

SOUTH GIPPSLAND SHIRE COUNCIL

Waste Management Strategy 2016-2021



*South Gippsland
Shire Council*

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EXECUTIVE SUMMARY

The provision of waste management services, including landfill construction, operation, rehabilitation and aftercare, transfer stations management, kerbside garbage, recycling and green waste services, public litter and recycling bin services, hard waste collection and other waste management activities accounts for (on average) more than \$4 million of Council's annual budget.

This Waste Management Strategy (WMS) has been developed to document and guide sustainable solutions for the reduction, collection, resource recovery from and disposal of waste within the South Gippsland Shire. The WMS describes strategies and actions to be undertaken by Council over a five year period (2016-2021) with the key aim to influence and drive the development and improvement of current waste management practices.

The objectives and actions of the WMS are consistent with the aims, objectives and strategies of the Gippsland Waste and Resource Recovery Group and Victorian State Government Policies.

The waste management industry is rapidly changing. Actions within this strategy have been developed with consideration of current waste management practices and likely and potential changes that may occur in the waste industry during the timeframe of the document. This approach aims to ensure that Council's waste management services continue to comply with legislation, meet the needs of the South Gippsland community and are in line with best practice in the waste management industry.

DRAFT

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INTRODUCTION

Background

In 2010/11 Council created a Waste Management Strategy (WMS) to guide waste management activities and priorities over the period of 2011 to 2021.

Between 2011 and 2016 many of the recommended actions from the original strategy were achieved while some others are no longer relevant. This has resulted in the need to revise the WMS to continue to guide Council waste management services into the future.

The future directions of waste management within the Shire need to adhere to the guiding principles of Council, its people and businesses. These principles are set out in the Vision 2020 document, the Council Plan and Council's Long Term Financial Strategy. Furthermore the WMS is consistent with the aims and objectives of Federal, State and Regional waste management policies, strategies and plans.

This Waste Management Strategy presents South Gippsland Shire Council's (Council) 5 year strategy for waste management from 2016 to 2021. It is a revision of Council's Waste Management Strategy 2011-21. The review is timely with most of the actions in the original strategy having either been achieved or no longer relevant due to changes in the waste management industry. A complete list of actions and their status from the 2011 WMS is provided in Appendix 1.

This WMS has been developed in response to Council's commitment to provide sustainable solutions for the collection, disposal and resource recovery from waste generated within the South Gippsland Shire.

To support the implementation of the WMS, it is essential that responsible and sustainable approaches to waste management continue to be considered and integrated into Council's policies, strategies and planning decisions.

The WMS prescribes the plans, strategies and actions to guide responsible and sustainable approaches to waste management.

The aims of the WMS are to reduce the generation of waste, divert waste from landfill, maximise the recovery of materials for reuse or recycling and reduce environmental impacts through the delivery of sustainable, best practice waste management services.

Key Drivers

The key drivers for this strategy are to:

- optimise service provision to the residents, rate payers and businesses of South Gippsland;
- comply with environmental, OH&S and any other applicable legislation;
- provide a high level of environmental protection;
- ensure financial sustainability of the systems utilised, where the cost of waste management is not overly onerous to the rate payer and is directly accounted for through waste service charges;
- support State Government policies relating to the State-wide Waste and Resource Recovery Infrastructure Plan;
- comply with the Gippsland Waste and Resource Recovery Group's (GWRRG) plans, policies and targets;
- allow for projected population increases and economic growth, in terms of sustainable outcomes for waste and materials recovery; and
- conserve airspace at the Koonwarra Landfill to ensure necessary longevity of use.

Overview of the Shire

South Gippsland Shire covers an area of 3,280 km² with an estimated population of 28,523 in 2016. It is rich in resources and has a range of thriving commercial enterprises and small businesses. Economic development is strong in the industries of dairying, horticulture, forestry, fishing, boutique food and wine, retail trade, manufacturing and tourism. South Gippsland includes prominent tourist sites such as the Wilsons Promontory National Park, Agnes Falls and the Coal Creek Community Park and Museum.

Local Population Characteristics

The major centres of population are Leongatha, Korumburra, Mirboo North and Foster. Other significant townships include Nyora, Toora, Venus Bay, Sandy Point, Poowong, Port Welshpool, Loch, Dumbalk, Welshpool, Meeniyan, Fish Creek and Tarwin Lower.

Population predictions are an integral part of estimating future waste generation rates, as they provide an indication of the number of people generating waste. Population trends can also be used to estimate the number of households in the future, which aids the long term planning of waste management services.

The forecasts used in this WMS are taken from data produced on behalf of South Gippsland Shire Council by Forecast ID. The data is available to the public via Council’s website.

Figure 1 and Table 1 show population and household forecast numbers from 2011 through to 2016 for South Gippsland Shire. The forecasted data shows a steady population growth rate of 0.95% per year. However, the average number of people in each household is predicted to drop from 2.40 in 2011 to 2.33 by 2021

Figure 1: Predicted population growth in South Gippsland

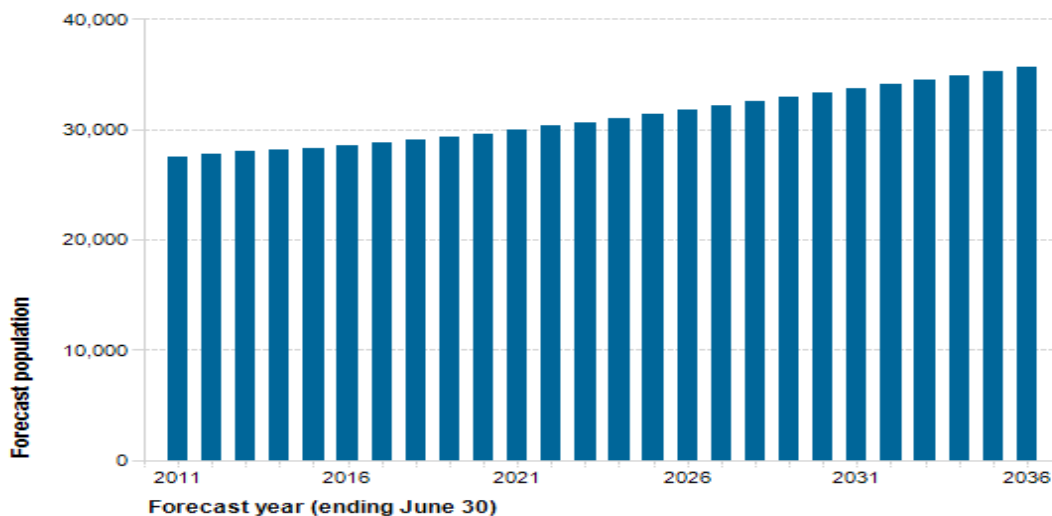


Table 1: Population and household predictions for South Gippsland

	2011	2016	2021	2026	2031	2036
Population	27,516	28,523	29,963	31,719	33,684	35,637
Households	11,320	11,952	12,636	13,504	14,358	15,233
Avg. Household Size	2.40	2.36	2.33	2.32	2.31	2.31

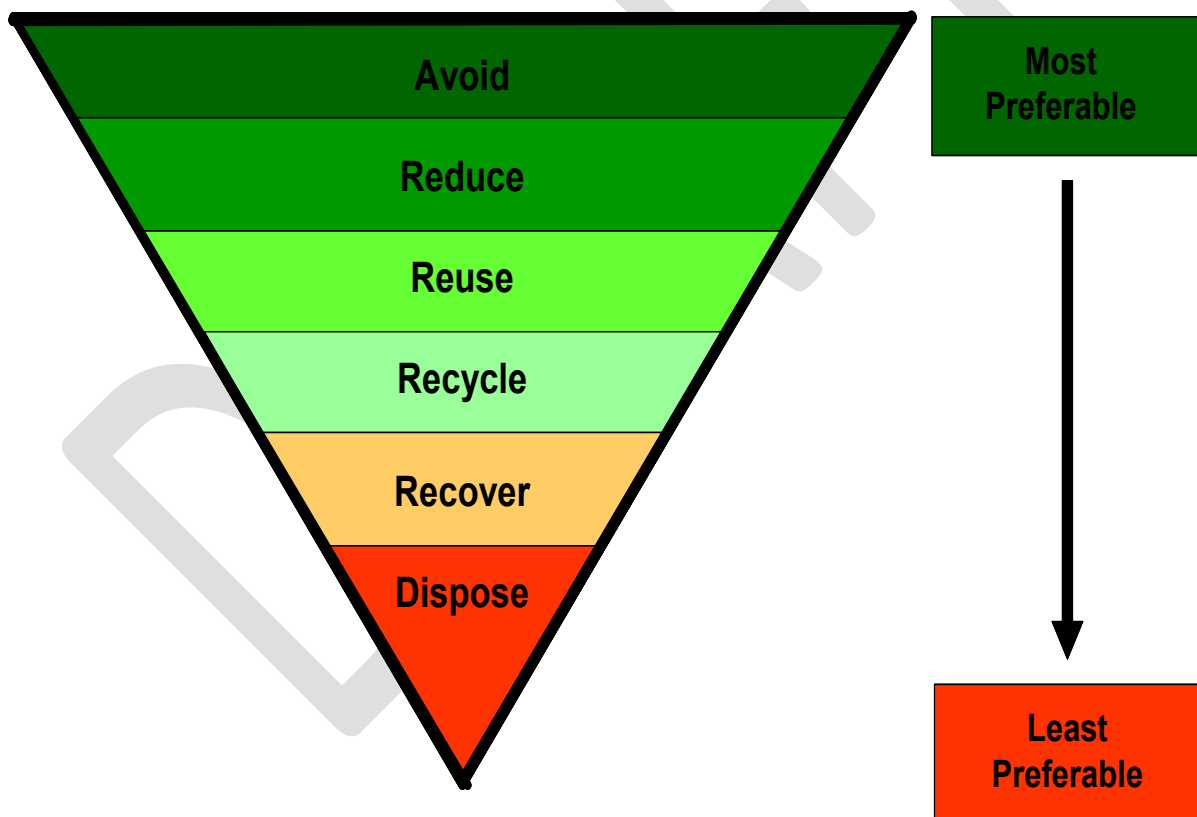
When considering future waste management requirements in relation to population, it is important to take into account that South Gippsland has a high tourism population with an estimated 5 million tourist nights spent in the Shire. Furthermore there are a significant number of second homes or holiday homes in South Gippsland. These variables are accounted for when planning for waste management infrastructure and services to be provided by Council.

LEGISLATIVE & STRATEGIC FRAMEWORK

Key Principles

The key principle underpinning the waste management strategy is the waste management hierarchy, which was disseminated under the Environmental Protection Act 1970. The waste management hierarchy, shown in **Error! Reference source not found.2**, places waste avoidance as the most preferred option and waste disposal (ultimately to landfill) as the least preferred. Waste policies developed by all levels of government are based on this principle.

Figure 2: Waste management hierarchy

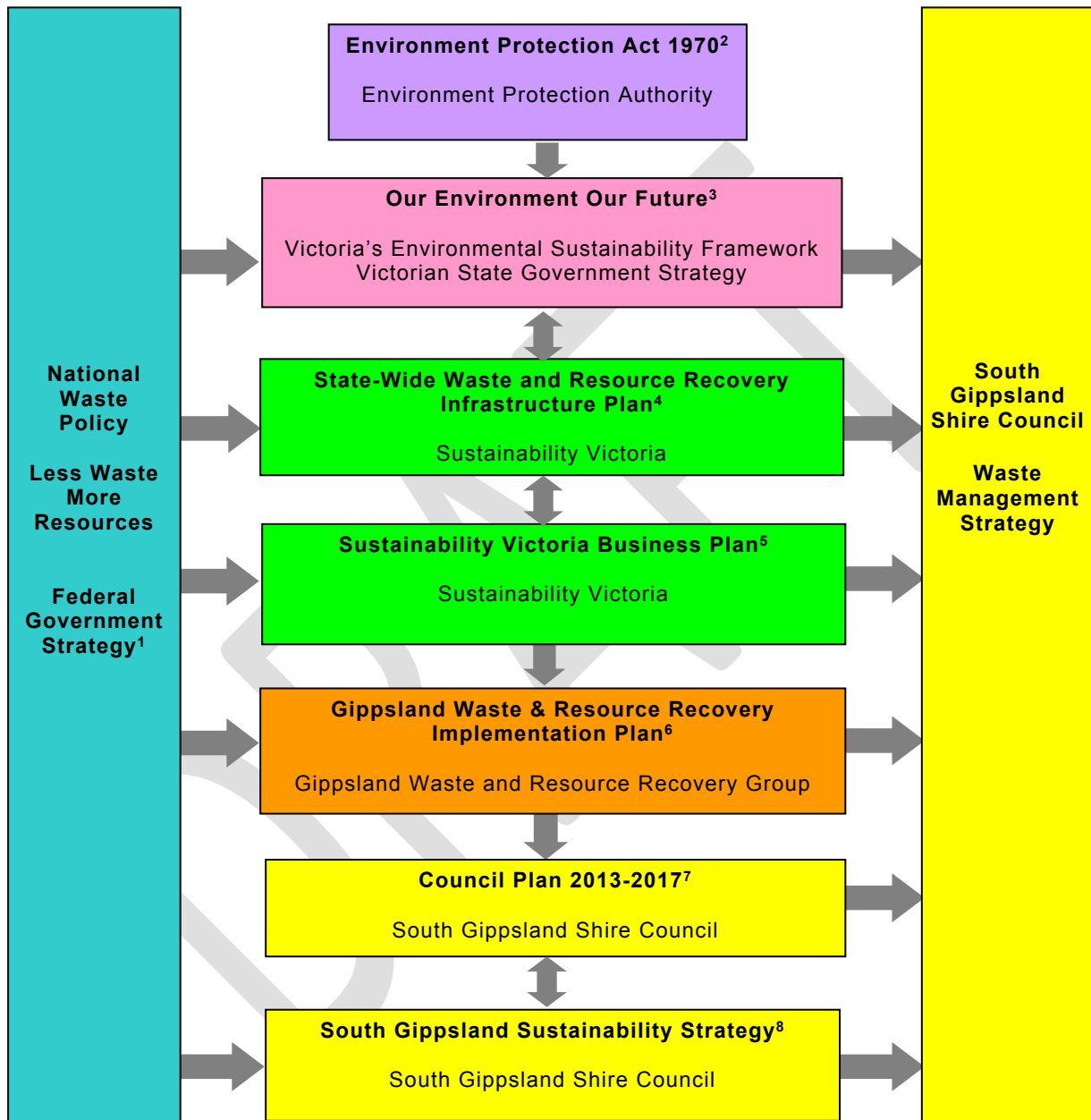


Legislation, Policies & Strategies

The WMS has been developed in line with relevant legislation and policies that have been developed at the Federal, State, Regional and Council level.

Figure (below) illustrates the interlinking of the various government levels and how they relate to this WMS.

Figure 3: Interlinking of legislation, policies and plans



¹ National Waste Policy – <https://www.environment.gov.au/protection/national-waste-policy>

² Environment Protection Act <http://www.legislation.vic.gov.au>

³ Our Environment, Our Future - <http://www.danielandrews.com.au>

⁴ State-Wide Waste and Resource Recovery Infrastructure Plan - <http://www.sustainability.vic.gov.au>

⁵ Sustainability Victoria Business Plan - <http://www.sustainability.vic.gov.au>

⁶ Gippsland Waste and Resource Recovery Implementation Plan - <http://www.gwrrg.vic.gov.au/>

⁷ South Gippsland Shire Council Plan - <http://southgippsland.vic.gov.au/>

⁸ South Gippsland Shire Council Sustainability Strategy - <http://southgippsland.vic.gov.au/>

Federal Government

The National Waste Policy – Less Waste, More Resources

The National Waste Policy, agreed to by all State Environment Ministers in 2009, sets the direction for Australia until the year 2020 to produce less waste for disposal and manage waste as a resource to deliver economic, environmental and social benefits. Annual implementation reports are released.

The aims of the National Waste Policy are to:

- avoid the generation of waste and 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.

National Initiatives - Australian Packaging Covenant (APC)

The Australian Packaging Covenant (APC) is a sustainable packaging initiative which aims to change the culture of business to design more sustainable packaging, increase recycling rates and reduce packaging litter.

It is an agreement between government and industry to find and fund solutions to address packaging sustainability issues. Through the APC, industry agrees to take a leading role in managing the impact of its packaging.

Organisations sign the Covenant to signal their commitment to:

- design packaging that is more resource efficient and more recyclable;
- increase the recovery and recycling of used packaging from households and away-from home sources; and
- take action to reduce the incidence and impacts of litter.

National initiatives – National Television and Computer Product Stewardship Scheme

The National Television and Computer Product Stewardship Scheme was introduced in 2011 to help divert televisions and computer equipment from landfill. These items contain materials that are of value, and therefore viable to recover. They also contain materials and substances that can be hazardous to the environment and people's health if they are not disposed of responsibly.

The scheme is funded by manufacturers and importers of televisions and computer equipment in Australia. The scheme had an initial target (in 2011) to recover (for recycling) 30% by weight of the eligible equipment sold in a year. This target increases each year, rising to 80% in 2026/27. At least 90% of collected material must be recycled.

Since its inception, the scheme has encountered serious problems that are only just starting to be resolved in 2016. The quantities that were to be collected in the first years of the scheme were grossly inadequate and could not cater for the public demand for the service or the sheer volume of material ready for disposal. Several councils had collection contracts terminated as soon as the recyclers had collected as much as they were required to under the scheme, rather than meeting the public's demand. As a result, many councils were left bearing significant costs to have e-waste stockpiles recycled through other arrangements after agreements were terminated.

The scheme has been re-launched in 2015/16 with changes to target quotas which are more realistic and considerate of the volumes of material in the market place.

State of Victoria

Environment Protection Act 1970

The Environment Protection Act (1970) provides a legal framework to protect the environment in the State of Victoria. It applies to noise emissions and emissions to the air, water and land in Victoria.

The Act gives EPA a key role in regulating waste through issuing:

- works approvals and licences for industrial and waste management activities that have the potential for significant environmental impact, including landfills;
- licences to businesses who receive or treat waste; and
- permits for the transport of prescribed industrial waste.

The Environment Protection Act is the overarching document which all other Victorian waste management related legislation, guidelines, regulations and licences are guided by.

State-wide Waste and Resource Recovery Infrastructure Plan (SWRRIP)

The SWRRIP provides Victoria with the long term vision and roadmap to guide future planning for waste and resource recovery infrastructure to achieve an integrated system with the following goals:

- Goal 1: Landfills will only be for receiving and treating waste streams from which all materials that can be viably recovered have been extracted.
- Goal 2: Materials are made available to the resource recovery market through aggregation and consolidation of volumes to create viability in recovering valuable resources from waste.
- Goal 3: Waste and resource recovery facilities including landfills are established and managed over their lifetime to provide best economic, community, environment and public health outcomes for local communities and the state and ensure their impacts are not disproportionately felt across communities.
- Goal 4: Targeted information provides the evidence base to inform integrated statewide waste and resource recovery infrastructure planning and investment at the state, regional and local levels by industry, local government, waste and resource recovery groups, government agencies and the broader community.

Best Practice Environmental Management – Siting, Design, Operation and Rehabilitation of Landfills (Landfill BPEM)

The Landfill BPEM is an EPA Victoria publication which guides the siting, design, operation and rehabilitation of licenced landfills in Victoria. Landfill licences and

Pollution Abatement Notices are designed to achieve the outcomes included in the BPEM.

Victorian EPA Landfill Levies

Landfill levies are paid on all waste disposed of at licensed landfills in Victoria. The levies are designed to make landfill a more expensive and therefore less attractive option for waste management and to drive waste diversion initiatives.

Differential landfill levy rates are payable with the lowest rates applied to municipal waste and asbestos followed by commercial/industrial, building/demolition and prescribed industrial waste which attracts the highest levy rate. Levy rates are expected to increase by CPI each year. The cost of landfill levies is incorporated into waste disposal fees at transfer stations and the Koonwarra landfill. A proportionate amount is also factored into the garbage charges that are applied to all properties that receive kerbside collection services.

The following table shows the amount charged per tonne for each waste category and the total amount of levy paid to EPA from 2011/12 to 2015/16.

Table 2: Landfill Levy Rates Per Tonne and Total Landfill Levy Paid

	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17
Municipal	\$22	\$24.20	\$26.60	\$29.30	\$30.33	\$31.09
Commercial/Industrial & Building & Demolition	\$38.50	\$42.40	\$46.60	\$51.30	\$53.04	\$54.37
Asbestos	\$22	\$30	\$30	\$30	\$30	\$30
PIW	\$70	\$70	\$70	\$70	\$70	\$70
Total Landfill Levy Paid to EPA	\$485,657	\$496,649	\$589,096	\$620,046	\$673,146	-

Levy funds are used for environment protection activities, including funding the operation of State Government departments such as the EPA (which in turn, funds the GWRRG) and Sustainability Victoria. The funds are also distributed through grant funding for projects that promote the sustainable use of resources and best practices in waste management.

EPA Victoria Landfill Bans

Disposal of some waste types to landfill in Victoria is prohibited through landfill bans. Landfill bans are generally introduced to reduce the impact that certain waste types can have on the environment or to drive the need for alternative disposal/treatment solutions so that resources are recovered for recycling instead of being landfilled.

Materials currently banned from entering landfill in Victoria include:

- liquid waste;
- grease trap material;
- oil filters;
- 200 litre drums contaminated by prescribed industrial waste;
- whole automotive tyres; and
- automotive batteries.

The Victorian State Government is currently planning to introduce a landfill ban on electronic waste (e-waste). While Council already recycles all televisions and computers at transfer stations and through the hard waste collection service, the proposed ban is likely to cover a much broader range of items than are currently recycled. It is likely that any item that is battery or electrical powered will be included in the ban, meaning that in order to comply, recycling programs will need to be expanded or modified. In addition, it is known that significant quantities of e-waste currently enter the Koonwarra landfill in commercial loads of waste from skip bins or commercial waste collection services. The introduction of a landfill ban on e-waste will mean that Council will need to implement measures to ensure that this no longer occurs.

Gippsland Waste and Resource Recovery Group

The GWRRG was formerly known as the Gippsland Regional Waste Management Group. In 2014 State Government legislative changes led to the group changing its name and focus to not only plan around the management

of municipal waste but also commercial and industrial waste on a regional basis. The group is one of seven Waste and Resource Recovery Groups in Victoria with one group covering the metropolitan area of Melbourne and the other six covering regional Victoria. The groups are Victorian State Government statutory authorities established under the Environment Protection Act 1970.

The GWRRG encompasses the municipalities of Bass Coast, Baw Baw, East Gippsland, Latrobe, South Gippsland and Wellington. The region covered by the Group extends from Phillip Island to Mallacoota, an area of some 42,000 km² with a population of more than 260,000 people.

The GWRRG has prepared a Gippsland Waste and Resource Recovery Implementation Plan. The objective of the regional implementation plan is to identify local waste and resource recovery infrastructure and service needs and how these could be met over at least the next ten years.

The plan aims to assist in achieving:

- a reduction in the amount of waste going into landfill;
- increased resource recovery and improved industry viability; and
- the management of landfill and resource recovery facilities to provide the best economic, community, environment and public health outcomes for local communities.

The regional plan is broad in nature, with specific initiatives and the provision of waste infrastructure and services planned for and implemented by the member councils.

South Gippsland Shire Council

Much of the broad strategic waste management planning is undertaken at Federal and State levels of Government. Local Governments participate in the development of these high level guiding documents through consultation and feedback on proposed initiatives. Council is however responsible for strategic planning at a local level, provision of required waste management

infrastructure and delivery of waste management services to the community. Council's key strategic documents that influence the provision of waste management services are Vision 2020, the Council Plan 2013-2017, the South Gippsland Sustainability Strategy and this Waste Management Strategy.

Vision 2020

The development of Vision 2020, the community vision for the South Gippsland Shire, was facilitated by Council in consultation with local communities. It represents the aspirations of South Gippsland communities for the year 2020. The vision aspires to a number of key outcomes, with the aim of creating South Gippsland into a place which has, amongst others:

- appropriate infrastructure to meet community needs;
- respect for the environment by being clean and green;
- sustainable economic growth; and
- a sustainable agricultural industry, including direct and indirect support for businesses.

Council Plan 2013-2017

The Council Plan 2013-2017 includes the objective:

“Improve the sustainability of the local and regional environment”

The plan includes the following strategy for achieving the key objective listed above:

- Strategy 1.3.2: We will promote sustainable waste management practices.

South Gippsland Sustainability Strategy – 2016

This document presents the South Gippsland Shire Council's long term sustainability strategy to be implemented by the Sustainability Team. The strategy contains a vision for sustainability and a set of actions to be undertaken over the next four years to work towards achieving that vision. The sustainability vision is *‘to be a municipality that values its local people,*

flora and fauna and is committed to actively and collaboratively engaging with its community and other partners in protecting the environment and benefiting from sustainability opportunities’.

The plan has been divided up into five broad areas of activity:

1. Community
2. Energy and Water
3. Climate Change
4. Biodiversity
5. Waste Management

Actions specific to waste management in the Sustainability Strategy relate to implementation of this WMS, organics recycling, public place recycling and landfill management.

Koonwarra Landfill Master Plan

Developed after Council brought the operation of the Koonwarra Landfill in-house, the Koonwarra Landfill Master Plan is a document that guides the ongoing development and operation of the Koonwarra Landfill.

The plan includes long term capital works schedules and costings for cell construction and rehabilitation works, as well as detailed analysis of the viability of extending the landfill into the area of the site specified as Stage 2 in the original concept plans for the landfill.

The plan also recommended the introduction of an alternative daily landfill cover system which was implemented in 2015/16 and alternative methods for the management of leachate, which are currently being finalised.

Waste Management Services Performance and Data Reporting

Each year Council’s Waste Management team is required to provide specific waste management related data to a number of organisations.

As the holder of an EPA waste discharge licence for the Koonwarra Landfill, Council must provide an Annual Performance Statement (APS) to the EPA each September reporting on licence compliance.

Information relating to the volumes of waste received and the amount of fuel used by plant at the Koonwarra Landfill must also be reported annually through the National Pollutant Inventory (NPI). This is a national database which aims to quantify the amount of pollution emitted by industrial facilities including licenced landfills.

Detailed waste services information and data is also reported annually to Sustainability Victoria through the Kerbside Recycling Survey and the Local Government Survey and to State Government through the Local Government Performance Reporting Framework.

THE COST OF WASTE MANAGEMENT

Current & Future Waste Management Budgets

A significant amount of Council's annual budget is allocated to the costs associated with the provision of waste management services. The amount varies from year to year, being higher in years where major landfill capital works are scheduled. In 2016/17 Council's operating expenditure is forecast to be approximately \$64.1 million with waste management operational expenditure forecast to be \$4.28 million.

Waste management costs, (in particular landfill design, construction, operation and rehabilitation costs) have escalated significantly over recent years, mainly due to increased EPA compliance costs.

This has a flow-on effect to residents through the Garbage Charge levied on properties for kerbside waste collection services and on waste disposal fees charged at transfer stations and the Koonwarra Landfill.

Waste management operational expenditure is forecast to grow from \$4.28 million in 2016/17 to over \$4.7 million by 2021/22⁹. This is despite service improvements in recent years, including bringing landfill operations in-house and the implementation of a tarp cover system at the Koonwarra Landfill which provide significant savings in the long-term. The operational budgets for each waste management service area in 2016/17 are displayed in Table 3.

Table 3: Waste Management Operational Budgets 2016/17

Service Area	Budget
Litter & PPR Bin Services	\$216,206
Kerbside Garbage, Recycling & Green Waste Collection Services	\$1,954,767
Transfer Station Operations	\$807,805
Hard Waste Collection Services	\$11,127
Active Landfill Operations	\$1,253,420
Closed Landfills Monitoring & Maintenance	\$39,584

⁹ South Gippsland Shire Council Long Term Financial Plan

In addition to forecast operational expenditure, Council has significant capital works projects planned for Stage 1 of the Koonwarra Landfill, expected to be complete by 2031. These include:

- \$450,000 for an upgraded leachate management system;
- \$830,000 for rehabilitating Cell 3;
- \$2.35 million to design and construct Cell 5;
- \$900,000 for rehabilitating Cell 4; and
- \$1 million for rehabilitating Cell 5.

Picture 1: Koonwarra Landfill Cell 3 Construction Works



Planning for future waste management services needs to take into account the financial burden on the community as well as environmental considerations

Grant Funding

Funding for Council's waste management services is generally derived from rates, service charges and disposal fees. Another source of funding is grants. The Waste Management Team actively seeks grant opportunities to assist in improving waste management services to the community.

Table 4 (below) provides details of grant funded waste management projects that have been completed since 2011/12. These projects have mostly been delivered on a dollar for dollar basis, with Council contributing 50 per cent of the costs either through cash or in-kind support.

Table 4: Grant Funded Waste Management Projects Delivered by Council

Year	Project Title	Grant Funding Received	Total Project Value
2011/12	Litter Prevention Officer Program (Joint project with Bass Coast Shire Council. SGSC portion shown)	\$72,980	\$110,000
2012/13	Venus Bay & Tarwin Lower Public Place Recycling Project	\$10,000	\$17,734
2013/14	Roadside Litter Prevention Project (Joint project with Bass Coast Shire Council. SGSC portion shown)	\$16,250	\$30,841
2013/14	Litter Surveillance Camera Project	\$10,000	\$19,540
2014/15	Korumburra Public Place Recycling Project	\$30,000	\$45,920
2014/15	Leongatha Parks Public Place Recycling Project	\$5,000	\$10,201
2014/15	Koonwarra Transfer Station Re-Use Shop Project	\$24,000	\$38,539
2015/16	Leongatha Public Place Recycling Project	\$53,900	\$75,126
2016/17	Mirboo North & Mossvale Park Public Place Recycling Project	\$20,000	\$43,034
2016/17	Cigarette Butt Litter Prevention Project	\$14,500	\$20,000

WASTE MANAGEMENT SERVICES

1. Kerbside Collection Services

GARBAGE COLLECTION SERVICE

Background

Since the South Gippsland Shire was formed in the mid-1990s Council has provided a compulsory weekly kerbside garbage collection service to residential properties in most township areas, with an optional service available to commercial properties. Generally, 120 litre mobile garbage bins (MGBs) have been the predominant bin type with some commercial properties opting for a 240 litre MGB at additional cost.

All kerbside services are provided on the basis of full cost recovery. Costs associated with the provision of the service are recovered through a Garbage Charge that is added to the rates of participating properties.

Kerbside garbage and recycling services were introduced in Venus Bay from July 2013. Initially, options provided to residents were for either a year round or 6 month (November – April) service. From July 2015, a minimum service standard was introduced for Venus Bay that meant that all residential properties received a compulsory 6 month kerbside collection service. Residents can choose to receive a year round service at their option but at an additional cost.

All kerbside services (garbage, recycling and green waste) are provided under a combined contract. The current contract commenced from February 2013 with the initial contract term expiring on 31 January 2020. There are 3 x 12 month extension options available at the discretion of Council. Under the terms of the contract, ownership of all bins utilised in the provision of all of the kerbside services will revert to Council at the conclusion of the contract.

Current Practice

Council's kerbside garbage service is available to developed properties in all towns in the municipality and on main interconnecting roads utilised by the trucks providing the service. Residents in these rural areas can receive a collection service if they are

able to place their bins at a location the collection vehicles pass and can safely stop and are prepared to pay for the service.

The kerbside garbage service is always paired up with a recycling bin and the service is compulsory for developed residential properties in the built up areas of all towns except Walkerville (where it is optional). Services provided to rural properties able to be collected from are also optional. Venus Bay properties have a compulsory 6 month collection service which runs from November to April annually, with the option of a year round service at additional cost.

Picture 2: South Gippsland Shire Kerbside Garbage Truck



The number of serviced properties has gradually increased each year reflecting growth rates in the Shire. Due to improved recycling rates, the increase in serviced properties has only led to minor increases in the amount of garbage collected and sent to landfill through the service.

In order to monitor the success of service specific education programs and to identify opportunities for improvement, audits of kerbside bin contents have been undertaken since 2009. The data collected has been reviewed and improvements to the services have been implemented as a result.

The most notable service improvement has been the introduction of a kerbside green waste collection service after it was shown by audits that approximately 23 per cent of kerbside garbage bins contents was green waste. A follow up audit in 2016 showed that the amount of green waste in garbage bins had significantly reduced to just 2.9 per cent. The introduction of the kerbside green waste collection service has also seen the amount of garbage sent to landfill from the service drop from an average figure of 411 kg per property per year to 337 kg per property per year in 2015/16.

The most recent audit undertaken in 2016 revealed that 38 per cent of the bin contents was food waste and 15 per cent was recyclable materials.

Future Opportunities

The most significant change for the kerbside garbage collection service is dependent on a full organics collection service (FOGO – Food organics, Green Organics) being introduced (see Green Waste Collection section). If a best practice FOGO collection is implemented, it is likely that the current weekly 120 litre garbage collection service would change from a weekly collection to fortnightly, with the organics bin collected weekly instead. This change to the collection frequency is in line with best practice and is practical because almost all food waste will be moving out of the garbage bin and into the organics bin. Without the green waste and food waste in the garbage bin, odour and volume is reduced to a level that can be managed with a fortnightly collection. The key reason to make the residual garbage bin collection fortnightly is to limit capacity to encourage residents to use their recycling and FOGO bins optimally.

A change of this type will require significant public education to achieve the necessary behavioural change. By removing food organics (from the garbage bin) and changing the frequency of collection from weekly to fortnightly, it is expected that the amount of waste disposed of to landfill from the kerbside garbage collection service would reduce by at least 35 per cent.

Another identified service improvement opportunity is to reduce the amount of recyclables ending up in landfill through the service. Audits undertaken in 2016 revealed that approximately 15 per cent by weight of the material in kerbside garbage

bins was recyclable material that could have been collected and recycled through the kerbside recycling collection service.

This issue could be partly addressed through reducing the collection frequency of the garbage bins as discussed, (if a FOGO service was introduced). In addition, specific and targeted education programs would be effective followed up with enforcement action for residents that continue to misuse the bins. Council's General Local Law 2014 contains penalties for persons who fail to comply with Council's Waste Management Services Procedures.

Actions related to kerbside garbage collection services are listed in the Actions section of this document. [Click here](#).

RECYCLING COLLECTION SERVICE

Background

Council has provided a kerbside recycling service since shire amalgamations in the mid-1990s. Initially the service comprised of an open crate for recyclable containers, with bundled paper and cardboard collected separately. In 2004 the service was improved with open crates being replaced by 240 litre yellow lidded mobile recycling bins (MRBs) collected fortnightly with all materials (including paper and cardboard) able to be placed in the bin for commingled collection.

Initially, only plastic codes 1-3 were able to be collected for recycling. In 2010/11 the service was improved through the addition of the ability to recycle plastics codes 4-7, meaning that all rigid plastic packaging are now accepted by the service, apart from polystyrene.

In 2013, all properties were delivered new 240 litre MRBs with yellow lids which conform to the Australian standard for recycling bins. Ownership of these bins reverts to Council at the conclusion of the current kerbside collection contract. The bins have an effective service life of at least 20 years, which means that there will be significant cost savings available in future contracts, because tenderers will not need to allow for the purchase and delivery of bins as a component of their tender.

Also, as with the kerbside garbage collection service, kerbside recycling collection services were made available to residents in Venus Bay on an optional basis in 2013, reverting to a minimum compulsory 6 month service standard in 2015. Residents are able to upgrade to an optional year round collection service for an additional cost.

Current Practice

Council currently provides kerbside recycling collection services to more than 11,500 properties across the municipality. The service is provided under contract in the same contract as kerbside garbage and green waste collection services. The initial contract term expires on 31 January 2020, with 3 x 12 month extension options available at Council's discretion.

The service collects domestic co-mingled recycling from residential and commercial properties that receive a kerbside garbage collection service. Collected materials include paper, cardboard, aluminium packaging, steel cans, glass bottles and jars and rigid plastic packaging codes 1-7. All of the collected recycling is currently transported to a facility in Wonthaggi where it is aggregated, before being sent to a Materials Recovery Facility (MRF) in Melbourne for sorting and eventual recycling.

Collections are undertaken on a fortnightly basis with the exception of the period between Christmas Day and the end of January in Sandy Point, Waratah Bay and Venus Bay where the service is provided on a weekly basis to cater for an increase in community demand for the service in these largely holiday home based towns.

Future Opportunities

Many of Council waste management services are delivered through a contract which means that the most effective time to make significant changes to service levels is when a new contract is prepared and awarded.

Kerbside recycling collection services currently provided by Council are based on best practice. If changes were made to the recycling industry such as the potential introduction of container deposit legislation (CDL) the method of service provision would need to be reconsidered to ensure the best outcomes.

To improve the level of service for a majority of residents and to simplify Council's current garbage charge fees, the feasibility of providing all serviced properties with weekly recycling collections between Christmas Day and the end of January each year will be investigated. This change would most likely need to be incorporated into the next kerbside collection contract.

Other options to improve the kerbside recycling collection services offered by Council are to make sure that the service accepts as many material types as possible.

Possible future inclusions if markets and/or sorting technology allows include:

- soft plastics (e.g. plastic bags);
- expanded polystyrene
- textiles;
- small household appliances/batteries/mobile phones (if an e-waste bin is implemented); and
- re-usable second hand goods.

Ongoing education of the public is also essential to maintain the effectiveness and efficiency of the service and to support the successful implementation of any changes to the service. The subject of waste management education is specifically addressed later in this strategy.

If a FOGO collection was implemented in the future as is discussed in the Kerbside Green Waste Collection section of this strategy, no changes to the kerbside recycling collection schedule would be necessary.

Up until 2016, the focus of audits has been directed at kerbside garbage bins because that was the likely area where the most service improvement opportunities would be identified, which has proven to be the case. Moving forward the focus could potentially move to include recycling bins as well to ensure that all opportunities to divert waste from landfill and reduce contamination of recycling bins are identified and assessed. A requirement to conduct bin audits of all kerbside bins could potentially be included in new kerbside service contracts. This would ensure that audits occur and also enable the costs to undertake them to be directly recovered through service charges.

Actions related to kerbside recycling collection services are listed in the Actions section of this document. [Click here](#).

KERBSIDE GREEN WASTE COLLECTION SERVICE

Background

Traditionally South Gippsland Shire Council has not provided kerbside green waste collection services. The only options for green waste management for residents have been to either take green waste to the transfer stations or manage it themselves, through burning or home composting. Burning is not an environmentally responsible method of managing this material and home composting is not undertaken on a scale that will provide worthwhile outcomes. However, through the implementation of Council's Sustainability Strategy information and advice is provided to the community on various methods of composting and the benefits it can provide.

Audits carried out over a number of years on the contents of kerbside garbage bins showed that approximately half the waste going to landfill from kerbside garbage bins was organic waste. Of this about 23 per cent was green waste and 27 per cent food waste on average, which equates to approximately 2,000 tonnes per year, all of which was ending up in landfill.

Diverting organic waste from landfill is a high priority for Council. Apart from taking up valuable landfill airspace, it increases landfill gas production and leachate generation which must both be managed at significant cost.

In 2012 while tendering for the kerbside garbage and recycling collection service, provision was made in the contract documents for a kerbside green waste collection service to be introduced at a later date at the option of Council. The tender only included provision for a green waste collection and not a FOGO collection (including food waste) because at the time, FOGO collections were uncommon and there was no local composting facility that was licenced to accept food waste.

In July 2014 council decided to introduce a kerbside green waste collection service which commenced in July 2015.

Current Practice

The kerbside green waste collection service currently in place is generally compulsory for residential properties that receive kerbside garbage and recycling collection services. Exemptions from the compulsory green waste service apply for units/flats, properties over one hectare in size and properties where garbage and recycling collection services are optional (i.e. rural). While these properties are exempt from the service they are able to opt in if they choose. There are currently 7,113 (2016) properties receiving a kerbside green waste collection service.

In the first full year of the service (2015/16) 1,700 tonnes of green waste was collected through the service and sent for composting. This led to the amount of waste disposed of to landfill through the kerbside garbage collection service reducing from an average of 411 kg per household per year to 337 kg per household per year, which is a significant improvement.

Picture 3: Collection of Kerbside Green Waste Collection Bins



Collected green waste is transported to an EPA licenced composting facility in Morwell. The facility is not currently licenced to accept food waste.

The current kerbside green waste collection service is generally the same as the services provided in Baw Baw Shire and Latrobe City. Bass Coast Shire Council are

planning to introduce a FOGO collection from September 2017, with the collected material to be transported to the Gippsland Water Facility at Dutson Downs (near Sale) for processing. A small number of other Victorian councils have introduced FOGO collections in the last two years predominantly in the north east of the state. The performance of these services will be monitored, with the knowledge gained used to inform any future proposals to introduce service improvements in South Gippsland.

Future Opportunities

Removing organic waste from landfill is a high priority opportunity for Council to consider in the next few years. Bass Coast Shire Council have committed to introducing a FOGO collection commencing in September 2017.

An investigation into the viability of improving the South Gippsland Shire's existing kerbside green waste collection service to be a FOGO collection service is planned for 2016/17. The investigation will look for viable composting options and facilities, preferably within the local region. Outcomes of the investigation may be influenced by the outcomes of the Collaborative Waste Investment Project that the six Gippsland councils are currently undertaking. This project aims to encourage the establishment of alternative waste processing facilities in Gippsland. A resulting facility may well be able to accept combined food and green waste from the South Gippsland Shire.

If it is determined that a FOGO collection is viable the service would be included in the next kerbside waste collection tender. The earliest this contract could be renewed is 1 February 2020, however the existing contract could be extended for up to three years at the discretion of Council.

The timing of the expiration of Council's existing contract means that South Gippsland can observe and learn from the implementation of similar services at Bass Coast and other municipalities.

The FOGO collection services being implemented elsewhere vary in their collection structure. However, the current belief is that a best practice kerbside waste collection service in the future will include a small kitchen caddy (bin) lined with compostable

bags for kitchen food waste to go into, a weekly FOGO collection (240 mobile organics bin - MOB), a fortnight recycling collection (240 litre MRB) and a fortnightly residual garbage collection (120 litre MGB). The currently accepted view is that without restricting the capacity of the garbage bin by making it a fortnightly collection, residents will not fully utilise the recycling and FOGO bins leaving valuable resources going to landfill.

Councils that have implemented this structure of bin collection have needed to allocate significant resources to educate the community about the altered services, including but not limited to brochures, advertising, door to door education for residents on how to use the bins and rigorous bin inspections.

Actions related to kerbside green waste collection services are listed in the Actions section of this document. [Click here](#).

2. Transfer Stations

Background

South Gippsland Shire provides six waste transfer stations strategically located throughout the municipality. These are located at:

- Koonwarra;
- Korumburra;
- Mirboo North;
- Venus Bay;
- Foster; and
- Walkerville.

The sites are currently operated under a management contract. The initial term of the current contract expires in December 2018, with 3 x 12 month extension options available at the discretion of Council.

The current contract contains significant changes from previous contracts, aimed at improving resource recovery and minimising waste sent to landfill. Specific clauses require the contractor to pay for the disposal of all transfer station waste at the

Koonwarra Landfill. This provides an incentive for the operator to divert as much material from the waste stream as possible (for recycling), because doing so, reduces their landfill disposal costs.

Prior to July 2013, green waste was accepted at transfer stations free of charge. In the years preceding 2013, volumes of green waste disposed of at the sites had continued to increase (particularly since the occurrence of significant fire events) to significant levels which were placing a substantial cost burden on Council for the management and mulching of the material. These costs were being subsidised by all ratepayers rather than being paid for by people using the service. Apart from material generated within South Gippsland, there was also evidence of substantial amounts of green waste coming to South Gippsland Shire facilities from neighbouring councils.

In 2013 fees were introduced for the disposal of green waste disposal at all transfer stations. The introduction of green waste disposal fees not only recovered most of the costs associated with managing green waste at transfer stations but also substantially reduced the volumes being disposed of by approximately 40 per cent. This has made the service more sustainable. To avoid stockpiling of material which could lead to increased fire risk, (due to a reluctance to pay disposal fees) an amnesty period is provided from the Saturday immediately before Melbourne Cup Day, through until 31 December each year. During this period residents are able to dispose of all green waste at transfer stations, free of charge.

In 2015 the Koonwarra Re-Use Shop was established at the Koonwarra Transfer Station. It incorporates the weighbridge office for the site and houses items that are available for sale to the public that have been salvaged from loads of waste destined for landfill. The project was jointly funded by Council and a grant provided by Sustainability Victoria.

Picture 4: Koonwarra Transfer Station Re-Use Shop



Council used to receive a household chemical collection day (Detox Your Home) every two years provided by Sustainability Victoria. Due to changes to the program South Gippsland was cut from the service in 2012 leaving the nearest collection points in Wonthaggi (Bass Coast Shire) and Morwell (Latrobe City).

Current Practice

All six transfer stations accept general waste from cars and trailers (no trucks) and a range of materials for recycling. Materials separated at the sites for recycling include:

- Green waste;
- Scrap metal;
- Paper and cardboard;
- Co-mingled household recycling;
- e-waste (TVs and computer equipment);
- Mobile Muster (mobile phone recycling)
- Mattresses;
- Bricks, and concrete (up to 1 cubic metre);

- Motor oil;
- Automotive batteries;
- Empty farm chemical drums; and
- Used silage wrap (Plasback program, Koonwarra and Foster only).

Under the current contract that has been in place since December 2011, there are incentives for the contractor to minimise the amount of waste they send to landfill. The contractor retains the disposal fees paid by transfer station customers, but must pay disposal fees to Council for all waste they send to landfill. Council sets the waste disposal fees through its annual budget process. The current contract structure has seen the amount of transfer station waste sent to landfill reduce from approximately 3,330 tonnes in 2010/11 to 1,775 tonnes in 2015/16, which is a significant improvement.

Council's current practice is to (where possible) recover waste management costs through waste disposal fees and service charges. Due to the likelihood that illegal dumping would occur at unmanageable levels if the waste disposal fees at transfer stations were based on full cost recovery, transfer stations disposal fees are not set at a level where the full cost of the service is recovered. The shortfall in costs associated with the management of transfer stations is funded from general rate revenue.

Koonwarra Transfer Station is the only site that is open seven days per week. Other sites are open less frequently but meet the current needs of the community. The Venus Bay and Walkerville transfer stations have increased hours and days of operation during the peak summer holiday season and on public holidays.

Re-Use shops operate at both Koonwarra and Korumburra Transfer Stations.

Future Opportunities

In the coming years the major opportunities for increased resource recovery are heavily reliant on markets becoming available to recycle more materials. In recent years commodity prices have been low meaning there is little incentive for the development of new recycling processes and markets.

Future potential landfill bans on items such as all electrical and battery operated items will force increased recovery in some areas, however the biggest gains have already been achieved in recent years. This good work needs to continue.

In the lead up to the expiry date of the current transfer station management contract, a service review will be undertaken to determine if it is in Council's best interests to extend the current contract, re-tender the service (potentially with some service changes), or to bring the service in-house as was done with the Koonwarra Landfill.

Council will continue to lobby to be included in the Detox Your Home program either with a permanent drop off facility, a mobile collection or both, as is the case in Wonthaggi and Morwell. The current situation where residents have to travel to adjoining municipalities is not satisfactory and it is almost certain that household chemicals and paint are inappropriately disposed of in kerbside bins or hidden in loads of general waste disposed of at transfer stations.

The Koonwarra Re-Use Shop has little scope to expand in size due to its location and site restrictions, however, as the site gets better established and turnover through the shop increases, it may become viable in the future for a social enterprise to operate the shop, as is the case with some other transfer station re-use shops around Australia.

All of Council's six transfer stations have adequate basic infrastructure, including site offices, retaining walls, safety hand rails and hard stand areas. Some have sealed roads and limited undercover storage areas. Sustainability Victoria's Guide to Best Practice at Resource Recovery and Waste Transfer Facilities outlines what a "best practice" transfer station incorporates. This document is a guide only and compliance is not compulsory, but in order to provide the best service standard possible for the community, transfer station infrastructure will be upgraded and improved as budgets and/or grant funding becomes available.

Actions related to transfer stations are listed in the Actions section of this document.

[Click here.](#)

3. Landfill Management

OPERATIONAL LANDFILL

Background

The Koonwarra Landfill is the only active landfill within the South Gippsland Shire. It opened in October 2007 after the former Koonwarra Landfill reached capacity and was closed. The site consists of two stages of which Stage 1 has both Council planning approval and EPA works approval. Stage 2 has Council planning approval but requires EPA works approval.

Stage 1 and Stage 2 both consist of five fully engineered and lined cells with cells 1-5 in Stage 1 and 6-10 in Stage 2. It is anticipated that Stage 1 will reach capacity around 2030/31 while Stage 2 could potentially last until approximately 2060.

The landfill was initially established, and operated by a contractor who designed and constructed cells 1 and 2 of the site. Due to contractual issues the contract to design, construct and operate the site was terminated in October 2011.

After an interim period where Council operated the site utilising hired plant and operators, the decision was made to bring the management and operation of the facility in-house (commencing May 2013), employing two full-time staff and purchasing the necessary plant and equipment. Operating the site in-house, rather than contracting the service is expected to save Council more than \$1 million over a ten year period and offers a greater level of control over the site and the ability to make improvements or adapt to legislative changes.

Current Practice

The Koonwarra Landfill is operated in-house by Council with two full-time staff employed to operate the site. It has approved airspace to last until approximately 2030/31 (Stage 1). The site accepts approximately 16,500 tonnes of solid waste annually.

The site operates to best practice standards with 4.5 metre high perimeter litter fencing, portable litter nets around active tipping areas and fully engineered cells to

contain and collect leachate. Gas is captured and flared off on capped and rehabilitated areas of the landfill to reduce greenhouse gas emissions and leachate is currently pumped to tanks and transported off site for treatment and disposal. Capping and rehabilitation occurs progressively with Cells 1 and 2 already capped, Cell 3 is the current active cell and is expected to be filled early in 2017.

Picture 5: Cells 1 & 2 of the Koonwarra Landfill Capped and Ready for Revegetation



A tarp-style daily landfill cover system was implemented from July 2015, which has provided significant airspace savings through reducing the amount of soil cover required to cover the waste daily. In the first year of using the tarp system approximately 6,400 cubic metres of airspace was saved, which has an approximate value of \$960,000, based on current landfill costs. The airspace savings achieved through using the tarp system is expected to extend the lifespan of Stage 1 from 2017 to 2031.

Picture 6: Tarp Landfill Cover System Installed on the Landfill Compactor



The Koonwarra Landfill is the largest contributor to Council's greenhouse gas emissions. The most effective way to minimise this impact is to reduce the amount of waste, especially organic waste that is deposited into the landfill. The only other effective emissions control measure able to be incorporated at the site is the flaring of landfill gas which is undertaken through the capture and flaring infrastructure installed on filled and capped landfill cells. Through this process, landfill gasses are converted to carbon dioxide which is less harmful to the environment.

Future Opportunities

Council is in a fortunate position with ample potential landfill airspace to last until approximately 2031 and up to 2060 if Stage 2 is approved by EPA. However, landfilling waste is an increasingly expensive option which sees large amounts of potential resources lost. Council needs to actively pursue alternatives to landfill through reducing our waste and also through investigating alternative waste treatment technologies. Alternatives to landfill are discussed in more detail later in this strategy.

In the short term, as a contingency plan if landfill alternatives do not eventuate, EPA works approval will be sought for the development of Stage 2 of the site.

Actions related to operational landfills are listed in the Actions section of this document. [Click here](#).

CLOSED LANDFILLS

Background

Apart from the current Koonwarra Landfill Council also actively manages two closed landfills located at Foster and Koonwarra.

The former Koonwarra Landfill operated from the mid 1980s until its closure in October 2007. Approximately 5.5 hectares of the site was used as a landfill. After the site was closed the landfilled area was capped and rehabilitated in 2008. The area is now well vegetated with native grasses, ground covers and small shrubs.

The site has a network of ground water bores which are used to monitor any potential off site contamination the landfill may cause. To this date no off site impacts have been identified.

The site operated under EPA licence number ES388 which has remained in place after the sites closure. In 2013 the EPA issued Council with post closure pollution abatement notices requiring a hydrogeological assessment of the site and an updated monitoring plan both to be verified by Environmental Auditors.

The Foster Landfill was licenced to accept waste from 1972 to 2002, at which time it was closed and rehabilitated. The site was unlined and covered an area of approximately 5 hectares. The site accepted solid municipal waste, solid inert waste, low level contaminated soil, scallop processing residue, tree prunings and inert industrial waste from ESSO BHP Bass Strait operations.

After its closure in 2002 the Council surrendered the EPA licence for the site and was issued with a Pollution Abatement Notice in its place. In 2014 Council was issued with new post-closure pollution abatement notices requiring a hydrogeological assessment of the site and an updated monitoring plan both to be verified by Environmental Auditors as was the case at the former Koonwarra Landfill.

While groundwater bore monitoring has shown that the site is not impacting the surrounding environment, leachate bores installed as part of the hydrogeological

assessment indicated elevated leachate levels within the waste. Further investigations are currently underway to identify the cause and determine what actions are necessary to maintain the integrity of the cap over the landfill.

Future Opportunities

Closed landfills represent a significant liability to Council. While both the Foster and former Koonwarra Landfill have not polluted their surrounding environments, ongoing costs associated with complying with new EPA requirements are significant and neither site is able to recover costs from disposal fees.

The Foster and former Koonwarra Landfills pose significant costs not only through the reporting required by the EPA, but to monitor groundwater and landfill gas at each site. Foster in particular may require ongoing leachate management which could pose a significant cost burden to Council and its ratepayers into the foreseeable future. Other costs are associated with the management of access tracks and weed control on the sites.

If it can be demonstrated that a closed landfill no longer poses a risk to the surrounding environment there is the possibility that EPA will remove the requirement for a site to be monitored into the future. While it is likely that Foster will require ongoing monitoring and management into the future, there is the possibility for the ongoing monitoring of the former Koonwarra Landfill to be removed.

Council will work with the EPA to satisfy requirements for the former Koonwarra Landfill to allow Council's ongoing monitoring responsibilities to be removed.

Council will also work with the EPA and consultants to minimise the financial impact that closed landfill requirements have on ratepayers, in particular ongoing leachate management at the Foster Landfill.

Actions related to the management of closed landfills are listed in the Actions section of this document. [Click here](#).

4. Hard Waste Collections

Background

Prior to 2012 South Gippsland did not provide a hard waste collection service. An annual at-call user-pays service was introduced as part of the Transfer Station management contract (which commenced from December 2011) with the annual booking period running from July to September and collections being undertaken in October.

The service is available to all residential properties in the municipality, not just those that receive a kerbside waste collection service.

Since the service was introduced annual booking numbers have peaked at 127 in 2013. Since then booking numbers have gradually dropped with only 75 bookings received in 2016. In 2015 a second collection per year was considered but it was determined that due to the drop in participation rates, an additional collection was not warranted.

Current Practice

Each year bookings for the annual service open on 1 July and stay open until the end of August. Residents wishing to receive a collection must book through Council and pay a service fee. Pension card holders receive a heavily subsidised rate (\$32 in 2016) to make the service more accessible for those needing it most. Non-pension card holders pay the full cost recovery rate (\$94 in 2016). While income offsets most of the costs of providing the service, the service is not cost neutral due to the high percentage of service users who are pension card holders. In 2015/16 the net cost to Council to provide the hard waste collection service was \$3,600.

Residents who have booked and paid for a collection are able to have up to two cubic metres of hard waste collected from their property. Items not permitted to be put out for collection are advertised. These are generally not permitted due to OH&S and/or environmental risks (e.g. very heavy items, asbestos & chemicals).

The service has been tailored to minimise risks and to comply with Worksafe Victoria's guidelines for the provision of hard waste collection services. Measures

taken to minimise risks include having a booking system (allows contractor to plan and resource the collection), having waste placed within the property line of booked properties (minimises illegal dumping and scavenging) and having weight restrictions on single items (minimises the risk of muscular skeletal injuries).

The contractor is paid a rate per collection (higher rate if the property is outside of the kerbside waste collection area) but they must pay Council for any waste landfilled as a result of the service. Materials separated for recycling include scrap metal, mattresses, e-waste (TVs and computer equipment only) and items that may be re-usable (sent to the Koonwarra Transfer Station Re-Use Shop).

Picture 7: Contractor Collecting Hard Waste from a Property



Future Opportunities

The range of materials diverted from landfill through the service will be increased as markets become available to allow their recycling. This may also be driven by potential landfill bans implemented in Victoria on any electrical items.

Long term opportunities for the hard waste service may also be influenced by OH&S issues or changes to OH&S guidelines due to a focus on reducing manual handling. While South Gippsland Shire Council's hard waste collection service has been designed to minimise risks and comply with the current OH&S guidelines, changes in

legislation can and do occur which can impact on how a service is able to be delivered.

Actions related to hard waste collection services are listed in the Actions section of this document. [Click here](#).

5. Public Litter & Recycling Bin Collections

Background

South Gippsland Shire Council provides a network of 280 public litter bins (PLBs) and 86 public place recycling (PPR) bins throughout township areas and public parks and reserves across the Shire.

In 2009 Koonwarra became the first town in the Shire to have PPR bins introduced. Between then and 2016, the PPR has expanded to Tarwin Lower, Venus Bay, Korumburra, Leongatha and Mirboo North.

Both PLBs and PPR bins are collected under a combined contract.

Current Practice

Council's network of public bins is collected under contract. The initial contract term expires on 30 June 2019 with 3 x 12 month extension options available at the discretion of Council.

Bins are collected on a set schedule which varies depending on the amount of use the bin receives. Schedules also vary depending on the season (i.e. increased frequency over summer in coastal towns) and public holidays for many parts of the Shire. The schedule is set to reduce the risk of bins overflowing while reducing costs to Council incurred through collecting empty or mostly empty bins.

Litter collected through the servicing of PLBs is disposed of at the Koonwarra Landfill. Recycling collected from PPR bins is transported to the Koonwarra Transfer Station where it is combined with the mixed transfer station recycling. From there it is transported to Morwell for processing.

Recent projects involving the introduction of PPR bins through towns have provided improved litter bin infrastructure as well as diverting material from landfill. These projects have been delivered as a result of Council applying for and receiving grant funding to complement existing litter bin upgrade budgets.

All signage on PLBs and PPR bins uses the Australian Standard colours for waste bins and where infrastructure involves exposed bins on stands, the lids are also colour coded to comply with the Australian Standard.

In 2016 a mapping project was also undertaken to GPS map all bins including photos and condition reports. This information will guide future maintenance programs and the development of tender documents.

PPR bins have proven to be popular and they promote a positive image in the community. The amount of material collected has increased dramatically with the introduction of more PPR bins in more towns leading to 18.6 tonnes of recyclables being diverted from landfill in 2015/16.

Council has developed an Event Plan to assist organisers of community events which covers litter and recycling management. Council offers event organisers advice on maximising recycling rates at events.

Council also supports community event organisers through the provision of free access to the Waste Wise Event Recycling Trailer. This is a trailer containing six bins and bin caps to assist in managing waste responsibly at community events. The use of the trailer is free, but the event organiser is responsible for the cost of disposing of collected waste at the transfer stations (recycling is free).

Picture 8: PPR & Litter Bin Infrastructure in McIndoe Park Leongatha



Future Opportunities

In the future there is potential for the PLB and PPR bin collection contract to have its expiry date extended to coincide with the kerbside waste collection contract. This could allow for the two services to be tendered together which may provide cost savings for Council.

The main opportunity for service improvements to the servicing of PLB and PPR bins involves increasing the number of locations and number of PPR bins. The opportunity for this to be achieved is greatly dependant on the availability of grant funding and Council's ability to successfully apply for funds.

Another opportunity lies in improving the way people use the bins. Visual bin audits will be conducted at least annually and if it is identified that large amounts of recyclables are still being put in the litter bin where PPR bins are available, then tailored education programs can be developed and delivered (see Waste Education in section 4.9).

In the lead up to the next tender for PLB and PPR bin collection services a review on bin usage rates will be undertaken and alterations made to the collection schedule to ensure the service is as effective and efficient as possible.

Actions related to public litter and recycling bin collection services are listed in the Actions section of this document. [Click here](#).

6. Illegal Dumping & Litter Management

Background

Illegal dumping and littering has been a long term issue not just in South Gippsland Shire but all over Victoria. It occurs in many locations ranging from rural road sides to outside charities or household waste being dumped in street litter bins.

Instances of illegal dumping have increased as the cost of disposing of waste responsibly has risen. In the past, illegally dumped waste was generally collected by Council Operations staff and disposed of with limited investigation or recording of incidents.

Littering behaviour has been addressed through the installation of litter bin infrastructure, education programs and enforcement action. Past education programs have targeted general littering, cigarette butts and fishing waste. Illegal dumping data is collected but identifying changes in littering behaviour is difficult to measure due to the ad-hoc nature of the problem.

The Local Laws Team have also successfully prosecuted a number of cases of illegal dumping litter, utilising evidence collected from examination of the dumped material and/or the review of surveillance camera images sourced from dedicated litter prevention cameras.

Current Practice

Illegal dumping is reported to Council's Local Laws Department. In cases where an offender may be identified due to the nature of the dumped waste the Local Laws team investigate and where possible the offenders are prosecuted. Once dumped waste is investigated operations staff collect and dispose of the waste.

Surveillance cameras are used in areas known to have repeated illegal dumping. Evidence from these cameras has led to a number of successful prosecutions. Cases

of dumping in many hotspots where the cameras have been used has decreased due to the issuing of significant fines and publicity of prosecutions in the local media.

Council partners with organisations on selected projects regarding littering and illegal dumping. Past projects have involved the CFA, Bass Coast Shire Council, South Gippsland Water, Parks Victoria and the GWRRG. Joint projects have allowed Council to access some grant funding that would have otherwise been unavailable.

Eligible community groups and charities are provided with limited free waste disposal to help them manage waste that predominantly comes from illegal dumping at op-shops. Advice is also provided to these groups on measures they could implement to reduce the amount of dumping that they receive.

Council also supports the annual Clean Up Australia Day (CUAD) and the community groups and individuals who participate in the event. CUAD has been running nationally since 1990 with almost 300,000 tonnes of litter and dumped waste collected and disposed of responsibly. Support is provided through the collection and disposal of waste from registered collection sites and in promoting CUAD in the local media. Further information is available here www.cleanupaustraliaday.org.au

Future Opportunities

Council will actively engage with other stakeholders in future litter and illegal dumping activities where shared objectives can be achieved. The nature of littering and illegal dumping means that municipal borders and boundaries between different land managers do not alter the problem needing to be addressed.

Future anti-littering and dumping educational and enforcement programs will be targeted at specific locations and on specific materials as they are identified as priority focusses.

Council's Local Laws team, Sustainable Communities team, Depot operations staff and external stakeholders will be involved where appropriate to ensure that any program has the best coverage and effect possible with available resources.

Grant funding will be actively sought to complement Council's existing staff and budget resources to allow these programs to achieve the best possible outcomes.

Actions related to illegal dumping and litter management are listed in the Actions section of this document. [Click here](#).

7. Waste Education

Background

Historically, service specific waste management education has been provided to the community on how to obtain the most benefit from the available waste management services and how to use them appropriately. Council does not have a dedicated Waste Management Education Officer but has provided assistance to the Gippsland Waste and Resource Recovery Group and Sustainability Victoria to deliver regional and state wide waste management education programs.

Current Practice

While Council does not have a staff member dedicated to delivering waste management education programs, the Waste Management Supervisor, Environmental Projects Officer and Environment Officer all assist in delivering waste management education programs and activities.

Targeted waste education is delivered to pre-school and school aged children upon request from the education facility. Pre-school organisations are actively invited to receive free education sessions on sustainability topics including waste reduction and diversion practices. A range of partnership events are held each year to promote the waste reduction message to audiences of all ages including local community groups such as community houses, community gardens, men's sheds, town progress associations, etc. Waste reduction information is regularly delivered via media releases, social media and emails.

Council also provides support to the Resource Smart Schools program. Resource Smart Schools is a Victorian Government initiative embedding sustainability in schools across the State. Locally, the program is presently adopted by 14 schools across South Gippsland, facilitated by Council's hosting and support of a Resource Smart Schools Facilitator.

The program involves schools completing four resource modules – Water, Waste, Energy and Biodiversity – plus an overarching ‘core’ module laying down the foundations and strategic direction of a school’s sustainability journey.

In the Waste module, schools are encouraged to complete a range of actions across the school’s operation, from developing waste reduction policies and including waste in the curriculum, to implementing litter-reduction infrastructure and practices in the school yard and reaching out to the wider community. The program has been extended by the State Government until at least 2020.

Future Opportunities

Existing education programs available to pre-schools, schools and community groups will continue to be provided.

The Resource Smart Schools program has just been extended until at least 2020. It is proposed that support for this program should be continued which provides a valuable education program through 14 schools across the Shire.

A major influence on waste management education in the future will be if a FOGO collection is introduced as discussed in the Kerbside Green Waste Collection section. Council’s that have successfully introduced the service have invested heavily in education about the service to achieve the behavioural change necessary to make the service run optimally. This education has in most cases involved education materials being developed and delivered to householders, door-to-door education in selected areas and rigorous bin policing. In all cases a staff member or consultant was wholly dedicated to education surrounding the organics collection for the planning, rollout and early operational phases of the service. Additional resources were also called on when required. This was for a service moving to a weekly FOGO collection, recycling fortnightly and the residual garbage bin collection changing to fortnightly.

8. Other Service Opportunities

Alternative Waste Treatment Technology

Reducing or eliminating the need for landfill is a high priority for Council. While total elimination is not possible with current technologies there are technologies available that can potentially significantly reduce Council's reliance on landfill.

While common overseas, alternative waste treatment facilities are still very rare in Australia due to the availability of relatively cheap landfill airspace, high capital and operating costs and the high volumes of waste that many waste technologies require to make them viable.

In recent years, anecdotal evidence indicated that some waste treatment technologies had become more financially attractive as landfill costs increased and in some cases the amount of waste required as feed stock to make projects viable has reduced.

In 2015 the six Gippsland councils in conjunction with Rural Development Victoria, Sustainability Victoria and Local Government Victoria released an Expression of Interest to industry aimed at identifying potential investors and waste treatment technologies that may be able to be implemented in Gippsland utilising the greater volume of waste available through multiple council's combining.

The project was not prescriptive and allowed industry to submit proposals targeting all or part of the waste stream the councils control and could cover the whole region or localised areas.

Fifteen submissions complying with the EOI proposing a variety of waste treatment technologies were received. These will now be further considered and if viable may be implemented.

Facility Upgrades

Future service levels could potentially be improved through facility upgrades or the establishment of new facilities.

The State Government's SWRRIP discusses pre-sorting of all waste before it is sent to landfill. In South Gippsland Shire this could only be achieved through significant upgrades at the Koonwarra Landfill or a new facility nearby designed to allow the sorting of the varied waste that is sent for disposal.

Another potential for site upgrades to improve service levels and potentially save costs is the establishment of a facility that allows for waste loads to be consolidated prior to transport to processing facilities. One of the biggest hurdles facing the introduction of services such as FOGO collections is the lack of local processing facilities and the cost of transport.

A load consolidation facility would allow for the multiple small loads to be dropped off at a local facility before being transported to a processing facility in fewer larger loads, saving in transport costs. The feasibility of such a facility would be considered when investigating the feasibility of a new service such as FOGO collections or transporting waste to an alternative waste technology treatment facility.

Collaborative Service Provision

The 2011 Waste Management Strategy contained an action to investigate the feasibility of co-contracting waste services with neighbouring councils.

When preparing the last round of waste management contracts the length of contract term was considered and set to allow the alignment of contract expiry dates both within Council and with our neighbouring councils. Geographically it has been generally believed that co-contracting would be most likely with Bass Coast Shire. However, in the preparation of their new contracts Bass Coast Shire's existing contracts have been extended by 18 months making alignment impossible to achieve at the time South Gippsland's waste contracts are next due for renewal.

This does not mean that other services and programs can't be potentially co-contracted if doing so will provide either service improvements or cost savings. Large projects such as a future alternative waste treatment facility would likely involve co-contracting with a number of other councils to provide the amount of waste necessary to make such a facility viable.

Another option identified in Bass Coast Shire Council's Waste Management Strategy released in 2016 is for the sharing of facilities. Their strategy proposed mothballing either the Koonwarra Landfill or the Grantville Landfill and both councils using the other one until it reaches capacity, then re-opening the other landfill and filling that.

For such a proposal to be worth considering there would have to be a significant advantage for both councils for it to be worth pursuing as the overall lifespan of the two landfills would likely not change but transport costs for one council and then the other would increase.

Plastic Bag Free South Gippsland Shire Council

Single use plastic bags create major environmental problems around the world. Through unsightly litter, to being ingested by sea animals, plastic bags are a major source of pollution in our environment. Plastic takes hundreds of years to fully break down in the environment.

A number of communities around Australia and internationally have banned single use plastic bags from use. In the past, large supermarket chains have posed a problem with large scale bans. To implement such a program Council would need to work closely with all traders to ensure they had access to suitable alternatives.

ACTIONS

No.	1. Kerbside Collection Services	Timeframe
1.1	Investigate the viability of modifying the kerbside green waste collection to include food waste (FOGO) for residential properties.	2016/17
1.2	Prepare new kerbside collection contracts which meet best practice and provide the best outcome for Council, the community and the environment.	2018/19
1.3	If a FOGO collection is introduced, optimise bin collection system to meet best practice (e.g. weekly organics, fortnightly residual garbage & fortnightly recycling).	2019/20
1.4	If a FOGO collection is successfully introduced to residential properties, investigate and consider the viability of providing a FOGO collection service to commercial properties.	2021/22
1.5	Conduct annual audits of kerbside garbage, recycling and green waste bins.	Ongoing
No.	2. Transfer Stations	Timeframe
2.1	Review transfer station service provision to identify opportunities for improvement and to determine if the existing contract should be extended, re-tendered or the service brought in-house.	2016/17
2.2	Investigate the viability for a social enterprise to operate the Koonwarra Re-Use Shop after the current transfer station operation contract concludes.	2017/18
2.3	Increase materials diverted from landfill as markets become available including but not limited to any materials banned from landfill.	Ongoing
2.4	Lobby State Government for the Koonwarra Transfer Station to be included in the "Detox Your Home" household chemical collection service.	Ongoing
2.5	Where appropriate upgrade transfer station infrastructure to move towards compliance with Sustainability Victoria's best practice guidelines for resource recovery centres as budget and grant funding allows.	Ongoing
No.	3. Landfills	Timeframe
3.1	Work with the EPA and environmental consultants to clearly understand the environmental management and monitoring requirements at the Foster Landfill with the view to implementing management options that are both practical and cost effective.	2016/17
3.2	Seek EPA works approval for Stage 2 of the Koonwarra Landfill.	2017/18
3.3	Work with the EPA to assess the potential to reduce environmental monitoring requirements at the former Koonwarra Landfill.	2020/21
3.4	Construct new landfill cells, rehabilitate filled cells and operate the Koonwarra Landfill in accordance with the Koonwarra Landfill Master Plan, EPA waste discharge licence (24873) and Best Practice Environmental Management guidelines (BPEM).	Ongoing
No.	4. Hard Waste Collection Service	Timeframe
4.1	Increase the range of materials diverted from landfill through the hard waste collection service as recycling markets for new materials become available.	Ongoing

No.	5. Public Litter and Public Place Recycling Bin Services	Timeframe
5.1	Prepare new PLB and PPR bin collection contracts which meet best practice and provide the best outcome for Council, the community and the environment.	2017/18
5.2	Undertake audits of public bins to review usage rates with a view to optimising bin locations and collection schedules prior to re-tendering the service.	Ongoing
5.3	Seek grant funding to upgrade bin infrastructure and continue to roll out PPR infrastructure to township areas and high visitation locations as budget and grant opportunities allow.	Ongoing
No.	6. Illegal Dumping & Litter Management	Timeframe
6.1	Where grant funded projects require, measure, record and report littering within the Shire in accordance with Victorian Litter Action Alliance guidelines.	Ongoing
6.2	Engage with external stakeholders including land managers to deliver litter reduction programs including components of education and enforcement.	Ongoing
6.3	Identify opportunities and apply for funding to support projects aimed at reducing litter and illegal dumping and improving litter management and enforcement activities.	Ongoing
6.4	Continue to actively investigate cases of littering and illegal dumping and wherever possible prosecute offenders.	Ongoing
6.5	Continue to support annual Clean Up Australia Day events by assisting with the disposal of collected litter.	Ongoing
No.	7. Waste Education	Timeframe
7.1	If a kerbside FOGO collection service is introduced, adequately resource necessary education programs to achieve the necessary behaviour change in the community.	2019/20
7.2	Continue to support the Resource Smart Schools education program.	Ongoing
7.3	Continue to deliver waste education programs to the community aiming to reduce waste generation, increase diversion of waste from landfill and maximise the recovery of resources for reuse or recycling.	Ongoing
No.	8. Other Service Opportunities	Timeframe
8.1	Investigate the viability of making South Gippsland Shire Council a plastic bag free community.	2017/18
8.2	Continue to participate in the GWRRG's Collaborative Waste Investment Project with the ultimate aim of identifying and establishing alternative waste treatment facilities to reduce Council's reliance on landfill.	2020/21
8.3	Investigate the viability of future transfer station upgrades to enable safe and effective pre-sorting of waste to separate recyclable material prior to landfill to increase material diversion.	2020/21
8.4	Investigate the viability of future transfer station upgrades to allow the consolidation of waste loads. This is aimed at making distant treatment facilities more viable through reducing transport costs.	2020/21
8.5	Continue to work collaboratively with other councils in the region to improve service efficiency and identify the potential for shared services.	Ongoing
8.6	Consider forming an agreement with other GLGN councils to investigate and consider the viability of shared procurement of waste management services.	2017/18

APPENDICES

Appendix 1 - 2011 Waste Management Strategy Actions and Status

Appendix 2 – Comparison of Waste Services at Gippsland Shires

Appendix 3 – South Gippsland Shire Waste Data

Appendix 4 – Glossary

Appendix 5 – Map of South Gippsland Shire Waste Disposal Facilities

Appendix 6 - References

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Appendix 1 – 2011 Waste Management Strategy Actions and Status

	Action	Description	Status
1	Review of the WMS Action Plan	Action Plan to be reviewed on an annual basis providing a brief report to Council.	The Action Plan has been annually reviewed to ensure implementation of the strategy.
2	Waste audits	Co-ordinate with the GRWGM to undertake waste audits of the kerbside collection bins, Public Litter Bins and transfer station bins to aid in understanding of how residents of South Gippsland are utilising the waste infrastructure provided.	Complete Waste audits have been undertaken and the data has been utilised to guide improvements to service provision.
3	Extension of current kerbside collection area.	Review the extension of the current kerbside collection service to Venus Bay and Walkerville. This will include survey of the households in the area to ascertain the level of support for the introduction of a service.	Complete Venus Bay – A compulsory 6 month collection service is in place with an optional 12 month service available. Walkerville – An optional 6 or 12 month collection service is available.
4	Kerbside rural collection trial	Investigate the introduction of a trial of the kerbside rural collection service described in section 6.1.2.	Complete Services are available on request where roads intersect with existing collection routes and where collections can be safely provided.

	Action	Description	Status
5	Roll out of Kerbside rural collection	Consider the roll out of a kerbside rural collection service to all areas of the Shire that indicate they want the service through a survey of residents. Note this collection service will not be offered to areas receiving a kerbside collection service currently.	Kerbside collections are not viable or safe to deliver to many rural parts of the municipality. Rural services are available on main interconnecting roads that the contractor uses to travel between serviced towns, at locations where it is safe for collection vehicles to stop.
6	Provision of a voluntary 80 L garbage bin to residents	Consider a clause in the next kerbside collection contract to allow for the provision of an 80 L garbage bin to residents that desire the service.	Benchmarking and consideration was undertaken prior to preparing the new kerbside collection contracts in 2012. It was determined that it was unlikely that the implementation of 80L bins to the kerbside collection service would provide any reduction in waste to landfill or any other benefit.
7	Provision of a voluntary 80 L garbage bin to residents	Consider the potential benefits of offering an 80 L garbage bin to residents in return for a reduction in their waste service charge.	See Action 6
8	Review the standard garbage bin size to 80 L and provide an option for a 120 L bin	Consider the provision of a compulsory 80 L garbage bin if review of the voluntary 80 L garbage bin system indicates viability and benefit. This will need to coincide with the implementation of a new kerbside garbage collection contract.	See Action 6

	Action	Description	Status
9	Target to reduce resource loss	Council will review the adoption of a target for reducing the loss of recyclables to the garbage bin to 5% by 2015. In 2015 Council will review achievement of this goal and identify a new target.	Target was not adopted. Audits of kerbside garbage bins have shown that the percentage of recyclable material in kerbside garbage bins has reduced from 15.4% to 13.1%. Ongoing education programs are likely to reduce this further towards the suggested target of 5%.
10	Enter into discussion with neighbouring councils regarding co-contracting of waste services.	Council to open discussions with neighbouring councils to ascertain the level of willingness to enter into co-contracting for waste services such as kerbside collection, transfer station operation and future waste treatment options (including Advanced Waste Treatment and organic waste treatment plants)	<p>Discussion was held with Bass Coast Shire Council on alignment of contract dates. When tendered, Council's contracts were able to align with neighbouring councils renewal dates. Bass Coast have since extended their contracts for 18 months making alignment not possible for the current contracts.</p> <p>Action retained in the new WMS (see action number 8.5). Will work with Baw Baw Shire and Latrobe City to identify potential opportunities and advantages to co-contracting with them and with the wider region on AWT options.</p>
11	Align end dates of waste contracts with neighbouring council.	Only to be considered if discussion with one or more neighbouring councils provides clear indication that co-contracting is a viable option in the future. Council will seek a Memorandum of Understanding with the neighbouring council to provide assurance of future intentions.	SGSC contracts were tendered to allow potential alignment of contract dates. Bass Coast Shire has since extended their contracts by 18 months making this not possible at our next contract expiry date.

	Action	Description	Status
12	Roll out a kerbside green waste collection service in Leongatha and Korumburra	Investigate the potential to roll out a voluntary or compulsory green waste collection service in Leongatha and Korumburra. Once the decision is made Council to go to tender for a green waste collection service to these townships.	Complete Compulsory green waste collection rolled out across the Shire in areas where kerbside garbage and recycling is compulsory in July 2015. Exemptions area available for flats/units, properties over 1 hectare in area and properties where a 12 month kerbside garbage and recycling collection is not compulsory (e.g. rural)
13	Expansion of kerbside green waste collection	Review of the kerbside green waste collection service provided to Leongatha and Korumburra to occur one year after service commencement. If it is found that kerbside green waste collection is a successful service then Council will review expansion of the service to areas that want a kerbside green waste collection.	Complete Refer to above Action
14	Investigate co-collection of Kitchen organics and Green waste.	If a kerbside green waste collection service has been rolled out successfully across the Shire, Council will investigate the co-collection of kitchen organics in the kerbside green waste bin.	This action has been retained in the new WMS (see Action 1.1)

	Action	Description	Status
15	Investigate commercial food waste collection	If kitchen organics collection and treatment is successful then a review will be undertaken of the potential to provide a kerbside organic collection system to large organic waste generators in South Gippsland including but not limited to restaurants, cafes, super markets etc.	This action has been retained in the new WMS (see Action 1.4).
16	Support for home composting	Review the provision of a subsidised home composting bin to residents willing to undertake a quick and easily accessible training session, potentially online.	A kerbside green waste collection service was introduced instead. Home composting offers Council no control on the composting being performed correctly or at all. Kerbside green waste collection offers better environmental outcomes.
17	Organic waste treatment facility support	Support the Gippsland Regional Waste Management Group in its efforts to identify a method for the collection and treatment of organic waste in the Gippsland Region.	Ongoing Potential treatment facility options have been identified through the GWRRG's Collaborative Waste Investment Project. Action to be retained (see Action 8.2 in new strategy).
18	Organic waste treatment facility support	Encourage discussion with neighbouring councils on the potential for co-contracting an organic waste treatment facility locally.	Refer to Action above.

	Action	Description	Status
19	Hard waste collection landfill diversion	Ensure new contractor for the booked collection of hard waste separates recyclable and reusable items from the waste collected.	Complete Hard waste collection has operated since 2012. Collection separates recyclables with quantities reported to Council. Refer to data table in Appendix 3.
20	e-waste collection	Ensure that e-waste is collected separately by the hard waste collection contractor and at transfer stations. Identify methods for the recycling or disposal of e-waste. Implement an e-waste charge at Transfer Stations to cover the cost of treatment/disposal.	Complete All e-waste has been separated for recycling since 2011. Fees are charged for e-waste.
21	Review of transfer stations signage	Review signage at transfer stations to ensure colour coded for different materials and uniformity across the transfer stations. Action to be undertaken by the current transfer station contractor.	Complete The transfer station contract requires the contractor to install uniform signage at all sites.

	Action	Description	Status
22	Construction of re-use shops	Investigate the business case for a 'Re-use Shop' at a minimum of one, but preferably two, transfer stations in the Shire. All transfer stations to identify re-usable objects to be sold at the 'Re-use Shop'.	<p>Complete</p> <p>A re-use shop was opened at the Koonwarra Transfer Station in August 2015. Delivered and operated through a collaborative partnership with Council's transfer station contractor and Sustainability Victoria who contributed \$24,000 to the project. Council and the transfer station contractor operate the facility on a profit share arrangement.</p>
23	Construction of re-use shops	If the business case for the 'Re-use Shop' indicates that it is viable then, subject to available funding support, Council will construct the facilities identified in the business case. Council will encourage local social enterprises to undertake operation of the 'Re-use Shop'.	<p>Complete</p> <p>Re-use shop established at the Koonwarra Transfer Station. Material from other sites is brought there. Operation of the shop is included in the transfer station contract.</p>

	Action	Description	Status
24	Mattress collection and recycling	Continue to separate all mattresses from other wastes at transfer stations for recycling at transfer stations.	Complete Mattresses are separated and broken down for recycling at all transfer stations. Steel and timber are recycled through the process.
25	Transfer station mattress gate fee	Implement a specific gate fee for the acceptance of mattresses.	Complete Mattress disposal fee introduced in 2011.
26	Provision of a transfer station green waste charge	Consider a gate fee for the acceptance of green waste at transfer stations. The fee could be waived during an amnesty period prior to the fire season each year. Commercial loads could be charged all year round.	Complete A disposal fee for green waste was introduced from July 2013 with an annual amnesty period in place from November to December.
27	Review of current landfill contract	Review the wording of the current landfill contract. Negotiation to be held with the current contractor to introduce a system that rewards the contractor for diverting waste from landfill. If this is not possible then Council will ensure that future contract contain such provisions.	Council has since brought the operation of the Koonwarra Landfill in-house which enables more control over landfill management.

	Action	Description	Status
28	Review of current transfer station contract	Review the wording of the current transfer station contract. Negotiation to be held with the current contractor to introduce a system that rewards the contractor for diverting waste from landfill. If this is not possible then Council will ensure that future contract contain such provisions.	Complete Transfer station contract tendered in December 2011 put incentives in place to divert material from landfill. The main incentive to reduce waste to landfill is that the contractor must pay for their waste disposal to landfill. Significant reductions have been achieved.
29	Construction of a Commercial Resource Recovery Centre	Identify a viable site for a commercial resource recovery centre. A business case will be developed to ensure that such a facility is a cost effective mechanism for achieving landfill diversion. Should the business case indicate the facility is viable then Council will look at obtaining funding support for its construction from State or Federal Government.	This type of facility is not currently viable for a single Council to establish. If such a facility was established by the private sector or a regional facility was established Council could potentially send its waste to such a facility prior to landfilling.

	Action	Description	Status
30	Council planning process review	Council planning department to review current requirements for ensuring that new building applications allow adequate space for waste infrastructure in building applications.	Ongoing New building and sub-division applications are referred to the Development Engineer (Engineering & Assets Department) who considers waste management infrastructure and access as part of the approval process for applications.
31	Council planning – waste management plan requirement	Council planning department to review a requirement for planning applicants to submit a waste management plan with building applications.	Waste Management Plans are not required by Council's Planning Department. However, applications for high density developments are required to identify bin storage area, etc.
32	Monitoring of littering and illegal dumping	Measure, record and report littering within the Shire in accordance with Victorian Litter Action Alliance guidelines.	Ongoing Litter counts and audits are performed where required by grant funded projects according to the methodology in the VLAA Local Litter Measurement Toolkit.

	Action	Description	Status
33	Enforcement of littering and illegal dumping hot spots.	If the proposed expansion of the kerbside waste collection service not curtail littering and illegal dumping then Council will investigate the need for CCTV and mobile cameras to be used at littering and illegal dumping 'hot spots'.	Ongoing Surveillance cameras are used to identify litterers. Local Laws team prosecute offenders where evidence is able to be obtained.
34	Littering and illegal dumping funding support.	Identify State Government funding opportunities for the support of projects and resources aimed at improving litter management and enforcement.	Ongoing Grant funded projects have enabled the upgrading of litter bin infrastructure and anti-littering signage in a number of towns across the Shire. A list of grant funded projects is in Table 3 of the 2016 WMS.
35	Waste audits of public litter bins.	Undertake waste audits of Public Litter Bins (PLB) to ascertain potential volumes of recyclables.	Ongoing Audits have been carried out. Audits identified a need for PPR services. PPR has been rolled out as grant funding has become available.

	Action	Description	Status
36	Potential diversion of public litter to a MRF.	Undertake discussions with Material Recovery Facilities (MRF) to ascertain the potential for the diversion of Public Litter Bins (PLB) waste to the MRF rather than the landfill.	Separate PPR bins have been implemented instead. No local MRFs are able to accept litter bin waste for sorting/recycling.
37	Identification of structure for the implementation of public place recycling	Evaluate Public Place Recycling (PPR) either through diversion of Public Litter Bins (PLB) to a MRF or through the provision of separate PPR bins next to PLBs in areas of high footfall and use. If Council opts for the implementation of PPR then the strategy will identify a timeline for the roll out of the PPR infrastructure required.	Ongoing PPR projects have been completed in Venus Bay, Tarwin Lower, Koonwarra, Korumburra Mirboo North, Mossvale Park and Leongatha. Future timelines are dependent on available grant funding.
38	Improve waste management education	Identify successful waste education systems used and ensure waste management education to the community aimed at promoting waste minimisation, recycling, recovery and protection of the environment.	Ongoing Council education programs include waste booklets, calendars, website, Resource Smart Schools program, pre-school and community group education sessions and educational elements incorporated in infrastructure projects.

	Action	Description	Status
39	Identify successful enforcement activities	Continue to prosecute littering and dumping offences in accordance with the Environmental Protection Act and Local laws. Maintain a list of successful enforcement for annual review.	Ongoing Local Laws retain records of all prosecutions related to littering and illegal dumping.
40	Support community action	Support community groups and action to divert waste from landfill.	Ongoing Community groups are supported through the availability of the Waste Wise Event Recycling Trailer which encourages community event organisers to manage event waste responsibly. Limited free waste disposal is available to some charities to dispose of dumped materials from op-shop operations.
41	Provide a community award	Review the potential for a South Gippsland Community Waste Award.	This action has not been implemented. No fair method of awarding the prize has been identified and it offers very little benefit to Council or the community.

Appendix 2 - Comparison of Waste Services at Gippsland Shires (2016)

	South Gippsland Shire Council	Bass Coast Shire Council	Baw Baw Shire Council	Latrobe City	Wellington Shire Council	East Gippsland Shire Council
Kerbside Garbage Collection*	Weekly 120 litre MGB	Weekly 120 litre MGB	Weekly 120 litre MGB	Weekly 120 litre MGB	Weekly 120 litre MGB	Weekly 120 litre MGB
Kerbside Recycling Collection	Fortnightly 240 litre MRB	Fortnightly 240 litre MRB	Fortnightly 240 litre MRB	Fortnightly 240 litre MRB	Fortnightly 240 litre MRB	Fortnightly 240 litre MRB
Kerbside Green Waste Collection*	Fortnightly 240 litre MOB	No Service	Fortnightly 240 litre MOB	Fortnightly 240 litre MOB	No Service	Bairnsdale & Lakes Entrance only
Transfer Stations*	6	3	4	4	7	12 Transfer Stations 13 Transfer Trailers
Detox Your Home Facility	No	Yes - Wonthaggi	No	Yes - Morwell	No	Yes - Bairnsdale
Active Landfills	1	1	0	1	3	3
Hard Waste Collection	Annual – Booking required – User Pays	Annual – Booking required – User Pays	Twice per year – Booking Required – User Pays (Also provide one voucher per property)	Twice per year – Booking Required – User Pays (Plus one weekend of free hard waste disposal at transfer stations)	Annual – No booking required – No fee	No service

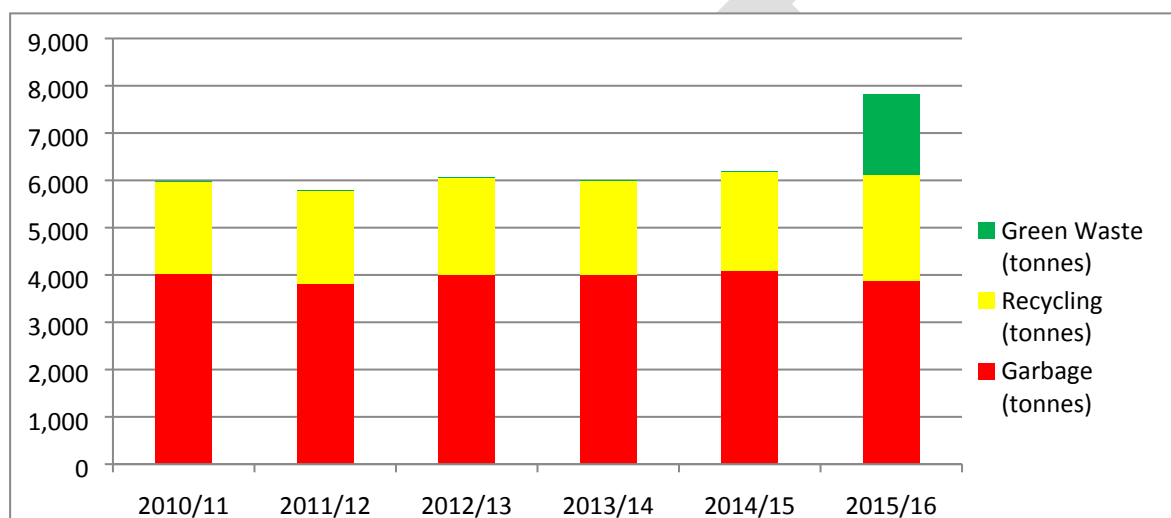
* Bass Coast Shire Council will change to a weekly FOGO collection (240L MOB), fortnightly kerbside garbage collection (120L MGB) and will close the Inverloch Transfer Station from September 2017.

Appendix 3 – South Gippsland Shire Waste Data

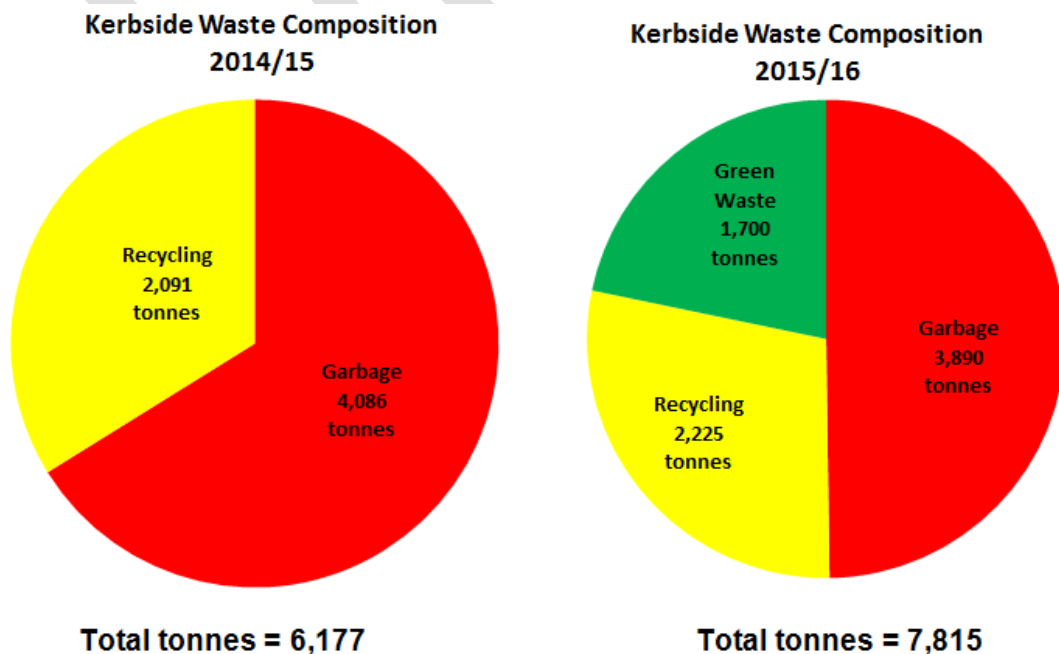
Kerbside Waste Collection Data Table

	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16
Garbage (tonnes)	4,031	3,822	4,002	4,000	4,086	3,890
Recycling (tonnes)	1,955	1,969	2,051	2,000	2,091	2,225
Green Waste (tonnes)						1,700

Kerbside Waste Collection Data Graph



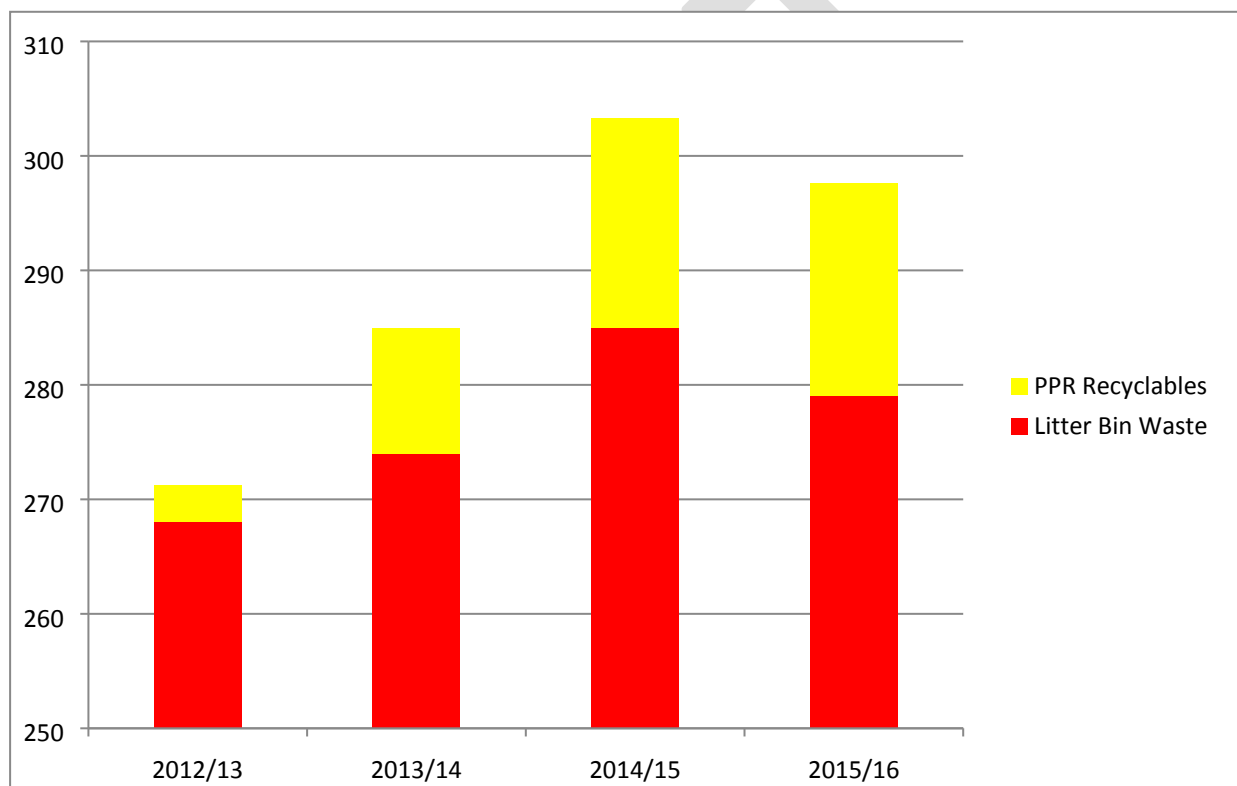
Waste Diversion Rate Before and After the Introduction of Kerbside Green Waste Collection Services (Green Waste Service Introduced July 2015)



Public Litter Bins and Public Place Recycling Bins Tonnages Table

	2012/13	2013/14	2014/15	2015/16
Litter Bin Waste	268	274	285	279
PPR Recyclables	3.2	11.0	18.3	18.6

Public Litter Bins and Public Place Recycling Bins Tonnages Table



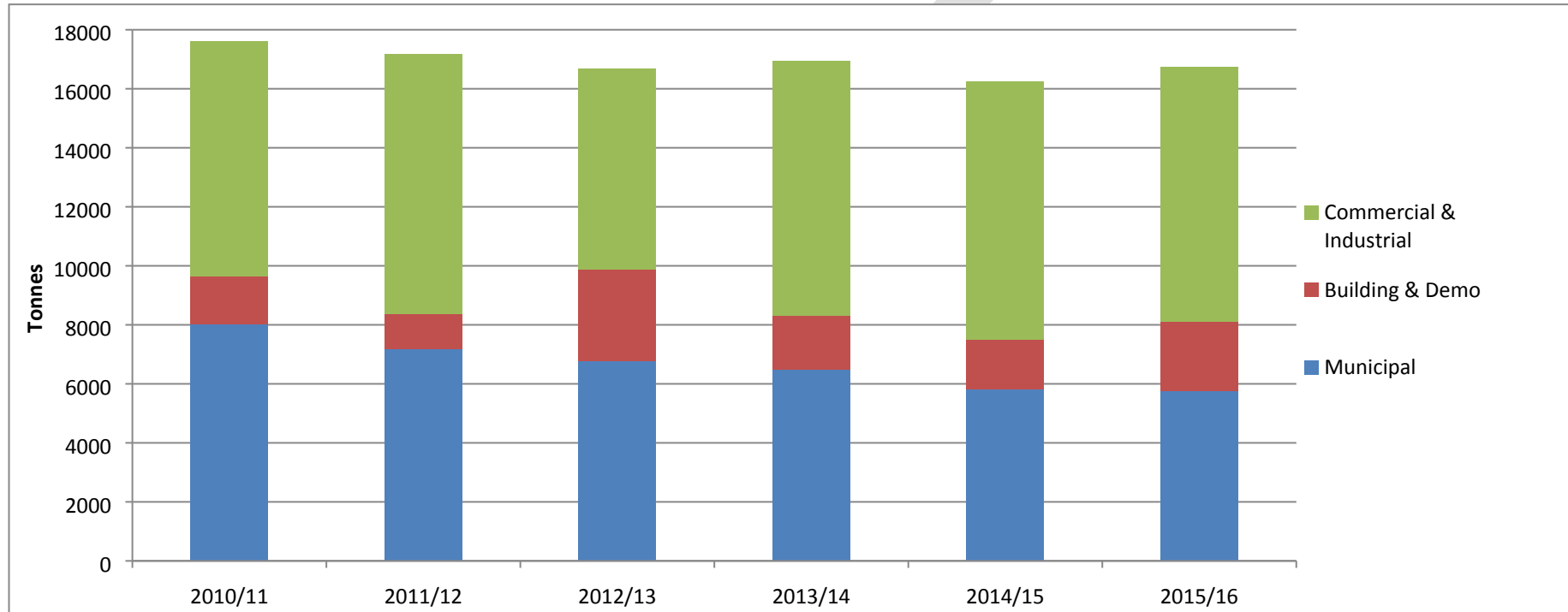
Transfer Station Quantities

	2010/11	2011/12*	2012/13	2013/14	2014/15	2015/16
Waste to Landfill (tonnes)	3,331	2,806	2,431	2,057	1,835	1,775
Green Waste (cubic metres)	30,971	28,461	38,038	21,870	21,187	16,211
Scrap Metal(tonnes)	873		1,162	895	1,029	1,235
Paper & Cardboard (tonnes)	404		341	349	375	312
Co-Mingled Recycling (tonnes)*	145		272	339	351	334
e-waste (tonnes)			58	66	37	20
Used Motor Oil (litres)	12,300		10,345	7,014	16,466	22,002
Silage Wrap Plastic (tonnes)				28	29	30
Batteries (each)	1152		673	751	858	714
Car/Truck Tyres (each)	469		273	325	297	458
Mattresses (each)			1,280	1216	1,144	1,153
Gas Bottles (each)			112	153	151	127

* Co-mingled recycling includes glass, rigid plastic, aluminium/steel cans, some paper & cardboard.

* ■■■11/12 Data is incomplete due to contractual issue.

Koonwarra Landfill Tonnages and Waste Composition Graph



Koonwarra Landfill Tonnages and Waste Composition Data Table

	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16
Municipal	8026	7182	6767	6477	5827	5755
Building & Demo	1624	1184	3105	1841	1683	2372
Commercial & Industrial	7953	8798	6815	8632	8733	8615
Total	17603	17164	16687	16950	16243	16742

Hard Waste Collection Data

Year	No. of Services	Items by Quantity							Items By Weight (tonnes)				Net Cost
		Mattress		Flat Panel TV		CRT TV		General	Steel	Landfill	Mattress	e-waste	
		Single	Double	Small	Large	Small	Large	Laptop, PC's etc.					
2012	94	27	10	0	0	111	31	75	7.88	6.8	1.1	4.1	\$6,192
2013	127	24	18	0	0	95	47	90	7.0	8.4	1.3	4.7	\$6,291
2014	108	24	6	1	0	56	22	39	8.3	7.0	0.9	2.0	\$5,770
2015	86	19	8	19	27	1	0	2	6.0	6.9	0.8	0.6	\$3,596
2016	77	7	17	6	18	4	4	0	6.2	6.9	1.1	0.5	\$4,509

Appendix 4 - Glossary

Abbreviation/Term	Definition
APC	Australian Packaging Covenant
AWT	Alternative Waste Technology
BPEM	Best Practice Environmental Management for Landfills (EPA document)
Building & Demo	Waste from building and demolition activities
CDL	Container Deposit Legislation – Scheme where payment is provided for the return of empty recyclable containers
Commercial & Industrial	Waste from commercial and industrial activities
Co-Mingled Recycling	Mixed domestic recycling including glass packaging, rigid plastic packaging, steel cans, aluminium cans, foil and aerosols, and paper and cardboard.
CUAD	Clean Up Australia Day
Detox Your Home	Sustainability Victoria program offering free disposal for household chemicals
DrumMuster	National product stewardship program to recover empty farm chemical drums
EPA	Environment Protection Authority Victoria
FOGO	Food Organics & Green Organics – A full organics collection service
GWRRG	Gippsland Waste & Resource Recovery Group
KABV	Keep Australia Beautiful Victoria
MobileMuster	Mobile phone recycling program
Municipal	Waste from municipal activities (e.g. kerbside garbage collection)
MGB	Mobile Garbage Bin
MOB	Mobile Organics Bin
MRB	Mobile Recycling Bin
MRF	Materials Recovery Facility
Plasback	Product stewardship program for recycling used silage wrap
PIW	Prescribed Industrial Waste
PLB	Public Litter Bin
PPR	Public Place Recycling
SWRRIP	State-wide Waste and Resource Recovery Infrastructure Plan
SV	Sustainability Victoria
WMS	Waste Management Strategy

Appendix 5 – Map of Shire & Waste Disposal Facilities



Appendix 5 – References

1. National Waste Policy – <https://www.environment.gov.au/protection/national-waste-policy>
2. Environment Protection Act <http://www.legislation.vic.gov.au>
3. Our Environment, Our Future - <http://www.danielandrews.com.au>
4. State-Wide Waste and Resource Recovery Infrastructure Plan - <http://www.sustainability.vic.gov.au>
5. Sustainability Victoria Business Plan - <http://www.sustainability.vic.gov.au>
6. Gippsland Waste and Resource Recovery Implementation Plan - <http://www.gwrrg.vic.gov.au/>
7. South Gippsland Shire Council Plan - <http://southgippsland.vic.gov.au/>
8. South Gippsland Shire Council Sustainability Strategy - <http://southgippsland.vic.gov.au/>
9. South Gippsland Shire Council Long Term Financial Plan