which will influence future waste infrastructure and service provision within the City of Greater Dandenong are outlined below.

Medium – High Density Development

Greater Dandenong is predicted to have an additional 16,700 new households by 2031, a 36% increase on 2001 levels. The majority of residential development is forecast to be within strategic redevelopment sites and within residential areas. Council is actively encouraging multi storey, higher density development in Central Dandenong and other major activity centres as a component of mixed use functions within those areas.

An emerging problem across Metropolitan Melbourne is to ensure that medium and high density developments include suitable provisions for the waste & recycling service needs for those who will live there. The interest from developers to invest in high density housing stock in Greater Dandenong brings increasing pressures to service the waste & recycling needs of our community. It is important that waste management and collection considerations for these developments is adequately considered in the planning phase. Limited vehicle access such as an inability to turn at the end of the street, insufficient bin storage areas and inadequate street frontage for bin collection are common issues.

Greater Dandenong's Council is working with the Metropolitan Waste & Resource Recovery Group as a part of a project team to assist with the development of standardised waste management guidelines for multi unit developments for all Melbourne Metropolitan councils and a framework to implement enforceable planning provisions relating to the compliance with approved waste management plans for individual developments.

Plan Melbourne has identified the need to apply specific measures to ensure that waste infrastructure and services are considered in planning provisions for medium – high rise developments and mixed use developments. Council supports this action and is an advocate for building codes that take waste management requirements into consideration

Cost sensitivity

Due to the fact that The City of Greater Dandenong includes a number of lower socioeconomic areas, cost to the community is an important consideration in assessing any major upgrades to future waste management.

Community diversity

Greater Dandenong is home to many minority communities that come from a culture where recycling is not common practice. Community education programs and future changes to the waste collection services, infrastructure and use of waste technologies should consider the municipality's diverse community profile.



6. Strategic Objectives

6.1 Vision statement

We work to create a community that lives in and respects a clean environment, where people take responsibility for the waste they generate; dispose of it appropriately; reuse it where they can; and look for better ways to manage their waste.

6.2 Mission statement

To enable the realisation of this vision, Greater Dandenong Council will:

- Deliver best practice waste management services and promote resource recovery
- Collaborate with a broad range of partners including the residential community, schools, educators and children's services, businesses, contractors and all levels of government
- Educate and inform the community
- Create pride of place through the provision of clean streets and public places
- Provide leadership in the planning of future waste services and infrastructure

6.3 Strategy themes

Council's waste and litter programs and activities are categorised into 5 key themes:

1. Waste minimisation
2. Waste management
3. Waste education
4. Litter prevention and management
5. 'Closing the Loop' on recycling

Each key theme is underpinned by a specific goal and a set of key priorities identified as necessary to help Council achieve that goal, as outline below.

Theme 1: Waste minimisation

Goal: Reduce the amount of waste sent to landfill

Key priorities

- Work with households and businesses to enable them to reduce waste to landfill
- Reduce the amount of waste generated across Council facilities
- Work with partners to reduce waste to landfill
- Advocate for increased product stewardship

Theme 2: Waste Management

Goal: Deliver sustainable waste services to the community

Key priorities

- Review and evolve Council's waste collection services
- Increase resource recovery and reduce waste to landfill from the kerbside collection service
- Increase resource recovery and reduce waste to landfill across public places and events
- Increase resource recovery and reduce waste to landfill across Council facilities
- Work with state government and regional partners to plan for future infrastructure

Theme 3: Waste Education

Goal: Increase community awareness of resource recovery and waste minimisation

Key priorities

- Work with all education institutions to foster and enable behaviour change
- Ensure waste education information and resources are more accessible to CALD communities
- Promote waste minimisation and resource recovery to the wider community
- Review education resources and communication tools to ensure applicability and effectiveness

Theme 4: Litter prevention and management

Goal: Create clean and litter free public places

Key priorities

- Establish a streamlined data assessment process
- Reduce the occurrence of small scale littering through education
- Reduce instances of illegal rubbish dumping across the municipality
- Reduce the occurrence of litter entering waterways
- Improve litter control at building sites
- Promote litter prevention to community

Theme 5: Closing the Loop on Recycling

Goal: Increase the amount of material that is recovered for re-use and recycling

Key priorities

- Support the use of recycled materials across Council operations
- Support Council and community based programs/companies that enable resource recovery and reuse
- Identify opportunities to influence and monitor green purchasing across Council
- Investigate new initiatives that could provide further opportunities for recycling and re-use

7. Targets and Measures

To support this strategy Greater Dandenong Council has established the following targets around waste minimisation and contamination reduction.

Table Three: Greater Dandenong Council's waste and litter targets and baseline measures

Target	Baseline measurement
Reduce household generation rates of garbage to landfill	11.70 kg/hh/wk (2013-14)
Increase household recycling diversion rates	6.62 kg/hh/wk (2013 -14 truck audit)
Reduce overall contamination in household recycling	23% (2013-14 truck audit)
Reduce overall contamination in household garden waste	9.3% (2013-14)
Increase the uptake of Council's on-call hard waste collection service	30% take-up (2013-14)
Observe a reduction in the number of customer requests for investigation of dumped rubbish over time	2,973 merits (2013-14)

Regular garbage and recycling audits (every two years and annually respectively), will be undertaken in order to measure Council's progress against these targets. Targets will be revised when new data becomes available and updated to reflect changes in projected numbers due to population growth and other key factors

8. Action Plan

Theme 1: Waste Minimisation

Goal: Reduce the amount of waste sent to landfill *LPO = Litter Prevention Officer

Priority	Actions	Measure	Responsibility (L=Lead team)	Timeframe	Resourcing (including additional required)
1.1. Work with households and businesses to reduce waste to landfill	Deliver a household program that focuses on /facilitates waste minimisation and material reuse	1 program delivered	Waste and Cleansing Services	Year 2	Within the 2016-20 Long Term Financial Strategy & resources.
	Install a household recycling collection station at Dandenong Civic Centre	Infrastructure in place	Waste and Cleansing Services	Year 1	Within the 2016-20 Long Term Financial Strategy & resources.
	Work with businesses to reduce generation rates and improve diversion of waste	2 programs implemented	Economic Development Unit (L) Waste and Cleansing Services	Ongoing	Subject to grant funding
	Work with Dandenong Market to investigate opportunities to improve current waste management	Site assessment and investigations completed	Waste and Cleansing Services	2015-16	Within the 2016-20 Long Term Financial Strategy & resources.
1.2 Reduce the amount of waste generated across Council facilities	Manage Council offices using the best practice model for waste management, advocating waste avoidance and minimisation as a priority	Maintenance of the Waste Wise silver accreditation standards	Waste and Cleansing Services	Ongoing	Within the 2016-20 Long Term Financial Strategy & resources.
1.3 Work with partners to reduce waste to landfill	Leverage opportunities for promotion of waste minimisation practices by linking in with key environmental events	2 programs delivered	Waste and Cleansing Services	Annually (aligning with key events)	Within the 2016-20 Long Term Financial Strategy & resources.
1.4 Advocate for increased product stewardship	Lobby to State and Federal Government supporting legislation to increase product stewardship	Collaborative lobbying effort by all metro Council's	Waste and Cleansing Services	Ongoing	Within the 2016-20 Long Term Financial Strategy & resources.

1.5 Assess benefits of a Container Deposit Levy (CDL) scheme to Greater Dandenong	Investigate the cost benefit to Greater Dandenong, including the State Government's strategic approach to CDL	Report to Council	Waste and Cleansing Services	Year 1	Within the 2016-20 Long Term Financial Strategy & resources.
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Theme 2: Waste Management

Goal: Deliver Sustainable waste services to the community

Priority	Actions	Key Performance Indicator (Target)	Responsibility (L=Lead team)	Timeframe	Resourcing (including any additional required)
2.1 Review and evolve Council's waste collection services	Audits				
	Conduct regular audits of households garbage stream	Audit conducted using consistent methodology	Waste & Cleansing Services (L), JJ Richards	Every two years	Within the 2016-20 Long Term Financial Strategy & resources.
	Conduct regular audits of households garden waste stream	Audit conducted using consistent methodology	Waste & Cleansing Services (L), JJ Richards	Annually	Within the 2016-20 Long Term Financial Strategy & resources.
	Conduct regular audits of households recycling stream	Audit conducted using consistent methodology	Waste & Cleansing Services (L), Polytrade	Annually	Within the 2016-20 Long Term Financial Strategy & resources.
	Monitor households compliance with waste and recycling bin usage	Daily monitoring supported by education and compliance measures	JJ Richards	Ongoing	Within the 2016-20 Long Term Financial Strategy & resources.
	Service reviews				
	Review Council's kerbside collection service to identify enhancement opportunities	Review completed	Waste & Cleansing Services, JJ Richards	Every two years	Within the 2016-20 Long Term Financial Strategy & resources.
	Review the scope and delivery model of Council's Residential Hard Waste Collection Service	Review Completed	Waste & Cleansing Services	Year 1	Within the 2016-20 Long Term Financial Strategy & resources.

	Determine an appropriate approach to maximising the recycling of e-waste in response to the State Government's e-waste landfill ban	Review Completed	Waste & Cleansing Services	Year 2	Subject to Council funding
	Review the provision of waste services and the scope of service to: <ul style="list-style-type: none"> • Commercial properties • Schools and children's services • Sporting clubs 	Review completed and scope of services defined	Waste & Cleansing Services	Years 1 -2	Within the 2016-20 Long Term Financial Strategy & resources.
	Review service providers for Council facilities to ensure consistency of provider	Review completed	Waste & Cleansing Services, JJ Richards	Year 1	Within the 2016-20 Long Term Financial Strategy & resources.
	Review special waste service provided by Council i.e. for special needs, medical needs, and facilities.	Review conducted and records up-to-date	Waste & Cleansing Services	Annually schools and Council	Within the 2016-20 Long Term Financial Strategy & resources.

2.1 Core	Medium to high density development				
	Formalise Waste Management Guidelines for new developments	Waste Management Guidelines formalised	Waste & Cleansing Services	Year 1	Within the 2016-20 Long Term Financial Strategy & resources.
	Investigate mechanisms to create working partnerships and formal arrangements with property managers and body corporate to improve compliance with waste service requirements.	5 new partnerships established	Waste & Cleansing Services (L), Statutory Planning	On-going	Within the 2016-20 Long Term Financial Strategy & resources.
	Monitor State Government developments to include waste management considerations in planning provisions	Planning provisions monitored and progress recorded	Waste & Cleansing Services (L), Statutory Planning	Ongoing	Within the 2016-20 Long Term Financial Strategy & resources.
2.2 Increase resource recovery and reduce waste to landfill from the kerbside collection service	Conduct a service review to explore opportunities to increase the range of recyclables accepted through the kerbside collection	Review conducted	Waste & Cleansing Services	Annually	Within the 2016-20 Long Term Financial Strategy & resources.
	Monitor food waste and garden waste collection and processing developments at the state level for future consideration by Council	Attendance at waste forums and networking sessions	Waste & Cleansing Services	Ongoing	Within the 2016-20 Long Term Financial Strategy & resources.

2.3 Increase resource recovery rates in public places and at events	Expand public place recycling bins across the municipality, to include shopping precincts, regional parks and sporting venues	Infrastructure installed	Waste & Cleansing Services	Ongoing Stage 1 - Shopping precincts Stage 2 - Regional Parks Stage 3 - Sporting Venues	Subject to available CIP or grant funding
	Conduct an audit of the public place bins to identify sites requiring education support	Audit complete	Waste & Cleansing Services	Annually	Within the 2016-20 Long Term Financial Strategy & resources.
	Continue to support Council and community events to be Waste Wise	Facilitate recycling and waste diversion at 5 key events	Waste and Cleansing Services (L), Events Team	Ongoing	Within the 2016-20 Long Term Financial Strategy & resources.
	Work in partnership with Council's Events Team to formalise procedures and requirements for Waste Wise Events	Formalised procedure for waste & recycling bins at events developed	Waste & Cleansing Services, Events Team	Year 1	Within the 2016-20 Long Term Financial Strategy & resources.
2.4 Increase resource recovery and reduce waste to landfill across Council facilities	Continue existing recovery initiatives within Council such as recycling of garden waste	Measure and record tonnages	Waste & Cleansing Services	Ongoing	Within the 2016-20 Long Term Financial Strategy & resources.
	Investigate further opportunities to recover materials from Council operations and works	Opportunities identified	Waste & Cleansing Services	Year 2	Within the 2016-20 Long Term Financial Strategy & resources.

2.5 Work with state government and regional partners to plan for future infrastructure	Monitor alternative waste technology developments for future consideration by Council	AWT developments monitored and financial implications for Council documented	Waste & Cleansing Services	Ongoing	Within the 2016-20 Long Term Financial Strategy & resources.
	Participate in regional forums and partnerships with the Metropolitan Waste & Resource Recovery Group (MWRRG) and SV	CGD attendance at relevant forums	Waste & Cleansing Services	Ongoing	Within the 2016-20 Long Term Financial Strategy & resources.
	Investigate the opportunity to participate in a Council group procurement contract for hard waste collections and increase scope of products collected	Investigation completed	Waste & Cleansing Services	Ongoing	Within the 2016-20 Long Term Financial Strategy & resources.
	Actively seek external funding to support Council programs that will facilitate resource recovery	2 grant submissions per year	Waste & Cleansing Services	Ongoing	Within the 2016-20 Long Term Financial Strategy & resources.

Theme 3: Waste Education

Goal: Increase community awareness or resource recovery and waste minimisation

Priority	Actions	Key Performance Indicator (Target)	Responsibility (L=Lead team)	Timeframe	Resourcing (including any additional required)
3.1 Work with all education institutions to foster and enable behaviour change	Continue to deliver the 'Journey Toward Sustainability' Program to schools	Recruit 2 new schools into the program	Waste & Cleansing Services	Annually	Within the 2016-20 Long Term Financial Strategy & resources.
	Increase involvement of secondary schools in council's waste education program	Deliver education programs at 2 secondary schools	Waste & Cleansing Services	Annually	Within the 2016-20 Long Term Financial Strategy & resources.
	Capacity build children's services and Kindergarten staff to apply waste wise practices to day to day operations	Conduct 5 staff training sessions	Waste & Cleansing Services	Ongoing	Within the 2016-20 Long Term Financial Strategy & resources.
	Regularly evaluate waste education programs	Program evaluations completed and reviewed	Waste & Cleansing Services	1 July annually	Within the 2016-20 Long Term Financial Strategy & resources.
3.2 Ensure waste education information and resources are more accessible to CALD communities	Deliver waste education programs educating CALD communities and migrant groups	Deliver 4 full day sessions	Waste & Cleansing Services	Annually	Within the 2016-20 Long Term Financial Strategy & resources.
	Translate existing waste education materials into other languages most commonly spoken within the municipality	Materials translated	Waste & Cleansing Services (L), Media & Communications	Ongoing	Within the 2016-20 Long Term Financial Strategy & resources.

3.3 Promote waste minimisation and resource recovery to the wider community	Develop a media and marketing plan to assist with promotion of waste education programs and key messages	Media and marketing plan developed	Waste & Cleansing Services	Annually	Within the 2016-20 Long Term Financial Strategy & resources.
	Deliver 'Follow your Waste' (FYW) tours for residents to highlight resource recovery processes	8 FYW tours delivered (4 for general community, 4 for CALD groups)	Waste & Cleansing Services	Annually	Within the 2016-20 Long Term Financial Strategy & resources.
	Promote internal waste management goals and expectations to all Council staff; to help increase resource recovery across Council offices.	Maintenance of the Waste Wise silver accreditation standards	Waste & Cleansing Services	Ongoing	Within the 2016-20 Long Term Financial Strategy & resources.
	Attend Council run festivals to engage residents face-to-face about waste minimisation, resource recovery and Council's waste services	Attendance at 5 festivals	Waste & Cleansing Services	Annually	Within the 2016-20 Long Term Financial Strategy & resources.
	Utilise Council's waste website pages to promote key messages	Website information reviewed and updated	Waste & Cleansing Services (L), Media & Communications	Monthly	Within the 2016-20 Long Term Financial Strategy & resources.
	Utilise Council's social media channels to promote key messages	2 posts per month	Waste & Cleansing Services (L), Media & Communications	Monthly	Within the 2016-20 Long Term Financial Strategy & resources.
	Deliver targeted education programs aimed at reducing food waste and promoting home organics recycling	2 workshops delivered	Waste & Cleansing Services (L), EnviroCom	Annually	Within the 2016-20 Long Term Financial Strategy & resources.
	Conduct engagement events to improve usage of public place bins at identified sites	3 events conducted	Waste & Cleansing Services (L), LPO	Ongoing	Within the 2016-20 Long Term Financial Strategy & resources.

3.4 Review education resources and communication tools to ensure applicability and effectiveness	Develop an annual waste education action plan	Action plan developed	Waste & Cleansing Services	1 July each year	Within the 2016-20 Long Term Financial Strategy & resources.
	Conduct a gap analysis review of existing education and communication resources	Review conducted and gaps identified	Waste & Cleansing Services	1 July each year	Within the 2016-20 Long Term Financial Strategy & resources.
	Investigate opportunities to expand Councils use of interactive media for education and engagement	Opportunities identified and costs estimated	Waste & Cleansing Services (L), LPO, Media & Communications	Year 1-2	Within the 2016-20 Long Term Financial Strategy & resources.
	Review waste and recycling sections of the Council Resident's Kit	Kit reviewed and updated	Waste & Cleansing Services (L), LPO, Media & Communications	Annually	Within the 2016-20 Long Term Financial Strategy & resources.
	Review and update litter components of the schools waste education program - to include litter prevention themes	Litter component reviewed and updated	Waste & Cleansing Services (L), LPO	Ongoing	Within the 2016-20 Long Term Financial Strategy & resources.

Theme 4: Litter Prevention and Management

Goal: Create clean and litter free public places

Priority	Actions	Key Performance Indicator (Target)	Responsibility (L=Lead team)	Timeframe	Resourcing (including any additional required)
4.1 Establish a more streamlined data assessment process	Implement a process that enables a more streamlined assessment of litter data	Process implemented	Residential Amenity Unit (LPO)	Year 1	Within the 2016-20 Long Term Financial Strategy & resources.
4.2 Reduce the occurrence of small scale littering across the municipality	Conduct engagement activities at popular public places to raise awareness about small scale littering i.e. cigarette butt campaigns	3 engagement activities conducted	Residential Amenity Unit (LPO) (L), Waste & Cleansing Services	Annually	Within the 2016-20 Long Term Financial Strategy & resources.
	Implement a municipal wide program focused on prevention of small scale littering	1 program implemented	Residential Amenity Unit (LPO) (L), Waste & Cleansing Services	Year 1 - 3	Subject to grant funding. Contribution by council up to 50%
	Integrate litter prevention messaging into Council's environmental education programs and resources	Messaging integrated	Parks Services (L), LPO	Year 1 - 2	Within the 2016-20 Long Term Financial Strategy & resources.
	Encourage residents to report small scale littering to Council through submission of an online report form	Increased no of resident reports through online submissions	Residential Amenity Unit (LPO) (L), Waste & Cleansing Services	Year 1-2	Within the 2016-20 Long Term Financial Strategy & resources.
	Actively seek grant funding to support the delivery of litter prevention programs	Submission of 2 grant applications	Residential Amenity Unit (LPO) (L), Waste & Cleansing Services	Annually	Within the 2016-20 Long Term Financial Strategy & resources.
	Assess the current placement and allocation of litter bins across public places to identify any gaps	Assessment conducted and gaps identified	Waste & Cleansing Services (L)	Year 2	Within the 2016-20 Long Term Financial Strategy & resources.

4.3 Reduce instances of illegal rubbish dumping across the municipality	Deliver an education program targeting illegal dumping of residential waste (to include multi unit dwellings)	5 sites targeted	Waste & Cleansing Services (L), Residential Amenity Unit (LPO)	Annually	Within the 2016-20 Long Term Financial Strategy & resources.
	Investigate opportunities to work with State Government bodies on programs targeting illegal dumping of commercial and industrial waste	Opportunities reported to LATF and Council	Waste & Cleansing Services (L), Residential Amenity Unit (LPO)	Ongoing	Within the 2016-20 Long Term Financial Strategy & resources.
	Provide rapid investigation response to reports of illegal dumping	Investigation conducted within 3 days	Residential Amenity Unit	Ongoing	Within the 2016-20 Long Term Financial Strategy & resources.
	Provide timely removal of illegally dumped rubbish reported to Council,	Rubbish removed within 5 business days of investigation	Waste & Cleansing Services	Ongoing	Within the 2016-20 Long Term Financial Strategy & resources.
	Review the current illegal dumping 'hotspots' surveillance program and establish new procedures	Program reviewed and new procedures established if required	Residential Amenity Unit, (LPO)	Annually	Within the 2016-20 Long Term Financial Strategy & resources.
	Formal review of Council's hard waste collection service to identify its potential impact on reducing illegal dumping	Review completed	Waste & Cleansing Services (L), Residential Amenity Unit	March 2016	Within the 2016-20 Long Term Financial Strategy & resources.
4.4 Reduce the amount of litter entering local waterways	Review and update Council's litter education materials (if required) to include the impact of litter and pollution on waterways.	Review conducted and updates completed as required	Waste & Cleansing Services, Residential Amenity Unit (LPO) (L)	Year 2	Within the 2016-20 Long Term Financial Strategy & resources.
	Install Gross Pollutant Traps (GPTs) in areas of most benefit	2 GPT's installed within the municipality	Residential Amenity Unit (LPO) (L), Engineering Services	Year 1 - 5	Subject to grant funding. GPT estimated price per unit \$100,000-\$500,000

4.5 Improve litter control from building sites	Review and update current building site literature issued by Council	Review conducted and updates completed as required	Civil Development (L) Residential Amenity Unit	Year 1 - 2	Within the 2016-20 Long Term Financial Strategy & resources.
	Review current building site compliance management procedures within Council	Review conducted and updates completed as required	Civil Development (L) Residential Amenity Unit	Year 1 - 2	Within the 2016-20 Long Term Financial Strategy & resources.
4.6 Deliver an integrated approach to litter prevention	Conduct regular Litter Action Taskforce (LATF) Meetings	8 meetings conducted	LATF	Annually	Within the 2016-20 Long Term Financial Strategy & resources.
	Develop an LATF Terms of Reference	Terms of Reference developed	LATF	Year 1	Within the 2016-20 Long Term Financial Strategy & Resources.
4.7 Work with local and regional partners to reduce potential littering and illegal dumping	Investigate partnership opportunities with local industry that could enable diversion of 'other' household waste materials	Investigation conducted and opportunities reported to the LATF	Waste & Cleansing Services, Residential Amenity Unit, Economic Development Unit	Ongoing	Within the 2016-20 Long Term Financial Strategy & resources.
	Advocate for further disposal options for residents for 'other' household waste materials	Municipality needs advocated to state government organisations	Waste & Cleansing Services	Ongoing	Within the 2016-20 Long Term Financial Strategy & resources.
	Create working partnerships with property managers and body corporate to address illegal dumping at tenanted premises.	5 new partnerships established	Waste & Cleansing Services, LPO	Annually	Within the 2016-20 Long Term Financial Strategy & resources.
	Participate in partnership programs	Participation in Clean Up Australia Day	Waste & Cleansing Services, LPO	Annually	Within the 2016-20 Long Term Financial Strategy & resources.

4.8 Promote litter prevention to the community and raise awareness about illegal dumping	Attend Council events to deliver key litter prevention messages to residents	Participation in 4 Council events	Residential Amenity Unit (LPO) (L), Waste & Cleansing Services, Park Services	Annually	Within the 2016-20 Long Term Financial Strategy & resources.
	Include litter prevention education in CALD community engagement programs	Deliver 4 engagement sessions	Waste & Cleansing Services (L), Residential Amenity Unit (LPO)	Annually	Within the 2016-20 Long Term Financial Strategy & resources.
	Review and update the litter component of Council's Resident's Kit.	Review completed and materials updated	LATF	Year 1	Within the 2016-20 Long Term Financial Strategy & resources.
	Provide regular litter-related communications for Council publication 'The City' and social media	6 articles and 12 social media posts produced	LATF (L), Media & Communications	Annually	Within the 2016-20 Long Term Financial Strategy & resources.
	Coordinate media coverage of significant illegal dumping incidents to raise awareness of the issue	1 media release produced	Residential Amenity Unit (LPO) (L), Media & Communications	Annually	Within the 2016-20 Long Term Financial Strategy & resources.

Theme 5: Closing the Loop On Recycling

Goal: Increase the amount of material that is recovered for re-use and recycling

Priority	Actions	Key Performance Indicator (Target)	Responsibility (L=Lead team)	Timeframe	Resourcing (including any additional required)
5.1 Support the use of recycled materials across Council operations	Investigate opportunities for the use of recycled materials	Opportunities investigated and findings reported to the Waste and Cleansing Team	Waste & Cleansing Services	Annually	Within the 2016-20 Long Term Financial Strategy & resources.
5.2 Support (local) programs and companies that facilitate resource recovery and reuse	Encourage local businesses to engage in programs that foster sustainable waste management	3 business involved in sustainable waste management programs	Economic Development Unit (L), Waste & Cleansing Services	Annually	Within the 2016-20 Long Term Financial Strategy & resources.
5.3 Identify opportunities to influence and monitor green purchasing across Council	Review current green purchasing policies and recommend potential monitoring processes	Review conducted and recommended monitoring process reported back to Executive Management Team	Environmental Planning (L), Waste & Cleansing Services	Year 1-2	Within the 2016-20 Long Term Financial Strategy & resources.
5.4 Investigate initiatives that could provide further opportunities for recycling and re-use	Review currently available recycling and re-use opportunities and initiatives	Opportunities reported	Waste & Cleansing Services	Ongoing	Within the 2016-20 Long Term Financial Strategy & resources.

9. Appendices

Appendix A: State and federal policy context

City of Greater Dandenong's Waste and Litter Plan has been developed in the context of the following state and federal policies and legislation.

National Waste Policy: Less Waste, More Resources 2009

This Policy sets the outcomes, directions and strategies for action for Australia's waste management and resource recovery to 2020. The policy includes in a key strategy for product stewardship, including providing for co-regulatory schemes which will cover a small number of products and materials, (e.g. televisions and computers). The aims of the *National Waste Policy* are to:

- Avoid the generation of waste, reduce the amount of waste (including hazardous waste) for disposal
- Manage waste as a resource
- Ensure that waste treatment, disposal, recovery and re-use is undertaken in a safe, scientific and environmentally sound manner, and

Contribute to the reduction in greenhouse gas emissions, energy conservation and production, water efficiency and the productivity of the land.

Draft State-wide Waste and Resource Recovery Infrastructure Plan

The development of a *State-wide Waste and Resource Recovery Infrastructure Plan* is a key initiative under Getting Full Value. Sustainability Victoria has developed the draft *State-wide Waste and Resource Recovery Infrastructure Plan* (SWRRIP) which brings together all the available information and data relating to waste and resource recovery management from industry, local government, waste management groups and other government agencies from across Victoria. It maps all major current waste and resource recovery infrastructure, identifies gaps and opportunities and provides intelligence to industry to inform their investment decisions. The purpose of the Draft SWRRIP is:

"To support Getting Full Value by providing Victoria with the roadmap to guide future investment in waste management and resource recovery infrastructure that effectively manages the expected mix and volumes of waste, supports a viable resource recovery industry and reduces the amount of valuable materials going to landfill".

To achieve this, four goals are listed in the draft SWRRIP:

- 1 Facilitate efficient markets by consolidating material streams, to establish economies of scale to attract industry investment.
- 2 Maximise the recovery of valuable resources from waste streams
- 3 Support *Getting full value* action to facilitate the long term purpose of landfills to be for receiving treated residual waste
- 4 Provide industry, local government, metropolitan and regional waste management groups and other government agencies with the information and guidance to inform planning at the state, regional and local levels.

Hubs of state importance

The draft SWRRIP identifies that in order to improve efficiency and the environmental performance of Victoria's waste management system, the system will continue to consolidate smaller infrastructure into larger regional hubs and infrastructure that is well run, compliant and capable of meeting future growth and environmental standards. The draft SWRRIP identifies 12 'hubs of state importance' for metropolitan Melbourne. MWMG considers the role these precincts play in Melbourne's network of infrastructure as important and strategic. Included in the list of sites is the Ordish Road precinct, South Dandenong.

Metropolitan Waste and Resource Recovery Strategic Plan 2009

The *Metropolitan Waste and Resource Recovery Strategic Plan 2009* (Strategic Plan) provides the Victorian Government, metropolitan councils and industry with a plan for the network of infrastructure and services that is needed to manage metropolitan Melbourne's solid waste over the next 30 years. It identifies short and long term waste infrastructure needs and sets out a schedule of municipal solid waste (MSW) infrastructure and the development and scheduling of landfill sites. The Strategic Plan is a statutory requirement under the Environment Protection Act 1970 (EP Act)

The EP Act requires that the Strategic Plan is reviewed every four years. Consultation with local government, the waste industry and community in late 2013 informed the review and preparation of the *2013 Consultation Draft Metropolitan Waste and Resource Recovery Strategic Plan*. The plan is a statutory requirement of the state government and provides a strategy for Melbourne's future waste and resource recovery infrastructure and services required to manage solid waste for the next 30 years. The strategic plan further articulates the goals and strategic objectives of *Getting Full Value*. The plan is currently in draft form and once finalised will provide the roadmap for Melbourne's future infrastructure and services.

Revisions to the EP Act came into effect on the 1st August 2014 and required the reconfiguration of the Strategic Plan into the *Metropolitan Waste and Resource Recovery Implementation Plan* which will be prepared in 2015. New legislation outlines the objectives and content requirement of *Regional Waste and Resource Recovery Implementation Plans* that are to be prepared.

Carbon pricing legislation repeal

The Clean Energy legislation (Clean Energy Act 2011) passed by the Senate in November 2011 was repealed in July 2014, abolishing the carbon price. To replace the carbon tax, the Australian Government is currently considering two reforms to Australia's carbon emissions these include implementation of the Australian Government's Direct Action Plan and review the Renewable Energy Target.

Appendix B: Recycling and garbage compositional data

Household Recycling Stream

A household Recycling Stream audit conducted in November 2013 indicated that recyclable paper was the most common material presented to the recycling stream, representing almost 40% of total materials, followed by recyclable glass (20%) and recyclable plastic (5.8%), as shown in Figure Six.

Figure Six: Composition of the household Recycling Stream by category

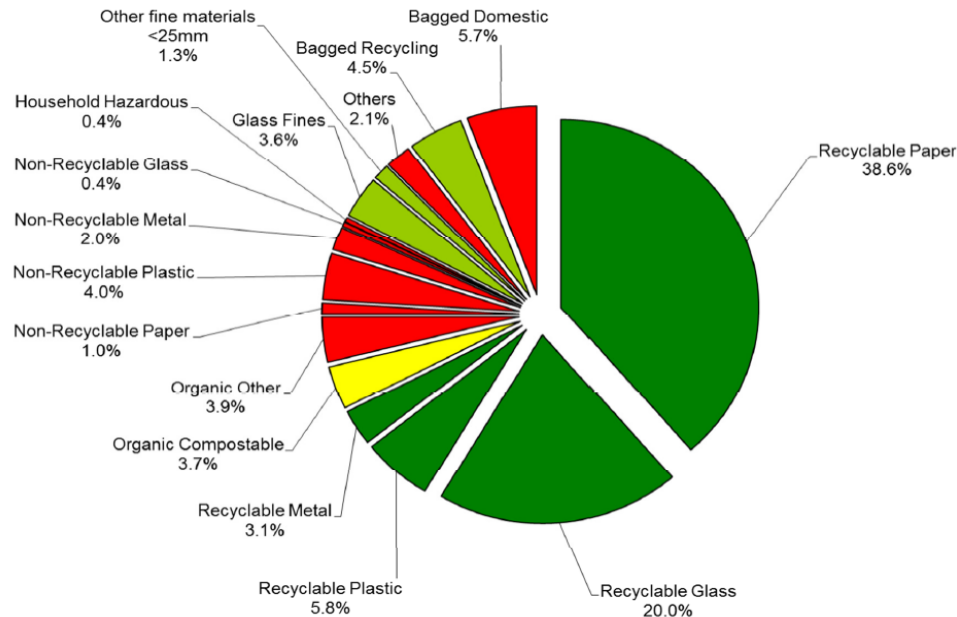
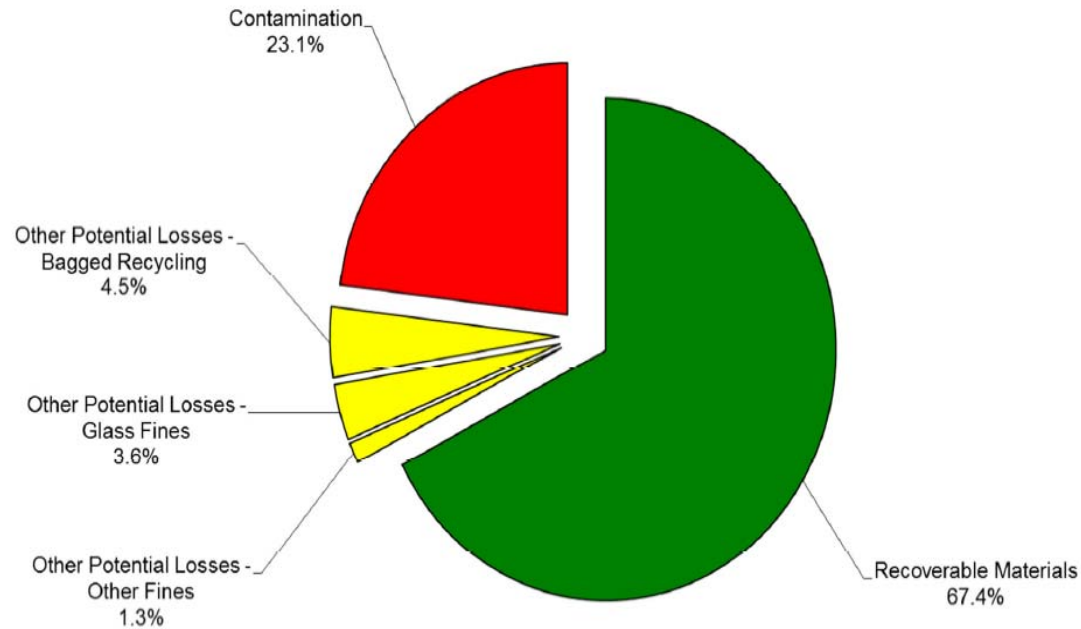


Figure Seven: Proportion of recoverable and non-recoverable materials in the Recycling stream



Source: EnviroCom Domestic Recycling Stream Assessment Report 2013

Contamination, that is materials that are not acceptable in the recycling stream, was calculated to be 23.13% of the sample, as illustrated in Figure Seven. The most common contaminants observed were bagged garbage (5.7% of the total sample), food/kitchen putrescibles waste (3.6%) and textiles and other plastics / plastic composites (both 2.1%).

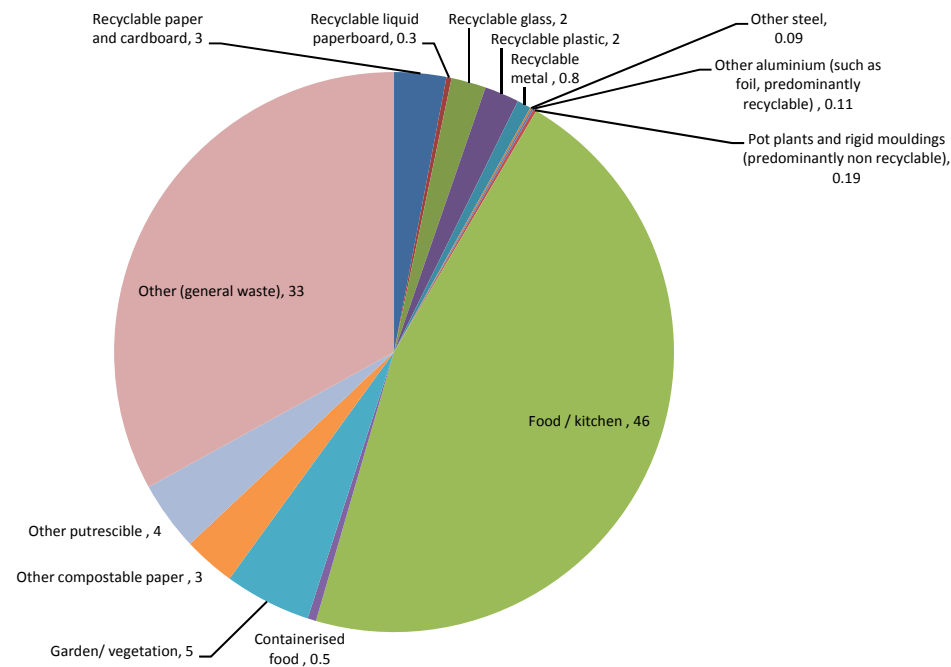
The audit involved a collection and analysis of a sample of 225 households across the municipality, and is based on a snapshot methodology. The limitations of the audit may be seasonal trends or other unpredictable events that can impact the presentation of material to the kerbside collection. These results indicate actions to reduce contamination in the recycling stream would be beneficial, particularly with a focus on bagged recyclables and food waste.

Household Garbage Stream

A household Garbage Stream audit conducted in 2012 indicated food waste and other (general waste) are the predominant material types presented to the waste stream, accounting for 46% and 33% respectively (Figure Eight). Food waste accounts for a significant proportion of the waste stream and presents an opportunity for diversion.

Approximately 13% of materials in the sample were recyclable in either the recycling or garden waste bin, and are considered 'resource losses' in the waste stream. The most common recyclables found in the waste stream are garden waste (5%), recyclable paper (3%), recyclable plastic (2%) and recyclable glass (2%).

Figure Eight: Composition of materials in the household Garbage Stream (%) (2012)



Appendix C: Waste and litter milestones and achievements

Time frame	Achievements	Details
2002 - Present	Garden waste diversion from landfill	<p>Greater Dandenong introduced the garden waste kerbside collection service in 2002 and was one of the initial Councils to provide this service. Over the past ten years the collection of garden waste has been increasing and Council's garden waste collection tonnage in 2013/14 was well above the state average.</p> <p>The production and use of compost derived from this waste stream has been beneficial to improving soil for horticultural and agricultural applications within the municipality.</p>
2005 - Present	Proactive approach to litter prevention	<p>Over the past ten years Council has taken a proactive approach to addressing the problem of illegal dumping in the municipality. Council's Litter Action Taskforce has been at the forefront of trialling and implementing a number of strategies to combat the issue. Greater Dandenong was one of the first Council's to fund a full time dedicated Litter Prevention Officer to coordinate litter prevention activities within Council. This has increased Council's capacity to be proactive in monitoring identified litter hotspots, and provide increased education and enforcement presence to litter prevention.</p>
2006 - Present	Hard Waste Collection Service improvements	<p>In 2006, Council introduced the at-call hard waste collection service. Greater Dandenong initiated the use of a sticker for booked hard waste to differentiate booked hard waste from waste dumped illegally, and reduce the occurrence of illegal dumping. This process has been effective in curbing the issue and has subsequently been adopted by other Councils.</p>
2014 - Present	Best Practice Kerbside Waste Collection	<p>In 2014, Greater Dandenong conducted a bin replacement program across the municipality. This program replaced aging bin infrastructure and upgraded bins to meet the National standard for bin infrastructure (Red lid for garbage, yellow lid for recycling and green lid for garden organic s) This initiative also provided service options inclusive of price incentives to encourage recycling.</p>

Ongoing	Strong partnerships	<p>Participation in group contracts with MWMG and other Councils for the landfill service contract and garden waste processing contract. This enables Council to benefit from economies of scale and access to the latest technologies.</p> <p>Council has been a lead contributor to the waste sector, participating in the Metropolitan Waste & Resource Recovery Group's Metropolitan Local Government Waste Forum, Technical Advisory Reference Group and Waste Education forums.</p>
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Table Four: Waste and litter service milestones and achievements

Appendix D: Waste management – Service levels

Kerbside collection services

Residential waste collection services provided by Council are outlined in Table Five. Collection Services are also available to some non residential properties including some commercial properties, schools, sporting pavilions and Council facilities, as detailed in Table Six.

Table Five: Waste Services for residential properties

Service	Service description	No. properties receiving service (As of 1 July 2014)
Residential kerbside collection	Bin Options A – F	52,361
Special needs collections	Assistance with bins provided to residents with special needs (aged and physical impairment)	29
Medical Needs	Additional free bins provided to residents with increased waste due to medical needs	20

Table Six: Waste Services for non-residential properties

Property type	Service description	No. properties receiving service (as of 1 July 2014)
Existing Commercial Properties	Bin Options A-F as above	151
Schools (Journey Towards Sustainability Participants)	240L Recycling	23
Sporting pavilions	360L Recycling bins	12
	660L Recycling skips	17
Council facilities	240L Garbage, 240L Recycling	43

Hard waste 'at-call' collection service

In Greater Dandenong in 2012-13, the number of hard waste collections booked represented 30% of total households in the municipality and 19% of the total material collected including e-waste, scrap metal, refrigerators, wood and cardboard, was recycled. Total annual tonnages collected through this service are indicated in Table Three.

Table Seven: Hard waste collection data

Year	No. of households to book a service	Total collection Tonnage	No. of mattresses collected	No. of fridges degassed
2013-14	15,894	3,369.24	7,508	848
2012-13	15,045	1,898	4,028	Not recorded
2011-12	15,046	2,076	3,894	712
2010-11	13,105	2,412	5,054	1,099
2009-10	11,589	2,865	6,837	705

Appendix E: Street cleansing services – service levels

Table Eight: An overview of Councils' street cleansing services

Service	Service description	Number of assets serviced (2013/14)
Street sweeping	<ul style="list-style-type: none"> - Residential and industrial roads swept monthly - Dandenong CBD, Springvale CBD, Noble Park CBD, Keysborough CBD roads, shop strip roads and car parks, swept daily - Dandenong CBD, Springvale CBD, Noble Park CBD, Keysborough CBD, footpaths swept daily 	<ul style="list-style-type: none"> - 14,495km of residential and industrial roads swept in 2013/14 - 9,060km of CBD roads, shop strip roads and car-parks swept in 2013/14 - 9,469km of CBD footpaths swept in 2013/14
Public waste bin Collection	<ul style="list-style-type: none"> - Shopping centres and shop strips, parks, reserves, bus stops 	<ul style="list-style-type: none"> - 820 bins
Public Place Recycling Bin Collection	<ul style="list-style-type: none"> - Dandenong CBD (42), Springvale CBD(36), Noble Park CBD(20) 	<ul style="list-style-type: none"> - 78 bins
Litter Collection	<ul style="list-style-type: none"> - Dandenong CBD street litter collection - Springvale and Noble Park CBD street litter collection - Roadside litter collection (at litter hotspots on roads) - Reserve litter collection (at major reserves and parks) 	<ul style="list-style-type: none"> - 3 full time staff - 2 full time staff - Litter removal from streets as required - Corrections Victoria crews - Gateway Services crews
Dumped rubbish removal	<ul style="list-style-type: none"> - Residential dumping removal by Cleansing team (reactive – in response to reports and proactive removal at dumping hotspots) - Commercial dumping collected by Works Team and contractors 	<ul style="list-style-type: none"> - Proactive - ongoing - Reactive – dumped rubbish removed within 5 days

Appendix F: Waste education programs and activities

Table Nine: An overview of Council's waste education programs and activities

Programs	Activities
Kerbside Collection Service Education	<ul style="list-style-type: none"> - Provide up-to-date information on Council's website - Waste fact sheets and information sheets for residents - Inclusion of waste and recycling collection days and recycling information in Council's Annual Community Calendar. Distributed to all residential ratepayers. - Heat stamping on new bin lids advising what items are accepted in the bin - Waste, Recycling and Garden Waste branding used on the new collection trucks, on the website and across all waste related communication materials - Regular promotion of kerbside collection services in Council's The City publication, council publications and local newspapers - Hard Waste Collection brochure - Waste and recycling pull up banners used for community engagement - Bin coral signage installed at multi unit dwellings
Community Education Programs	<ul style="list-style-type: none"> - Follow your Waste Tours for the general public include a tour of the materials recycling facility, landfill and composting facility - Waste and recycling displays and demonstrations at community events and festivals - Waste Wise Events Program encouraging attendees to recycle at community events and festivals - Promotion of Sustainability Victoria's Free Detox your Home collection service when locally available - Community workshops focusing on recycling, composting, worm farming and reducing food waste - Clean Up Australia Day - Litter community education - 'Report Illegal Dumping to Council' signage and brochure - 'Lily Litter' ladybug mascot appearances at festivals and events - Dandy Creek Biodiversity Recycled Art Program - Promotion of Community Education Programs on Council's website

Schools Education Programs	<ul style="list-style-type: none"> - Incursions and excursions with local primary and secondary schools, and early learning centres - Journey Towards Sustainability partnership program - Provision of material and resources linked to the Australia curriculum - Schools Newsletter - Support Council's School Holiday Programs (Heritage Hill, Polytrade) - Active involvement in schools garden network meetings
Specialised Education Programs	<ul style="list-style-type: none"> - Develop and deliver tailored programs, such as the waste education and engagement program at multi unit sites
Internal Council Programs	<ul style="list-style-type: none"> - Implementation and promotion of office recycling programs
Partnership Programs with State Government	<ul style="list-style-type: none"> - Involvement in state-wide education programs such as Get it Right on Bin Night, Detox Your Home , Keep Australia Beautiful Campaigns
CALD/Migrant Community Education	<ul style="list-style-type: none"> - Follow your waste tours - Classroom incursion visits to AMES Centres in Noble Park, Springvale, Dandenong and migrant groups and associations.
Advocacy	<ul style="list-style-type: none"> - Advocacy on waste related policy issues

Appendix G: Existing contractual arrangements

Table Ten: An overview of Council's contractual arrangements

Contract	Contractor	Timeframes
Kerbside waste collections	JJ Richards	- 8 year contract commenced 1 October 2013, with 2 x 1 year extension options
Landfill	SITA	- 2011-2015 , with 3 x 2 year extensions
Garden waste processing	Natural Recovery Systems	- Current Metropolitan Waste and Resource Recovery Group (MWMG) "Green Organics Overflow Contract" currently in place. MWRRG South-East Region Green Organics Contract has been awarded subject to the successful tenderers (3) securing Planning & Works Permits. Approximate start date is April 2016, with a 15 year contract period and up to a 5 year extension period option.
Receipt of recyclables	Polytrade	- 8 year contract commenced 1 October 2013, with 2 x 1 year extension options.
Hard Waste Collection	WM Waste	- 3 year contract commenced 1 October 2012, with 3 x 1 year extension options.

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