

reThink Waste!
reduce · reuse · recycle



Waste Reduction and Recycling Business Plan

2011–2015

Priorities and direction for the Waste Avoidance and Resource Efficiency Fund



Prepared by:
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Foreword

This Waste Reduction and Recycling business plan describes a four-year, \$159 million program of research, infrastructure development, business engagement and capacity building that will help us reach our target of halving waste to landfill by 2020.

Rethinking waste is crucial to sustainability. It means changing the way our community sees waste and the resources within it.

It means shifting the focus to avoiding, reducing, re-using and recycling waste rather than simply collecting it and burying it in landfill.

As part of its wide-ranging waste reforms, the Queensland Government will use funds from the Industry Waste Levy to boost business waste avoidance programs, local government landfill upgrades and help develop new industries and markets for recycled materials.

No other state government has opted to reinvest its levy funds to make such major improvements in waste management, and we will take this opportunity to take Queensland from being the worst recycler in Australia to being the best.

We will do this if we help business take on waste avoidance as a business development process, and help councils upgrade their landfills to better measure, separate and reprocess valuable resources otherwise destined to be buried.

And if we invest in research and development to find new uses for recovered materials.

And also if we avoid creating waste in the first place and choose recycling as the first option over landfill, so that more unwanted materials are given a new life by someone else—and help someone into a job.

This plan will also help us strengthen regulation and compliance to deal with littering and illegal dumping, and improve our waste tracking systems.

The result of more than a year's work, with invaluable contributions from our local government, business and community stakeholders, this plan shows that Queensland is in a strong position to pursue its vision of a low-waste state over the next decade.

A handwritten signature in black ink that reads "Vicky Darling".

Vicky Darling MP

Minister for Environment

Setting the scene

The Queensland Government's Waste Reduction and Recycling Strategy 2010–2020 was released in December 2010 to steer waste reduction and resource recovery through the next decade.

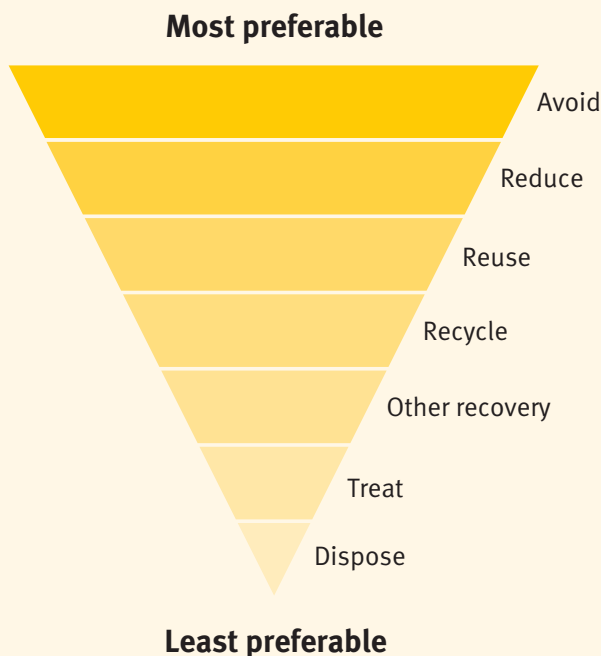
Its three goals—reducing waste, optimising the use of resources, and developing jobs in resource recovery and recycling—flow down through all the Department of Environment and Resource Management's activities, and are the principles of this business plan.

The strategy, supported by this business plan, aims to meet waste reduction targets in five ways:

- setting clear targets and priorities
- setting a price signal—the waste disposal levy
- enforcing stronger regulation
- creating new support programs and investment strategies
- partnering for change.

This plan gives life to the strategy, and progressively shifts the emphasis from recovery and recycling toward a statewide culture that embraces waste reduction.

The programs within this plan support the strategy's vision for a low-waste Queensland.



Waste management reform in Queensland faces many challenges, including a growing population, increasing scarcity of suitable landfill sites, a carbon-constrained environment and long transport distances.

This vision will only be achieved if the whole Queensland community—individuals, families, businesses and governments—understands, and commits to much-needed changes.

Why change anything?

Queenslanders have been disposing of waste to landfill for many years, and the way the state has developed over the last 50 years has hastened the problem.

Queenslanders are one of the highest per capita generators of waste in Australia—on average, each person currently generates around 2.4 tonnes of waste every year. Each year the amount of waste generated in Queensland increases and at a faster rate than our population is growing.

Disturbingly, Queenslanders only recycle about one third of recoverable waste.

What has worked in the past no longer works today. Burying what is thought of as rubbish actually buries resources used to create the myriad things we buy, consume and discard.

While the item is of no further use, its intrinsic resources have not ceased being valuable.

The rising cost of raw materials is changing the economics in favour of diverting materials from landfill into resource recovery, with landfills being consumed faster than new space can be found.

The Queensland Government is committed to a sustainable Queensland. This means a low-waste Queensland where less waste is generated, resources are used and recovered more efficiently, and disposal is seen as a last, not a first, option.

The Waste Reduction and Recycling Act 2011 (WRR Act) will empower and support the strategy and this plan. Under the WRR Act, the Queensland Government must outline major projects, goals and priorities for implementing the State's waste management strategy in the form of a business plan.

This business plan will also help deliver the Queensland Government's 2020 vision—Toward Q2: Tomorrow's Queensland, the Sustainable Procurement Policy, the Queensland Department of Public Works' Recycling Policy for Buildings and Civil Infrastructure, the Queensland Cleantech Development Strategy, and other relevant objectives.

The plan also recognises obligations under national and international initiatives that address waste management and waste reform, including:

- National Waste Policy: Less Waste, More Resources, which sets a national agenda on waste through to 2020
- Australian Packaging Covenant
- Basel Convention's Control of Transboundary Movements of Hazardous Wastes and their Disposal.

What can this plan do?

Opportunities exist everywhere to change the way resources are used. This involves reform at all levels of government, and in industry and individual households.

This business plan highlights areas and actions from the strategy and translates them into programs and projects that can change the way Queenslanders think and act in resource management and waste disposal—maximising waste reduction and promoting recycling and ecological sustainability.

Local government sector opportunities and projects will be addressed by local government through the Sustainable Futures Fund (SFF).

How will this plan be funded?

An Industry Waste Levy applied to landfill waste, in force from 1 December 2011, will establish the Waste and Environment Fund. The fund will receive levy monies to finance projects and programs. From this fund, an allocation of \$159 million, known as the Waste Avoidance and Resource Efficiency (WARE) Fund, will be used to implement this plan from 1 December 2011 to 30 June 2015. The Waste and Environment Fund also provides \$100 million for the SFF, administered by the Local Government Association of Queensland. Projects and programs funded from the SFF will complement the WARE fund to achieve the goals of the strategy.

Funding priorities and amounts detailed in this plan may change if there is a demonstrable need, such as emerging trends, technologies and program adjustments.

What's the logic behind this business plan?

The waste strategy sets ambitious but achievable goals and targets for priority waste streams. These goals and targets—developed by analysing Queensland's waste data and trends, and by working with stakeholders as part of consultation on the draft waste strategy—are the reasoning behind this business plan.

Taking a cause and effect approach, the Department of Environment and Resource Management—with assistance from stakeholders, technical experts and a 'program logic' consultant—developed an integrated approach to achieve the targets.

Program logic captures the rationale behind a program, and clarifies how a proposed suite of programs is expected to produce desired results—in this case reducing the amount of waste going to landfill. Program logic was used to map this business plan and outline the reasoning behind the program's intentions.

First of all, to design programs that would meet the waste strategy goals and targets, DERM needed to examine Queensland's detailed waste profile. Data analysis revealed cardboard, paper and food waste are a central component of commercial and industrial waste.

Likewise, municipal solid waste has a large organics component consisting of food and garden waste, while construction and demolition waste has substantial amounts of timber, concrete, earthen spoil, bricks and pavers. These emerged as the priority wastes that must be addressed in order to achieve strategy targets. Littering and illegal dumping was also identified as an area of poor performance and community concern.

The next step involved identifying impediments to achieving increased recycling and resource recovery across priority waste streams. Extensive desktop research was conducted, and input from a stakeholder advisory committee and technical working groups was used. The key barriers emerged as infrastructure, compliance, technology, applied research and development, market development, education, awareness and support for existing programs.

Programs in this plan provide tools to address the priority wastes and key impediments. These reflect Queensland's context and lessons from other jurisdictions, including:

- investigation, data gathering and analysis, and performance monitoring
- communication, awareness raising and education
- applied research and development and pilot schemes
- incentives to stimulate change
- partnerships to engage wider communities and access more resources
- advocacy to establish new practices and approaches
- development of markets
- building capacity, including infrastructure, skills and practices
- developing businesses.

This plan delivers opportunities for sectors to engage in the waste reform agenda, including:

- the waste management industry
- businesses—especially small-to-medium sized businesses
- residential communities
- community and social enterprises
- state and local government
- academia and the wider research community.

Funding actions and partnerships, grouped in five thematic areas, will combine to help Queensland meet the waste strategy's targets. These themes are:

1. Waste infrastructure and market development

2. Research and development

3. Capacity building

4. Enhanced regulation and compliance

5. Strategic and national initiatives

Programs delivered under these themes will be staged to enable waste management markets and technologies to mature. Not all programs will commence in the first year or be funded over the entire four-year scope of this plan.

This logic to program development is presented in figure 1.

Why this approach?

The program-based approach is a proven way to improve performance. It has been used both nationally and internationally, with positive results across a variety of different geographical and economic contexts, including:

- other Australian states
- United States of America
- United Kingdom
- Ireland
- European Union.

The programs outlined in this business plan complement policy and legislative changes undertaken by the Queensland Government to stimulate growth and improvement in key sectors.

The aim is to move from a linear waste management model (where products and materials move through the system and end up as waste in landfill) to a closed-loop system (where different types of waste are used as inputs for new processes).

The programs are designed to address all aspects of a sustainable closed-loop economy, and target Queensland's largest and most problematic waste streams. In addition, programs in this business plan have been tailored to Queensland by applying learnings from other jurisdictions, advice and input from key Queensland experts, combined with research and analysis.

Figure 2 (page 8) outlines key phases in a closed-loop economy. It overviews the goals of each phase, and provides examples of where particular programs will aim to enhance performance. Importantly, the programs will often have influences across multiple phases and stakeholder groups. However, figure 2 presents only the primary targets and primary focus areas. For specific eligibility requirements see <www.derm.qld.gov.au/waste>.

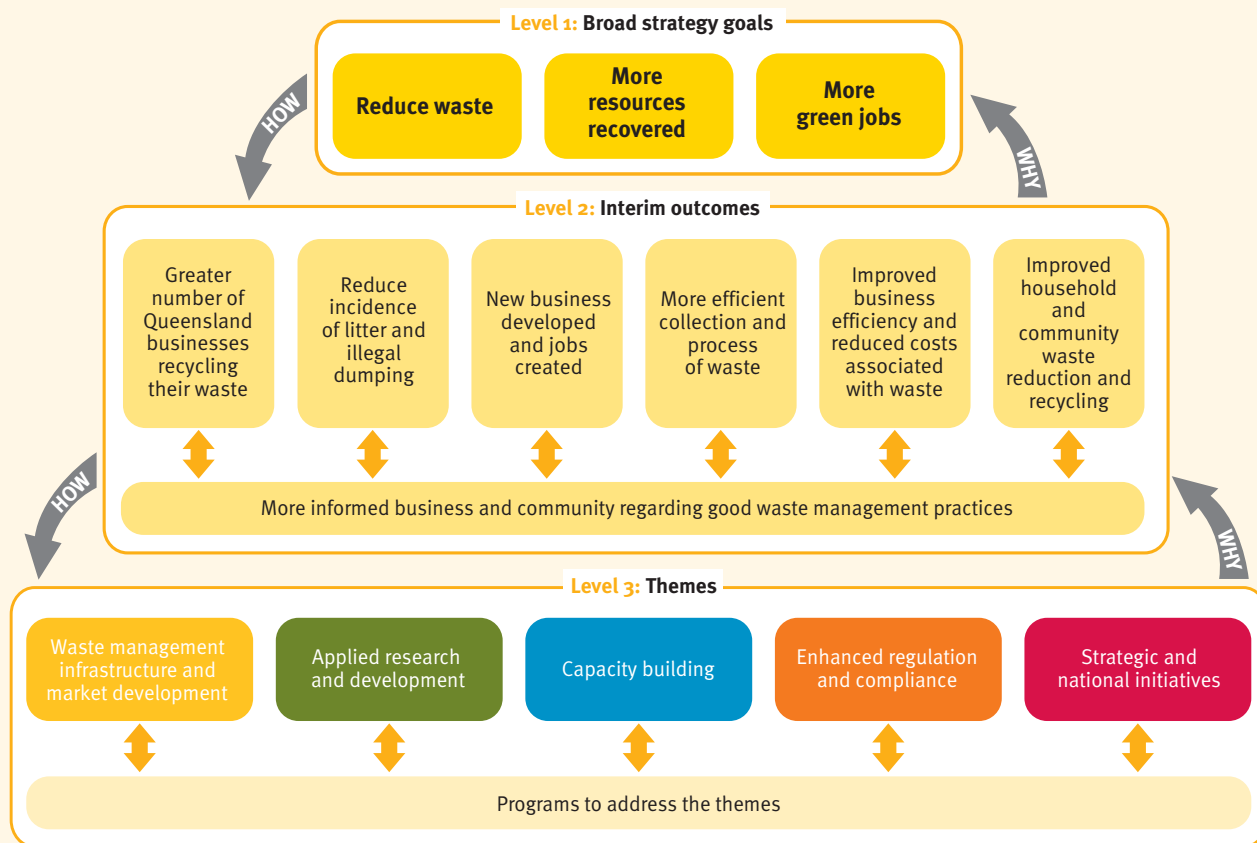


Figure 1. The logic behind the business plan

Beyond 2015

This plan covers the period up to 2015 after the waste levy is introduced; that is, the halfway mark towards achieving the strategy's targets.

The plan's performance indicators relate to the targets in the strategy to June 2014.

Regular monitoring and reporting on progress during the term of this plan will shape annual reviews.

By taking stock of progress up to June 2015, strategies and interventions can be considered and implemented to meet the 2017 and 2020 targets and inform the second business plan.

Waste generation in Queensland is increasing at a rapid pace. Between 2003 and 2008 there was approximately 40 per cent increase in waste generation whilst Queensland's population grew by 10 per cent.





Figure 2. A conceptual rationalisation for the choice of programs within this business plan

Themes that meet the need

The following five themes reflect international best-practice experience, lessons from other jurisdictions and stakeholder imperatives identified through the consultation:

- waste infrastructure and market development
- research and development
- capacity building
- enhanced regulation and compliance
- strategic and national initiatives.

Theme 1—Waste infrastructure and market development

Total four year investment \$49.25 million

The need

For many years Queensland's market has operated in a financial environment where the cost of waste disposal has been exceptionally low and the incentive to recover resources equally low. This historical lack of incentive to recover resources has led to a lack of investment in resource recovery infrastructure.

Queensland's current resource recovery and waste management infrastructure is not sufficient to receive and process the waste expected to be diverted from landfill disposal. To ensure adequate infrastructure, significant investment is required in new and upgraded infrastructure through the projects within this area.

Simply diverting waste from landfill and expanding infrastructure is not sufficient to increase resource recovery. Market development is essential to ensure materials recovered from the waste streams can be beneficially processed, with the supporting markets existing to absorb the new influx of materials.

There have been instances in other jurisdictions where the capacity of markets to absorb material flows did not match the flows being generated. This led to depressed prices, dumping of recovered materials and adverse feedback to the waste generating community. In turn, this diminishes enthusiasm for ongoing recycling and resource recovery.

Analysis of Queensland's State of Waste and Recycling Report Card data, combined with industry feedback, points to immediate market development opportunities in organics, construction and demolition and commercial and industrial waste streams.

Consequences of inaction

Without substantial and timely investment in waste infrastructure and market development, business and industry, particularly in regional areas, will not have sufficient options to divert waste from landfill. Furthermore, Queensland will continue to operate at a lower level than other jurisdictions, particularly eastern states.

Not only will this limit Queensland's capacity to achieve the targets of the strategy, but it will mean Queensland is missing out on industry development opportunities, including expansion of green jobs and growth in regional centres. This could mean regional Queenslanders miss out on having access to similar levels of services as their urban counterparts.

Links with the strategy's broad goals

This theme contributes to the following broad goals of the waste strategy:

- optimise recovery and recycling
- develop sustainable waste industries and jobs.

Programs to address the need

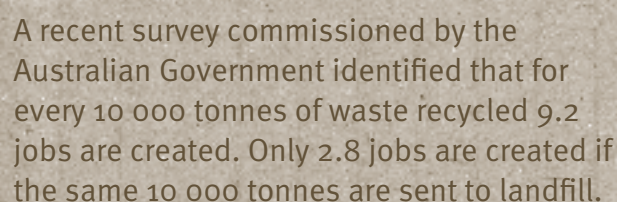
This thematic area will stimulate significant investment in new and upgraded infrastructure through projects within this program area. This will enable sufficient resource recovery and waste management infrastructure to receive and process the waste destined to be diverted from landfill disposal once the levy is introduced.

Programs include:

- Local Government Weighbridge and Ancillary Equipment Grant Program
- Waste Infrastructure Grants
- Waste Equipment Rebate.

In addition, the market development part of the theme will develop sustainable markets across the strategic project areas of organics, commercial and industrial and construction and demolition by providing funding through:

- Market Development Grants (including market industry development officers).



A recent survey commissioned by the Australian Government identified that for every 10 000 tonnes of waste recycled 9.2 jobs are created. Only 2.8 jobs are created if the same 10 000 tonnes are sent to landfill.

Theme 2—Applied research and development

Total four year investment \$9.62 million

The need

To build a best-practice approach to resource recovery and waste management, it is essential that new technologies and practices are found and tested.

There are many innovative approaches being trialled and used, both nationally and internationally, to reduce the amount of potentially recoverable materials sent to landfill. However, how they apply to Queensland, with our unique geographic, climatic and economic profile, is unclear. Conversely, Queensland's distinct economic profile also provides opportunities for innovative, new approaches.

To meet the strategy's targets and develop a localised Queensland solution, trialling, identifying, supporting and implementing new approaches is a crucial step.

Consequences of inaction

A lack of investment in research and development could leave Queensland with limited opportunities to adapt promising technologies and processes to a Queensland context, and viable projects may be overlooked. This is especially true for difficult to manage waste and waste streams which are a particular concern for Queensland, such as agricultural plastic and tyres.

Overall, a lack of investment in research and development may increase chances of unsuccessful projects, limit the establishment of new clean industries, reduce resource recovery opportunities for difficult to manage waste, limit the uptake of new and innovative technologies and processes and reduce investor confidence.

Links with the strategy's broad goals

This theme contributes to the following broad goals of the waste strategy:

- optimise recovery and recycling
- develop sustainable waste industries and jobs.

Programs to address the need

For this thematic area, the emphasis for programs will be on applied research, demonstrating and piloting technologies, processes and practices, rather than solely theoretical research.

The programs clustered under this theme:

- cover all waste streams
- are applicable across Queensland
- are available to all parties who can reduce the amount of waste going to landfill.

Programs include:

- Hazwaste Grants
- Applied Research and Development Grants
- Consultancies.

Theme 3—Capacity building

Total four year investment \$23.48 million

The need

Every Queenslanders and every aspect of Queensland's economy must contribute towards improved resource recovery and diversion of waste from landfill. Stakeholder feedback indicates that capacity to undertake additional activities is currently limited. This broad-focused theme aims to increase the foundational capacity required to achieve improved waste reduction and recycling across all sectors.


Consequences of inaction

Without investment in capacity building the impact of this business plan is lessened. Due to limited capacity, vital sectors may not be able to take full advantage of the opportunities presented by the government's significant financial investment in waste reform. This foundational capacity is essential to the State achieving the ambitious reforms outlined in the strategy.

Links with the strategy's broad goals

This theme contributes to all three broad goals of the waste strategy:

- reduce waste
- optimise recovery and recycling
- develop sustainable waste industries and jobs.



The national waste and recycling sector is valued between \$7 billion and \$11.5 billion—there are opportunities for continued growth.

Programs to address the need

This thematic area addresses the issue through a series of projects aiming to increase all facets of the industry's capacity.

Programs include:

- Waste Busters for Business
- Partnerships
- Training and Educational Grants
- Communication and Education
- Community and Business Attitudinal Research
- Community Grants
- reThink Business Waste Services
- Business Waste Avoidance Grants
- Business and Industry Networking Sessions.

Theme 4—Enhanced regulation and compliance

Total four year investment \$34.44 million

The need

To realise maximum environmental benefits from waste reform and ensure ambitious targets are met, enhanced compliance across all sectors is necessary. Stakeholder feedback and lessons from other jurisdictions show the introduction and implementation of a waste disposal levy needs to be supported with an enhanced compliance program delivered by both state and local government. Ongoing partnerships with the waste sector are crucial in identifying illegal operators.

In addition, the regulatory framework for waste management and resource recovery must:

- keep pace with national trends
- maintain a modern approach
- address lessons learned through the implementation process.

All regulatory and compliance activities require accurate and comprehensive data. Enhancing regulation and compliance requires improvements in the extent and coverage of available data.

To meet all of these commitments, separate funding for compliance activities is required.

Consequences of inaction

Without investment in regulation and compliance activities, the environmental benefits from waste reforms will not be achieved and the government's ambitious targets will not be met. By not enhancing these critical defences, there will be increased numbers of unapproved and non-compliant waste related activities and local government partners left wanting in their efforts to reduce the impacts of litter and illegal dumping. This investment is critical to ensure that a modern approach to waste management is maintained, that education is balanced with compliance, and that the State can meet its commitments to national regulated waste tracking requirements and trends.

Links with the strategy's broad goals

This thematic area contributes to all three broad goals of the waste strategy:

- reduce waste
- optimise recovery and recycling
- develop sustainable waste industries and jobs.

Program to address the need

This program funds compliance initiatives via additional resources to complement existing functions led by DERM, including:

- regulatory services
- litter and illegal dumping strategies
- regulated waste online tracking
- improved legislative framework.

Theme 5—Strategic and national initiatives

Total four year investment \$4.67 million

The need

While many parts of the waste reforms are a state priority, particular aspects must be addressed in a national context. Having Queensland's presence in these forums and initiatives will ensure the state's waste strategy continues to evolve in line with the rest of the nation, even setting the standard in some areas.

For example, the National Waste Policy (released in November 2009) and national product stewardship legislation provide a foundation for take-back or producer responsibility schemes to reduce the impacts of end-of-life products.

Funding from this theme will ensure Queensland can successfully implement national initiatives by continuously updating and contemporising the state's waste strategy.

Consequences of inaction

A lack of ongoing investment in strategic and national initiatives will leave Queensland waste management and resource recovery to stagnate. Keeping pace with national initiatives and global best practice, being responsive to community and stakeholder needs, and adapting to changing policy and legislative environments requires continual investment. Without this investment, Queensland runs the risk of falling back into an outdated waste management framework.

Furthermore, to implement the ambitious waste reforms outlined in the strategy, continuous improvement must be built into the implementation of the reforms – otherwise we may not be achieving the best return on investment, or investing strategically to achieve the goals and targets of the waste strategy.

Links with the strategy's broad goals

This thematic area contributes to all three broad goals of the waste strategy:

- reduce waste
- optimise recovery and recycling
- develop sustainable waste industries and jobs.

Programs to address the need

This theme addresses the need by investing in several national programs, including:

- product stewardship
 - reporting and evaluation
 - National Waste Policy
 - Australian Packaging Covenant
 - strategy and waste policy oversight and review.
- Programs to deliver solutions

Programs to deliver solutions

Theme 1—Waste infrastructure and market development

Local Government Weighbridges and Ancillary Equipment Program

First year funding \$11 million

Four year total \$13.46 million

Purpose:

The waste reforms will significantly improve waste data collection across the state.

Under a previous program in the 2010–11 financial year, \$4.1 million was allocated toward grants to assist local governments acquire the infrastructure necessary to become 'levy ready'.

This program was entitled the Infrastructure Assistance Grants Program and was designed to target high priority sites and to prompt local governments to strategically analyse their infrastructure needs. Priority was based on location in the levy zone, volume of waste disposed and whether the materials collected at the site would attract the levy. The program consisted of two phases.

Phase 1 was directed towards those landfills disposing more than 10 000 tonnes per annum to supply and install a 60 tonne capacity weighbridge and associated infrastructure. Funding for ancillary equipment was delivered in Phase 2 using a formula approach. All local governments in the levy area were allocated funding based on population and land area.

The processes, issues and outcomes of this program and data obtained through the Waste Site Characterisation Survey were used to improve design and management of the new program under WARE.

The Local Government Weighbridge and Ancillary Equipment Grant Program (Phase 3) was designed with four program areas requiring assistance statewide to achieve the strategy's waste targets.

To provide incentive for investment in infrastructure tools related to accurate data collection and operational site controls across Queensland, the Phase 3 grant will offer funding amounts for four different size categories.

- **Category 1**—weighbridge infrastructure and ancillary equipment >5000 tonnes per annum
- **Category 2**—associated infrastructure for sites >2000 tonnes and <5000 tonnes per annum
- **Category 3**—associated infrastructure for sites >50 tonnes and <2000 tonnes per annum
- **Category 4**—volumetric survey <2000 tonnes per annum

Example projects may include entrance works at local government landfills such as gates, fencing, roads and security, signage, weighbridges, and connection of water, phone and power utilities.

Aims:

The primary aim of the WARE Local Government Weighbridge and Ancillary Equipment Grant Program is to assist local governments to install infrastructure and controlling facilities for the purpose of supplying accurate waste data to DERM.

Another aim is to help local governments over the next two years comply with the new legislation.

Waste Infrastructure Grants



First year funding \$5.77 million

Four year total \$28.06 million

Purpose:

Internal expertise, stakeholder meetings and consultation have identified lack of infrastructure as a significant barrier to reaching targets in the strategy. For example, in Queensland there is a lack of processing infrastructure dedicated to large-scale mixed commercial and industrial waste sorting and recovery.

This grant program will ensure Queensland develops the infrastructure required to effectively divert waste from landfill. The program will enable Queensland to reach the levels of investment and innovation of other states, take a leading role in maximising the value of our resources to meet the goals of the strategy.

Example projects may include conveyers, sorting, crushing and compacting equipment, bailing equipment, materials recovery facilities, treatment technologies and recycling centres.

Aims:

- Fund transfer stations, materials recovery facilities (MRFs) and recycling centres to improve sorting and recovery processes, create jobs and cost effectively divert tonnes of waste from landfill.
- Fill an immediate gap in regional areas requiring waste infrastructure.
- Support development of efficient waste and recycling industries and associated jobs in Queensland.
- Ensure e-waste, tyres, plasterboard, liquid waste, carpet, glass, leather, organics, concrete, textiles and other priority wastes are processed for resource recovery.

Waste Equipment Rebate

First year funding \$865 000

Four year total \$3.12 million

Purpose:

Infrastructure is required at all levels to assist in the expansion of material resource recovery services within Queensland. While the waste infrastructure grant is designed to generally assist the resource recovery processing sectors, it has also been recognised that a lack of small scale infrastructure is a barrier to implementing new resource recovery systems at a business level.

Correctly separating recyclable materials improves the efficiency and extent of resource recovery. As such, this program aims to assist Queensland businesses establish standardised internal resource recovery and source separation systems.

Example equipment available under the rebate includes bin infrastructure such as mobile garbage bins and office recycling bins; and awareness raising signage.

Aims:

- A catalogue of bin products (including bin enclosures, bin lifters) and signage accessible to businesses at fixed unit pricing.
- Rebate programs offered to business to implement effective source separation systems.

Market Development Grants

First year funding \$0

Four year total \$4.6 million

Purpose:

Markets exist in Queensland for recovered materials. However, there is considerable scope to improve the number and range of businesses dealing with diversion, recovery and processing of waste from landfill.

Key areas of interest for market development grants will be industry, business, local government and community organisations with the capacity to use recycled materials. On the other side of the spectrum is reprocessing industries providing feedstock.

Success in this area will come from effectively identifying Queensland businesses currently offering processing capacity and those that could develop additional capacity through new technologies, processes or support.

Knowledge and expertise needs to be developed across various waste streams, including difficult to handle materials. The initial focus will be on priority materials identified by DERM. This program will target industry, business, local government and community organisations.

Possible projects include employment of market industry development officers, procurement focussed initiatives, and projects which increase consumer demand for high priority products and materials.

Aims:

- Create opportunities for Queensland-based industry, business, local government and community organisations to develop new markets for recovering, processing and diverting materials from landfill.
- Expand the number of jobs in waste management and resource recovery.
- Implement technology to reduce waste disposal, improve resource recovery and create new products for markets.
- Support the development of viable markets for waste streams in geographic locations which lack existing provision.
- Promote or develop standards and certification programs to improve market quality and ensure products are fit for purpose.

Theme 2—Applied research and development

HazWaste Grants

First year funding \$0

Four year total \$2.45 million



Purpose:

Many Queensland-based industries produce hazardous waste during their operations. These wastes need to be carefully managed as they can be toxic to humans and the environment.

Key areas of interest for the HazWaste Grants include development of new processes to recycle hazardous waste into raw materials for use as feedstock by other industries. They will also address avoiding, substituting or minimising hazardous input products or materials.

Example projects include equipment for managing hazardous components of waste, transport equipment, and innovative treatment processes which reduce the quantity and hazard category of hazardous waste or the treatment of hazardous waste for reuse.

Aims:

- Improved diversion of hazardous waste from landfill across all sectors.
- Reduced quantities of hazardous wastes.
- Reduced hazardous nature of residues requiring disposal.
- Innovative methods adopted to reprocess or reuse hazardous waste.
- New or expanded markets for alternative end uses of hazardous waste.

Consultancies

First year funding \$721 000

Four year total \$2.56 million

Purpose:

The Queensland Government supports evidence-based policy and practice. Consultancies will be undertaken to fill key knowledge gaps and ensure waste management decisions and investment priorities are evidence-based.

Focus areas could include:

- waste infrastructure needs
- market development opportunities and gaps
- hazardous waste reduction management
- training requirements in the waste management sector.

Aims:

- DERM becomes better informed to fund programs to achieve outcomes of the waste strategy.
- DERM acquires quality and contemporary waste management and resource recovery data.

Applied Research and Development Grants

First year funding \$0

Four year total \$4.6 million

Purpose:

There is potential for many industries to reduce waste generated and sent to landfill. Realising this potential may involve testing, implementing or proving new technologies and techniques relating to Queensland. Accordingly, this fund will provide support for pilot or demonstration projects where innovative technologies and systems are planned to be used in Queensland, providing models for improving resource recovery.

Example projects include applied processes for repurposing industrial by-products, off cuts or residuals into new, marketable products; demonstration and piloting of technologies; and processes and techniques to improve resource recovery.

Aims:

- To assess technology and techniques that are proven and in use outside of Queensland but need to be assessed or trialled in a Queensland situation.
- Piloting of new technologies and techniques (including prototypes) developed through research and trials that require proving prior to commercialisation.
- Production of case studies that will facilitate adoption of successful projects.

Theme 3—Capacity building

Waste Busters for Business

First year funding \$144 000

Four year total \$3.82 million



Purpose:

Many small to medium businesses do not have the capacity to review their waste management activities and identify areas for improvement.

Waste Busters for Business will employ Business Waste Busters around the state to raise business awareness, participation and commitment to waste avoidance and resource recovery. These professionals will provide local expertise and advice, conduct waste assessments and help implement resource recovery practices.

An example of assistance available includes help for businesses to undertake waste assessments and identify ways to improve resource recovery and minimise waste.

Aims:

- Have Business Waste Busters available throughout the state to help businesses transition to a low-waste economy and increase individual commercial benefits.
- Raised awareness of the new Queensland waste strategy with local businesses.
- Give businesses tools and resources to make changes in practices across the entire waste hierarchy, from avoidance, reduction, recovery, recycling through to more efficient disposal.

Partnerships

First year funding \$714 000

Four year total \$2.55 million

Purpose:

The partnerships fund is a program designed to support DERM to engage in strategic partnerships.

Achieving improved waste management and resource recovery involves collaboration across sectors. Some mutual benefits of partnerships include improved knowledge and capacity, increased leverage, improved efficiency, expanded networks and heightened performance.


For example, DERM's current partnership with Planet Ark has supported a centralised resource recovery providers' database, expanded education opportunities and built on an established interstate network.

The partnership program has a broad scope and may cover all aspects of waste management and resource recovery, such as community awareness, waste avoidance, litter prevention or improved manufacturing.

Example partnership projects must be able to demonstrate they help achieve the goals and targets of the strategy. Projects could range from agreements with other government departments through to community resource recovery initiatives.

Aims:

- Achieve innovative solutions to waste management, and increased economies of scale through regional collaboration.
- Form effective partnerships between the Queensland Government, industry, local government and the community to deliver the waste strategy's objectives.



Queensland has the capacity to divert 60 per cent of paper and cardboard from landfill by 2015, reaching 70 per cent by 2020. The development of local markets will increase capacity and support economic development and sustainable employment.

Community and Business Attitudinal Research

First year funding \$144 000

Four year total \$402 000

Purpose:

To responsibly allocate funding and evaluate the Waste Reform program we need to understand the level of knowledge, attitude and behaviour that key sectors of Queenslanders currently hold or exhibit about waste. The initial research will provide a baseline against which we can measure the continuing effectiveness and direction of the government's waste reforms. Having a Queensland wide perspective and being able to attribute numbers to these opinions will provide strength to the program going forward.

Aims:

- Determine a baseline in both the general community and small to medium-sized enterprises about attitudes and behaviours towards waste management.
- Uncover issues associated with managing waste.
- Evaluate shifts in awareness of waste management and the extent of behaviour change in the follow up research to be undertaken annually.

Training and Educational Grants

First year funding \$0

Four year total \$2.45 million

Purpose:

Training and education grants will support up-skilling across all aspects of the waste management cycle, with an emphasis on the resource recovery sector.

Funding will have three focus areas:

- analysing key training and education needs
- a targeted partnership program
- supporting existing and new training and education programs.

Recognition will be given to the different approaches needed for metropolitan, regional and remote areas.

Example projects include those that build on existing training and education packages; projects that address gaps in training and education needs; and those that result in up-skilling and certification.

Aims:

- Develop a comprehensive picture of available waste management, recycling, resource recovery training and education programs in Queensland, and an understanding of key gaps.
- Establish partnerships with registered training organisations, developing and implementing programs to increase skills and expertise in the resource recovery sector.
- Ensure staff are skilled in the use of existing and new technology, operations and practices, and better career and skills pathways made available to people working in the waste sector.
- Foster appropriate skills and training planning within the waste sector.

Communication and Education

First year funding \$995 000

Four year total \$2.62 million

Purpose:

Knowledge builds understanding and capability, and helps ensure commitment to, and compliance with, waste management practices and objectives. Promotional materials will be made available to program partners for distribution to their stakeholders to engage communities across Queensland through electronic and print media. The program will also partner with local governments to build on their successful education initiatives.

Aims:

- Communities and businesses know about avoidance and recycling options—focusing on organics, green waste, plastic, paper and metals recycling, and reducing recycling stream contamination.
- Encourage all communities to improve their existing practices by concentrating on reducing, reusing and recycling their waste, including knowing how to manage and dispose of household toxic or hazardous wastes.
- Raised awareness about legislative changes relating to litter and illegal dumping.

reThink Business Waste Services Project

First year funding \$1.44 million

Four year total \$6.97 million

Purpose:

There are barriers to the broader uptake of resource recovery by business. One is a perception that it is cost-prohibitive and time-intensive to investigate and assess resource recovery options.

To help businesses transition to more resource efficient practices, DERM will provide subsidy payments to individual businesses, or property management groups acting on behalf of individual businesses, to introduce new resource recovery services.

An example of an eligible resource recovery service under this program would be introducing a new cardboard recycling service to divert more material from going to landfill.

Aims:

- Encourage Queensland businesses to improve resource recovery practices.
- Stimulate new markets in rural areas by capping rebates to business applicants in south-east Queensland.
- Encourage business to evaluate existing waste management arrangements to divert more materials from landfill and reduce operating costs.

Business Waste Avoidance Grant

First year funding \$0

Four year total \$2.45 million



Purpose:

Many businesses do not have capacity or resources to review their production processes to identify and fund changes aimed at improved resource efficiency and waste avoidance.

To help businesses meet this challenge, the funding will assist businesses conduct process reviews.

Funding will also be available for implementing proven technologies or processes avoiding production of low value by-products, low recycle value of by-products and/or encourage cleaner production.

Example projects include identifying improvements in a manufacturing process; implementing technologies to improve efficiencies and reduce waste; or developing beneficial reuse opportunities for by-products that otherwise would become waste.

Aims:

- Businesses review their processes to minimise the generation of waste.
- Provide incentives for investment in process and technological solutions aimed at recovering and/or reusing secondary products from manufacturing or process waste.
- Expand and develop markets for products diverted from landfill.

Business and Industry Networking Sessions

First year funding \$115 000

Four year total \$336 000

Purpose:

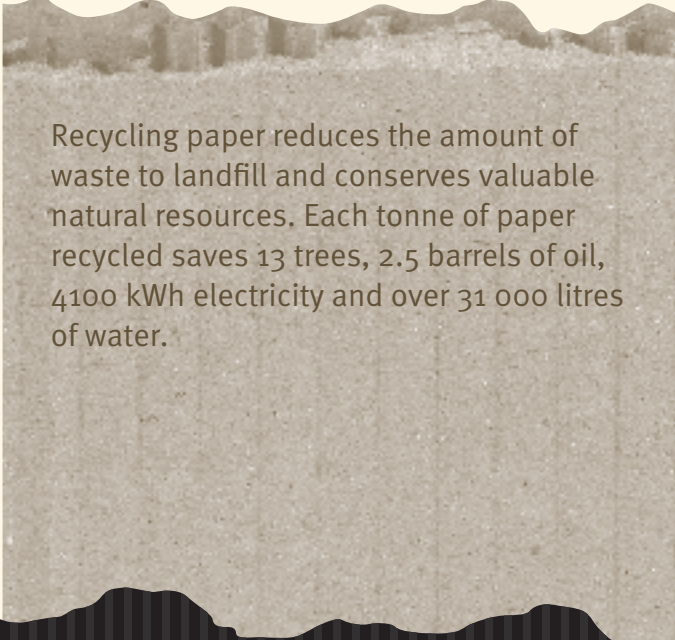
For many companies, opportunities to explore new ideas and approaches to waste management with similar businesses or service providers are limited. This program will provide a regular forum space for businesses and the resource recovery industry.

Queensland businesses will benefit from networking and building collaborative relationships with resource recovery service providers, vendors of new technologies and waste management experts.

Example sessions would include presentations outlining new waste avoidance processes and technologies to help businesses reduce and avoid waste, and providing a forum for businesses to develop partnerships and work together.

Aims:

- Innovative waste management technology developers, vendors and users in Queensland actively participating in networking, knowledge sharing and building collaborative relationships.
- Queensland businesses know more about best-practice waste management technologies and processes.



Recycling paper reduces the amount of waste to landfill and conserves valuable natural resources. Each tonne of paper recycled saves 13 trees, 2.5 barrels of oil, 4100 kWh electricity and over 31 000 litres of water.

Community Grants

First year funding \$0

Four year total \$1.84 million

Purpose:

Community engagement is essential to achieve long-term sustainable behavioural change in waste avoidance and resource recovery. Community programs in Australian states indicate social enterprises have the potential to achieve considerable outcomes in altering community attitudes, leading to positive behavioural change towards waste reform.

Projects delivered by community organisations promoting waste avoidance and recovery of items for re-use, will build capacity, instil behaviour change within the community and reduce the amount of residual waste going to landfill.

This program will fund Queensland-based community and social enterprises to develop quality initiatives increasing resource recovery and reducing waste disposal to landfill.

Example projects include neighbourhood focused projects looking at charity waste, textiles, mattresses or food waste avoidance; community gardens and re-use community recycling projects.

Aims:

- Community capacity and awareness are built to increase waste avoidance, reuse products that have been considered waste, and enhance understanding of the environmental and financial impacts of waste generation and disposal.
- Community based not for profit opportunities are supported for waste avoidance, preventing unnecessary food wastage, reducing our impact on the environment, and reducing greenhouse gas emissions.
- Community organisations are supported to explore and promote new and enhanced options for the re-use of household products and textiles.

Theme 4—Enhanced regulation and compliance

Regulatory Services

First year funding \$6.07 million

Four year total \$25.03 million

Purpose:

Queensland's waste legislation embodies compliance with standards of waste production, handling, storage and disposal. The Waste Disposal Levy Compliance Plan will be delivered in accordance with DERM's Compliance Strategy 2010–14 and the Queensland Waste Strategy 2010–2020. Strategically located teams will conduct compliance, administration, education and engagement activities.

Regulatory services activities will target a range of aspects including regulation and administration of the levy, waste facility operations, illegal dumping, and unapproved and non-compliant waste related activities and contaminated land regulation, advice and support for businesses and landfill operators.

Aims:

- Compliance strategies informed by risk methodologies and sufficient investigations undertaken to secure key wins based on a targeted approach to compliance and enforcement.
- Improved identification of offenders and increased success of legal action, with successful prosecution outcomes being promoted as deterrents for further breaches.
- Successful prosecutions and subsequent promotion will encourage businesses to operate legally, adhere to approval conditions, reduce unregistered businesses operating and deter other offences such as illegal dumping.
- Fair marketplace for registered, conforming waste handlers boosted by removing unregistered and non-conforming businesses.
- Land pollution caused by unauthorised disposal of waste reduced, with consequent benefits for the environment.
- Waste data (levy and regulated waste) collected and reported by waste handlers as a legislative requirement?
- Enhanced administration, regulation and management of contaminated land matters.
- Implementation of advanced surveillance techniques to secure evidence of offences.

Litter and Illegal Dumping Strategy

First year funding \$1.52 million

Four year total \$4.42 million



Purpose:

Litter and illegal dumping have a range of environmental, social and economic impacts. For example, litter pollutes waterways and causes harm to important aquatic habitats, such as coral reefs and seagrass beds. Likewise, animals often mistake litter for food or shelter and ingest it or become tangled in it. Illegal dumping can have serious environment impacts, particularly if the material is hazardous.

While there have been gradual reductions in the amount of littering, the annual Keep Australia Beautiful National Littering Index shows that Queensland is the most littered mainland state—15 per cent higher than the national average. Illegal dumping is also of concern in Queensland. Over the past few years, there has been an estimated 52 illegal dumping events occurring every day, totalling over 19 000 each year.

To ensure Queensland's environment is clean and free from litter and illegal dumping, this program will fund a litter and illegal dumping strategy. Targeted compliance activities are an essential part of this strategy and include:

- introduction of an online reporting system allowing the public to report littering and illegal dumping
- increased emphasis on the detection and identification of offenders
- establishment of an illegal dumping task force
- increased enforcement measures including intelligence officers and investigators, criminal investigations and prosecutions.

Aims:

- The public can report littering and illegal dumping from vehicles and vessels using an online service.
- Penalty infringement notices and fines will work as a disincentive to littering and illegal dumping, more offenders will be prosecuted, and successful prosecutions used as to deter others.
- A reduction in litter and illegal dumping with subsequent benefits to the environment, community safety and economy.
- Increased awareness of litter and illegal dumping, by circulating information about alternative disposal methods.
- Funding regional litter and illegal dumping squads.

Regulated Waste Online Tracking

First year funding \$341 000

Four year total \$618 000

Purpose:

All states and territories in Australia require movement of controlled waste to be tracked under the agreed National Environmental Protection Measure for Movement of Controlled Wastes. Currently this is a five-docket paper-based system, with some reporting on spreadsheets.

The paper-based and spreadsheet formats have unacceptable error rates, because of incomplete or incorrectly completed forms. Also, paper-based forms must be entered into databases to meet reporting requirements and compliance activities. Consequently, staff resources for compliance activities have been diverted to data entry and finding incorrectly supplied reports, instead of identifying issues with on-ground environmental outcomes.

Other states have been using online web-based reporting systems, which allow tighter controls over data entered.

Businesses are also seeking electronic means of waste tracking and reporting.

The online tracking system for regulated waste for Queensland will create a more efficient way of supplying waste tracking information. This information will be available to all waste handlers to help them quickly and efficiently meet their legislative requirements.

Aims:

- Improved method of reporting data for regulated waste handling businesses and ensuring industry compliance.
- Improved ability for waste producers to implement due diligence, ensuring appropriate treatment and disposal of regulated waste.
- Accurate repository for all trackable waste data for comparison to detailed data received from levy implementation.
- Significant reduction of printed forms and storage requirements by waste handlers and DERM.
- Unlicensed waste handlers identified and incidents of illegal dumping of regulated waste informed by this more accurate data.

Waste Reform Implementation Support Team

First year funding \$1.06 million

Four year total \$4.37 million

Purpose:

To ensure the waste legislation is effective, it is imperative to implement regulation and policies that will drive progress and support long-term investment decisions. In addition, the team will monitor and evaluate the effectiveness of appropriate price signals and legislative instruments.

Aims:

- Continue to provide advice and support to local government, industry and businesses so they understand the legislation, their obligations and what it means for them and their operations.
- Ongoing reviews of the *Waste Reduction and Recycling Act 2011* and associated regulations, and the waste regulation associated with the *Environmental Protection Act 1994*.
- Investigation and development of a number of policies and guidelines including strategic planning for waste infrastructure, alternative waste technology, waste to resources, refuse derived fuel and waste to energy.

Theme 5—Strategic and National Initiatives

Product Stewardship

First year funding \$577 000

Four year total \$669 000

Purpose:

As part of managing goods or materials that become waste at the end of their useful life, Australia's states are agreeing to set standards for recovery or disposal. Funds have been set aside ahead of the Australian Government's National Framework legislation passing through Parliament and also by the Queensland Government to determine priority product streams to be targeted in the absence of national product stewardship schemes.

Aims:

- Facilitate establishment of collection points that will manage multiple product streams, to avoid consumer confusion about take-back options.
- Priority wastes better handled.

Reporting and Evaluation

First year funding \$0

Four year total \$430 000

Purpose:

Program evaluation and reporting is a high priority. Without evaluation, it is impossible to measure progress and achievements, refine priorities and ensure continual improvement. This funding will enable DERM to fully evaluate the business plan and programs, ensuring there are comprehensive reporting frameworks in place.

Aims:

- Reporting frameworks exist to evaluate progress against targets in the waste strategy.
- Enable continuous evaluation of the business plan.

National Waste Policy

First year funding \$28 000

Four year total \$177 000



Purpose:

Queensland, along with other states and territories, is an active participant in the implementation of the National Waste Policy Implementation Plan. Queensland is contributing to implementation of projects for regional and remote Australia, construction and demolition and commercial and industrial wastes, and data management.

Aims:

- Queensland meets its obligations regarding implementation of the National Waste Policy Implementation Plan.

Strategy and waste policy oversight and review

First year funding \$700 000

Four year total \$3.21 million

Purpose:

The strategy is an ambitious 10-year plan to improve waste management and resource recovery in Queensland. The reforms are significant, and will require regular review and evaluation to ensure they are successful and capable of addressing emerging issues and changing circumstances. This review process is required by legislation, and will include assessing performance against the goals and targets of the strategy.

While the strategy sets the framework for reform, there is still much to be done to ensure Queensland waste management is world-class, including developing policy approaches for high priority wastes, and improving management of changing technologies and practices, such as waste-to-energy, refuse-derived fuel and alternative waste technologies.

Aims:

- Review strategy, targets, and levy as required by the legislation with public input
- Address ongoing improvements, including identifying suitable 'priority product' wastes to be diverted from landfill through a public consultation process
- Ensure Queensland's interests are effectively represented at a national level

Australian Packaging Covenant

First year funding \$0

Four year total \$184 000

Purpose:

Discarding used packaging materials to landfill is a waste of valuable resources. The Australian Packaging Covenant is a national initiative between all levels of government and industry. It aims to conserve resources through better packaging design and production processes, and facilitates the re-use and recycling of used packaging materials.

The Queensland Government is a partner and signatory to the covenant. This fund extends Queensland's commitment to the covenant, and its goal of reducing environmental impacts of used packaging.

This funding also includes improved away from home recycling, with a focus on schools and public places.

Aims:

- Investment in strategic state and national projects promoting sustainable design, use and recovery of packaging.
- Improve away from home recycling, including schools and public places.

Next steps

Please use the matrix on the next page to find funding opportunities from the WARE fund.

In addition, please visit the DERM website <www.derm.qld.gov.au/waste> for more information including fact sheets, application process guides and forms.

Attachments

Attachment 1: WARE fund budget from 1 December 2011

Program	Project	Yr. 1	Yr. 2	Yr. 3	Yr. 4	Total program budget to 30 June 2015
Waste infrastructure and market development	Waste infrastructure grants	•	•	•	•	\$28 062 331
	Local government weighbridge and ancillary equipment	•	•			\$13 463 320
	Waste equipment rebate	•	•	•		\$3 121 759
	Market development grants		•	•	•	\$4 606 062
	Sub-total					\$49 253 472
Research and development	HazWaste grants			•	•	\$2 453 832
	Consultancies	on-going program				\$2 564 121
	Applied research and development grants		•	•	•	\$4 606 062
	Sub-total					\$9 624 016
Capacity building	Waste busters for business	•	•	•		\$3 829 835
	Partnerships	•	•	•	•	\$2 556 908
	Community and business attitudinal research	on-going program				\$402 260
	Training and educational grants		•	•	•	\$2 456 204
	Communication and education	on-going program				\$2 629 764
	ReThink business waste services	•	•	•	•	\$6 975 733
	Business waste avoidance grants			•	•	\$2 453 832
	Business and industry networking sessions	on-going program				\$336 550
	Community grants		•	•	•	\$1 842 746
Sub-total					\$23 483 829	
Enhanced regulation and compliance	Regulatory services	on-going program				\$25 030 862
	Litter and illegal dumping strategy	on-going program				\$4 425 254
	Regulated waste online tracking	on-going program				\$618 159
	Waste Reform Implementation Support Team	on-going program				\$4 375 323
	Sub-total					\$34 449 598
Strategic and national initiatives	Product stewardship	on-going program				\$669 238
	Evaluation and reporting	on-going program from year 2				\$430 125
	National waste policy	on-going program				\$177 225
	Australian packaging covenant	on-going program				\$184 275
	Strategy and Waste Policy Oversight and Review	on-going program				\$3 215 508
	Sub-total					\$4 676 371
Total program funding						\$121 487 286
Staffing and administration						\$37 512 714*
Total						\$159 000 000

* Includes an advance payment from Queensland Treasury totalling \$15.9 million for local government infrastructure grants and the development of the Queensland Waste Online Levy System



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