

Sustainable Industries

Sustainable Industries

National Packaging Covenant



Queensland achievements 2000 - 2005



The National Packaging Covenant

The National Packaging Covenant (the Covenant) was launched in August 1999 with the aim of providing more effective management of used packaging materials based on the principles of shared responsibility and product stewardship.

The Covenant is a voluntary agreement between the packaging supply chain and government. Covenant signatories agree to share responsibility for reducing the environmental impacts of packaging.

Under the Covenant, raw material suppliers, designers, manufacturers, users, retailers and consumers, as well as government and collection agencies, all accept responsibility for their activities.

The Covenant's key objectives for the first five years were to:

- Establish a framework, based on the principle of shared responsibility, for the effective lifecycle management of packaging and paper products – including their recovery and utilisation
- Establish a collaborative approach to ensure that the management of packaging and paper throughout its lifecycle and the implementation of collection systems, including kerbside recycling schemes, produce real and sustainable environmental benefits in a cost-effective manner
- Establish a forum for regular consultation and discussion of issues and problems affecting the recovery, utilisation and disposal of used packaging and paper, including cost

The National Environmental Protection Measure (NEPM)

A key regulatory framework called the National Environmental Protection Measure supports the voluntary Covenant. Designed as a tool to encourage compliance throughout the packaging chain, the NEPM helps ensure that signatories meet their Covenant obligations via action plans and reports.

Since 2000, more than 600 businesses from a broad range of industries have been identified as meeting the brand owner requirements of the NEPM. Companies not entitled to exemption under the NEPM were required to either become signatories to the Covenant or to meet the more rigorous regulatory requirements of the NEPM.

With assistance from the Environmental Protection Agency (EPA), many of these businesses elected to sign the Covenant and are now benefiting from the outcomes the voluntary process delivers.

The Covenant in Queensland

The Queensland Jurisdictional Recycling Group (JRG) administers Covenant projects and funding in Queensland. The group is made up of representatives from the EPA, the Department of State Development and Innovation, regional local governments, industry associations and waste and recycling contractors.

The JRG meets every six weeks to develop key Queensland projects, consider grant applications and provide updates on Covenant activities.

Covenant signatories include:

- Local Government Association of Queensland (LGAQ), representing 125 local governments
- Alvey Reels Australia
- Australian Country Choice Pty Ltd
- Buderim Ginger
- Bundaberg Sugar
- Capilano Honey Ltd
- Cenovis Pty Ltd
- Cooroy Mountain Spring Water
- Crows Nest Cordials
- Darling Downs Foods Limited
- Fisher & Paykel Australia Holdings Ltd
- Golden Circle Limited
- Harvest FreshCuts Pty Ltd
- Herron Pharmaceuticals
- Lion Nathan Australia
- Nerada Tea Pty Ltd
- Pixie Ice Cream Pty Ltd
- Parmalat Australia Ltd (formerly Pauls Limited)
- Prepared Foods Australia
- SunCoast Gold Macadamias (Australia) Ltd
- Weis Australia Pty Ltd

In Queensland

- There are 51 signatories to the Covenant
- Covenant funding has supported 39 separate projects
- Funding to the value of \$3.6 million has been awarded

Key Queensland Projects

During the Covenant's five years, the Queensland Government and the Covenant's industry signatories have jointly funded the following projects:

- Market Development Grants Program for Plastics
- North Queensland Recycling Infrastructure Feasibility Project
- Best Practice Kerbside Recycling Project
- Best Practice Kerbside Recycling Incentive Grants
- Local Government Data Collection Protocol
- Regional Education Program
- Public Place Recycling / Litter Management Grants Scheme
- Transport and Logistics Study and Model
- Sustainable Community Based Recycling Assistance
- Waste Education Facilities Evaluation

Reporting and data

Measuring and reporting recycling data is important in the management of used packaging materials, and under Queensland legislation, local governments must report waste and recycling data each year.

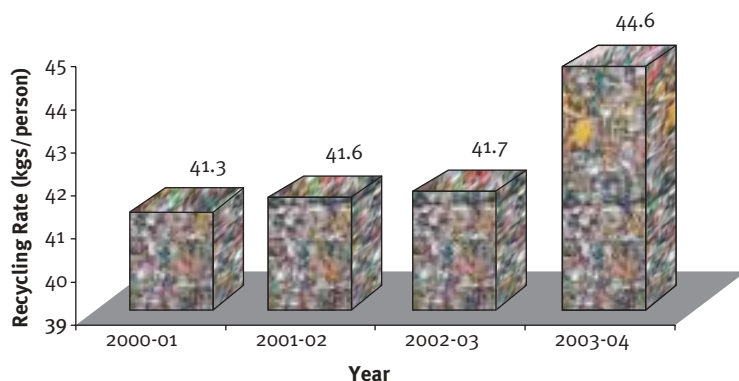
Since 2000/01, this data has been collated annually and published by the EPA as *The state of waste and recycling in Queensland*.

Each year the report captures Queensland's recycling performance, recording the status of local government resource recovery and recycling, and highlighting key initiatives undertaken by state and local government, industry and the community to improve performance.

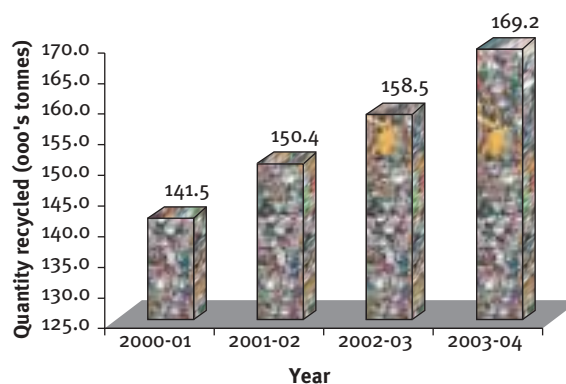
It also provides a useful reference document regarding Queensland's waste minimisation and recycling issues, identifying the challenges to be met in reducing the amount of recyclable resources going to landfill and using these recoverable resources more sustainably, now and in the future.

To achieve greater consistency and accuracy for collecting and reporting data, the LGAQ and EPA have developed a *Waste and recycling data collection guide*.

Household recycling (kilograms per capita)



Total household recycling (ooo's tonnes / year)



Towards Best Practice Kerbside Recycling in Queensland

The Best Practice Kerbside Recycling Project was developed with the primary aim of helping local governments develop sustainable kerbside recycling programs by providing training, tools and support for the adoption of best practice kerbside recycling principles.

The guideline *Towards Best Practice Recycling in Queensland* takes into account Queensland's unique situation including dispersed population, tyranny of distance, location of markets, viability and service affordability.

The guideline also addresses best practice principles for drop-off recycling centres for those local governments that determine that kerbside recycling is not sustainable in their communities.

The guideline addresses critical service level decisions including:

- General recycling contract requirements

- Materials recovery facility (MRF) contract service requirements
- Recycling collection service requirements.

Decisions made within the guideline are directly linked to a model contract, which provides a framework for preparing tender documents, assessing submissions and drafting contracts.

Best Practice Kerbside Recycling Funding

To help local governments to adopt the Best Practice Kerbside Recycling model, \$1,057,872 has been made available through the Covenant.

The amount of funding provided for each local government was based on the type of system implemented, from \$8 per household for mobile bin systems to \$3 per household for drop-off centres.

Where best practice had already been achieved prior to commencement of

the program, funding of \$2 per household was made available to support community education initiatives.

To qualify for funding, local governments must demonstrate:

- Increased yield of recyclable materials
- Transparency of cost to rate payers
- Sustainable contract costs
- No market risk to council

In 2001/02, only 45 of Queensland's 125 local governments reported provision of kerbside and/or drop-off recycling services for their communities. This figure has now increased to 65, giving 93 percent of Queensland's population access to recycling services.



Kerbside collection (Redcliffe City Council)



Kerbside recycling bin (EnviroCom)

Program participants

In Queensland, the Best Practice Kerbside Recycling Program has provided grants to the following local governments:

- Bowen Shire
- Brisbane City
- Bundaberg City
- Caloundra City
- Douglas Shire
- Gold Coast City
- Hervey Bay City
- Ipswich City
- Livingstone Shire
- Mackay City
- Maroochy Shire
- Pine Rivers Shire
- Redcliffe City
- Redland Shire
- Thuringowa City
- Toowoomba City
- Townsville City

Best Practice Projects

Local governments have undertaken a range of projects under the Best Practice Kerbside Recycling Incentives scheme.

Some of these include the following:

- Baseline data collection to enable performance auditing of processes and outcomes to determine improvements over time
- Ongoing data collection and analysis for performance evaluation
- Customising model contracts and assessing their application
- Establishing drop-off centres where kerbside recycling is not a viable option
- Upgrading council-owned materials recovery facilities
- Expanding collection and processing capacity to enable recycling of a wider range of material types
- Introducing glass fines recycling
- Developing and implementing comprehensive community education programs
- Developing and evaluating purpose-built waste education facilities
- Promoting services and facilities via advertising campaigns and direct mail
- Developing and distributing a householder recycling guide
- Recruiting suitably skilled personnel to ensure effective delivery of new services



Ipswich 3R'S promotional van (EnviroCom)



Unloading recycle for sorting (Mackay City Council)



Glass recycling at Hervey Bay MRF (EnviroCom)

Townsville and Thuringowa City Councils

In 2001, the future of kerbside recycling in Townsville and Thuringowa, and more broadly in North Queensland, was in doubt.

The neighbouring cities of Townsville and Thuringowa had different recycling systems in place and separate arrangements for collection and processing of recyclables.

With funding from the Covenant, Nolan ITU undertook a north Queensland recycling infrastructure feasibility study. This study found that recycling in the region would be viable if regional materials recovery facilities were built and suitable model contracts developed.

As a result of community demand for kerbside recycling services, Townsville and Thuringowa agreed to proceed under a model contract which included collection and processing arrangements and establishment of a regional materials recovery facility.

Collection contracts were awarded to Townsville Council's CitiWaste business unit, and the materials processing contract to Visy Recycling.

The councils surveyed community attitudes and knowledge prior to developing the education strategy.

Communication initiatives included well-signed recycling vehicles, householder information packs, television advertising and use of the Beverage Industry Environment Council's 'Don't Waste...' logo.

In addition to education program funding through the Best Practice Kerbside Recycling Project, the Townsville and Thuringowa materials recovery contract required an annual education contribution.

Ratepayers in both cities now enjoy integrated kerbside recycling services and effective public place recycling initiatives that yield cost effective resource recovery.

Livingstone Shire Council Community Recycling Drop-off Centre

Feasibility studies in the small central Queensland Shire of Livingstone showed that kerbside recycling was not a viable option.

The council had in place a small glass deposit centre that was neither well used nor well managed.

With support from a Best Practice Kerbside Recycling Grant, and in consultation with the local community, Livingstone established an accessible recycling drop-off centre adjacent to the Nerimbera State School. The school community and shire council jointly drove the project.

The Livingstone Drop-off Centre is easily accessible to passing traffic, provides clear instructions for users and is well maintained.

Since the first months of the project, Livingstone Shire has increased its resource recovery from approximately 16 tonnes a month to 30 tonnes a month. Council sources suggested this was just "the tip of the iceberg for recycling in the shire".

The Livingstone case demonstrates that drop-off centres can provide a sustainable alternative to kerbside recycling and a valuable community facility in rural Queensland.



Livingstone Shire glass recycling at Cooee Bay (Livingstone Shire Council)



New Livingstone drop-off centre (Livingstone Shire Council)



Drop-off centre recycle collection (Livingstone Shire Council)

Best Practice Kerbside Recycling at Townsville-Thuringowa

In late 2002, Townsville and Thuringowa City Councils revamped their separate kerbside collection systems with an integrated best practice program servicing both cities, and the results have far exceeded expectations.

With high contamination levels, an inefficient materials recycling facility (MRF), lack of markets for collected materials, and poor risk management of fluctuating commodity prices and volumes, Townsville and Thuringowa were among the state's worst recycling performers.

Grant Steen, Manager of Townsville CitiWaste freely admitted: "recycling levels in 2001 were just a fraction of those of comparable regional cities such as Rockhampton, and a full 60 percent below the state average."

"With high contamination levels and poor marketing of collected materials, we were faced with the real possibility of shutting the system down."

As part of its Covenant work, the EPA developed model contracts based on earlier efforts by Brisbane City Council. Encouraged by Nolan-ITU's report on the viability of recycling in

the north and ongoing community support for kerbside recycling, both Councils bit the bullet and invested in a new best practice program.

"From a low of only 26 kilograms of recyclables per person in 2001, the rate almost doubled to over 50 kilograms in 2004 while contamination levels fell from 40 to 11 percent," Mr Steen said.

"From 60 percent below the state average of 43 kilograms per person in 2001, we're now 12 percent above the state average. This means that less recyclables now go to landfill and more are sold to market.

"These improvements in kerbside recycling performance have delivered important economic benefits for both councils and ratepayers. Townsville alone saves \$600,000 a year from improved collection and sorting efficiencies and marketing of materials."

From a cost of \$14 per household in 2001, recycling now delivers a benefit of \$17 per household per year, a \$31 turnaround. Other less tangible benefits include increased community participation in recycling and

improved environmental awareness from knowing the program really works.

MRF operator Visy Recycling has also been pleased with the results, as Queensland Recycling Manager John Hadden explained.

"The proportion of aluminium to glass collected in Townville is significantly higher than the Queensland average, reflecting industry efforts to ship food and beverage products to the north in lighter aluminium to cut transport costs.

"While aluminium is around 13 times lighter than glass, it is around 20 times more valuable as a secondary-market commodity. We didn't fully anticipate this and have been pleasantly surprised by the end result."

Hadden concluded: "This means that kerbside recycling in Townsville and Thuringowa has a rosier future than we originally hoped. The extra revenue from aluminium means Visy can further invest in the Townville program and help to secure its future."

Townsville alone saves \$600,000 a year from improved collection and sorting efficiencies and marketing of materials.



Recycling collection truck (Townsville City Council)



Public Place Recycling and Litter Management

While opportunities to recycle domestic packaging waste have been relatively well established in major population centres for some years, the packaging waste generated away from home is now being tackled.

With populations growing and people spending increasing amounts of time in public places, at entertainment venues and sporting events, more food and beverage containers are being disposed of away from home.

Providing recycling facilities at public venues means that the growing volume of packaging discarded is not a wasted resource, as it can be collected and recycled rather than going into landfill or becoming litter. The Queensland public views packaging litter as a significant environmental issue, so its management and minimisation are key components of the Covenant.

In partnership with the EPA, the Beverage Industry Environment Council (BIEC), through its local manager, has assisted Councils to implement Public Place Recycling Systems with infrastructure placement, signage and training. The training has been based around their Bin Infrastructure System (BinS), an assessment tool for performance

monitoring of litter abatement, resource recovery and cost savings.

The Public Place Recycling / Litter Management Grants Scheme enables local governments to implement public place recycling initiatives in community spaces and at sporting and community events.

In addition, the grants complement the efforts of local governments moving towards holistic resource recovery and recycling programs through the Best Practice Kerbside Recycling Program.

The following Councils have shared in infrastructure funding of \$204,000 under the program:

- Bowen Shire
- Redcliffe City
- Caloundra City
- Pine Rivers Shire
- Redland Shire
- Hervey Bay City
- Ipswich City
- Townsville City
- Thuringowa City
- Toowoomba City

Events and community facilities

In addition to ongoing support for public place recycling, the EPA, in association with local governments, has actively supported public place recycling initiatives at a number of events and community facilities.

These include:

- Brisbane Turf Club, Doomben
- The Gabba (Brisbane Cricket Ground)
- Suncorp Stadium
- ANZ Stadium
- Southbank Parklands
- Dairy Farmers Stadium, Townsville
- The RNA showgrounds
- University of Queensland, St Lucia

Public Place Recycling has now been adopted at non-funded events and locations as a result of increased public awareness and the community expectation that recycling facilities will be provided. The Big Day Out and Woodford Folk Festival are two such events.

It is estimated that more than 500 tonnes of discarded packaging is now recovered from major events in Queensland every year.



The Strand, Townsville (BIEC)



Redcliffe bayside recycling (Redcliffe CC)

Public Place Recycling at Doomben

When jockey Chris Munce brought Queensland Oaks winner Vouvray back to scale after winning the classic of the winter carnival at Doomben Racecourse in 2004, he was greeted with the usual roar of approval from racegoers when well-backed horses save the day.

But what may not have been clear to Munce was that at the feet of the throng lining the rails and the packed grandstand there was very little litter. Munce would have had to look very hard to see any discarded bottles, spent form guides, and betting slips bearing the names of horses slower than Vouvray.

Brisbane Turf Club, which operates the Doomben track, has had on-course public place recycling since November 2002 and was the first racecourse and major sporting facility

in Australia to introduce it.

Brisbane Turf Club's Chief Executive Sean Kelk said at first he was sceptical about adopting on-course recycling, but was pleasantly surprised at how well it turned out.

"Our savings are in the thousands of dollars a year from avoided waste disposal costs. We've also saved money and time in cleaning up after meetings and the course just looks better on race days and the patrons appreciate that."

The program at Doomben operates along similar lines to all public place recycling initiatives and uses a dual bin system with the yellow lid for recyclables.

Kelk explains, "Racegoers recycle at home using a yellow-topped bin and we tried to mimic this system here.

With the EPA's help we've kept it simple and it has worked very well with contamination levels remaining low from the outset.

"Since starting the program, over 30 tonnes of plastic, glass, paper and cardboard is being recycled annually. Even Vouvray's droppings are now recycled at a worm farm and I hear it produces very good compost."

The success of the public place recycling program sees the Gabba recycle eight tonnes at every Lions' home game and substantially more at the annual November cricket test match. During the 2003 World Rugby Cup, 12 tonnes were recycled at Suncorp Stadium and a further four tonnes at Dairy Farmers' Stadium, while the University of Queensland's St Lucia campus recycles over one tonne every week.

Our savings are in the thousands of dollars a year from avoided waste disposal costs.



Recycling at Doomben Racecourse (EPA)



Collected recycle (EPA)





Waste Education Kit (EnviroCom)



Kerby (LAWMAC)



The Wagon (Toowoomba City Council)

Education and communication

Community education is a critical aspect of successful waste minimisation and resource recovery initiatives.

For Queensland local governments that administer large areas with small populations and limited resources, raising community awareness can be difficult.

Waste Education Kit

The EPA commissioned the development of a comprehensive kit *Waste education in Queensland - a guide to developing, implementing and evaluating waste education programs*.

Providing a comprehensive guide to support Council waste, recycling and litter education projects, the kit includes:

- A *how to* guide for developing a community waste education strategy
- Decision-making tools for implementing education programs
- Checklists and pro forma for posters, fact sheets, surveys, curriculum materials and advertising
- Generic resource materials that can be customised for local use
- An image library for use in developing local materials

The kit is available from the EPA website, and was distributed to Queensland's 125 Councils with follow-up training.

Regional Mobile Education Units

Kerby

The Local Authority Waste Management Advisory Committee (LAWMAC) represents 31 north Queensland Councils from Mackay to Cooktown and west to Mount Isa.

In 2002, LAWMAC was awarded Covenant funding to support development of a mobile waste education unit promoting waste minimisation and recycling messages throughout the region.

A former Brisbane City Council bus was named *Kerby* and refitted to incorporate static and interactive displays addressing various waste issues. Since its launch in September 2002, *Kerby* has visited regional shows, community events and more than 500 schools throughout the LAWMAC region, hosting over 50,000 visitors.

Local media have promoted *Kerby's* key messages and local governments have reported increased demand for recycling services, improvements in recycling behaviour and in some cases, decreased waste to landfill.

The Wagon

The Reduce, Re-use, Recycle trailer known as *The Wagon* services 13 local governments in the Darling Downs Regional Organisation of Councils.

Coordinated by Toowoomba City Council, *The Wagon* contains educational displays and interactive resources for both the community and schools. Designed for easy transportation and manoeuvrability, the trailer can be set up inside or outside at shopping malls, regional shows, community events and schools.

The Wagon generated interest prior to the launch through a naming and logo competition. Support from local businesses including a regional television station, has assisted with funding and promotion.

Evaluation of waste education facilities

The effectiveness of both mobile and fixed purpose-built facilities dedicated to community waste education is currently being evaluated.

The results of this study will help determine the future targeting, placement and use of such facilities within the framework of community education programs.

Industry

Industry plays a critical role in the success of the Covenant, with Queensland businesses showing that implementing the Covenant's principles makes good business sense.

The Covenant requirement to develop, implement and evaluate action plans has changed the culture of some Queensland companies, involved staff in environmental decision-making and provided business opportunities for others.

K R Castlemaine Foods

Darling Downs Foods was one of the first Queensland companies to become a signatory to the Covenant. Darling Downs Foods merged with Castle Bacon in 2003 to form K R Castlemaine Foods, one of the largest manufacturers of smallgoods in Australia.

K R Castlemaine Foods sees its involvement in the Covenant not just as one of compliance, but of good corporate business. Everyone in the company, including the chairman and senior managers, participates in developing and implementing action plans.

Through internal environmental media updates, staff are kept up to date on the company's progress with

its action plans, as well as broader Covenant initiatives throughout Australia.

In February 2002, the Toowoomba facility commissioned a full audit of all its production waste with a focus on packaging in the waste compactor. This has led to the elimination of wasteful in-house packaging practices.

The company's other major successes include:

- Almost 700 tonnes of cardboard boxes and several tonnes of cardboard inner tubes being recycled annually
- 62,000 paper ingredient bags weighing 14.3 tonnes being included in the cardboard recycling stream each year
- Waste cardboard being transported in special tippers rather than on pallets, eliminating 40,000m of stretch wrap from the waste stream

K R Castlemaine Foods also works with suppliers to substitute excessive packaging or provide take-back schemes. This has resulted in substantial waste reduction and cost efficiencies for the company and suppliers.

For example, chicken meat was previously supplied in non-recyclable wax cartons, which comprised 9.4 percent of the total waste stream. The bulk of chicken meat now arrives packaged in recyclable cardboard or re-usable plastic tubs, eliminating over 13 tonnes of waxed cardboard from landfill annually.

"During the formulation of our NPC Action Plan, the Environmental Manager insisted that we should go 'beyond compliance'. The investigative and analytical procedure required to uncover areas where beneficial changes should be made regarding 'packaging' is time consuming. It was decided to enlarge the scope beyond packaging during the investigative process and include all other wasteful practices and procedures that have 'always been done that way'. Subsequently our eco-efficient Materials Efficiency Strategy (MES) was hatched. K R Castlemaine Foods (Toowoomba) decided to investigate all waste streams and wasteful practices and to develop stewardship strategies for precious resources....."

**K R Castlemaine Foods
National Packaging Covenant
Annual Report 2004 and Action Plan 2005**



Commercial collection (Gold Coast City Council)



Cardboard recycling (KR Castlemaine Foods)



KR Castlemaine waste stream audit (EnviroCom)



Golden Circle operations (Golden Circle)

Golden Circle Limited

Queensland icon Golden Circle Limited became a Covenant signatory in 2000. Based at Northgate in Brisbane, Golden Circle also has operations in Victoria and New South Wales.

Golden Circle's successes under the Covenant include:

- Working with suppliers, customers and industry associations to reduce packaging waste
- Changes in packaging types to achieve greater recyclability – 95% of Golden Circle products now come in readily recyclable containers
- Implementing engineering solutions to reduce production waste by more than 35 tonnes in 2003/04
- Forming a Process Improvement Group
- Developing an Internal Packaging Waste Tracking System which results in landfill savings and internal and external re-use opportunities
- Waste reduction training integrated into the internal environmental training program and via staff newsletters



Markwell's bait bags (Markwell's)

Markwell's

Queensland-based fishing bait retailer Markwell's has partnered with the EPA, Sea World, Sunfish Queensland, PCC Packaging and Healthy Waterways to make biodegradable bait bags a reality in the market place.

Thousands of biodegradable bait bags have been sold over the past three years with plans to introduce different sizes and bait types. While production of these bags is currently more costly than conventional plastic bags, Markwell's is selling biodegradable bags at the same price.

The EPA has been working with the fishing bait industry to find a long-term solution to the serious environmental impact of plastic bait bags.

The estimated three million bait bags used in Queensland each year are a significant component of marine litter. Plastic bags ingested by turtles, dugongs and other marine mammals can block the animals' digestive systems and cause their death.

The biodegradable bait bags are made from renewable cornstarch and decompose more quickly than plastic bags. The breakdown process is even more rapid in biologically active



ReBUL collapsible boxes (ReBUL)

environments such as the seabed, so they have less potential to adversely affect marine animals.

The challenge now is for other state and national fishing bait retailers to match Markwell's and help protect the environment by using more environmentally-friendly packaging.

ReBUL Packaging

ReBUL (which stands for Recyclable Bulk Packaging) is a Queensland-based family company that has identified implementing company action plans as an opportunity to develop a new and innovative business venture for the sustainable transportation of products.

ReBUL's product line consists of custom-sized cardboard boxes and pallets.

The boxes are made from 100 percent recycled paper and are 100 percent recyclable. They are lightweight and require no additional packaging insert support or specialised tools for assembly.

Because the boxes can be collapsed after use, they are ideal for storing, or for supplier take back and re-use. The six-panel design allows damaged panels to be easily replaced and recycled.

Industry case study – Bunnings

In 2001 and 2002 the EPA issued compliance notices stating companies could either sign up to the Covenant or elect to follow the more onerous rules of the NEPM. Notices were sent to companies whose packaging dominated the waste stream, which in effect targeted large national or multi-national companies.

Forty companies received notices, including Harvey Norman, KFC and Pizza Hut, Streets, Ridley, Yakult, Mayne Health, Mitre 10, and Bunnings. All elected to join the Covenant, although one company took its obligations further than the others.

Bunnings Building Supplies Limited, a division of the Wesfarmers Group, received its compliance notice in November 2001.

Mark Gomm, National Risk Analysis Manager at Bunnings, explained that the compliance notice from the Queensland EPA came as quite a shock.

“We’d vaguely heard of the Covenant, but we weren’t really looking at waste, litter and recycling issues at

the time, and product stewardship was a term we certainly hadn’t heard of,” Mr Gomm said.

“When the issue was put to Bunnings directors, it was well supported. Our first action plan signalled a commitment to packaging waste as well as other sustainability outcomes.

“We not only learnt what product stewardship meant, but started on a program that has changed the culture of the business, our suppliers, and most importantly, our customers.

“Beginning with internal packaging and waste outputs, we now recycle around 17,000 cubic metres of cardboard and plastics nationally each year while warehouse stores have reduced landfill costs by up to \$18,000 a year.

“Bunnings now takes a more strategic approach to product stewardship, influencing our supply chain, and seeking opportunities to partner with suppliers and waste management agencies in recovery initiatives.

“We’re looking at water and energy use in our stores as well as

sustainability issues in the wider community. We want to play our part in safeguarding tropical rainforests while also tackling resource consumption and litter closer to home.

“Bunnings’ program to reduce the use of plastic shopping bags has been well received by our customers. It has cut the number of bags entering the waste stream by more than 2 million, while over \$100,000 has been donated to Keep Australia Beautiful from the 10 cent levy on plastic bags sold.

“We’ve adopted a sustainable timber purchasing policy to ensure all timber products are sourced from legally operating and sustainably managed forests, and we’ve changed to recycled plastic pallets at our distribution centres to reduce timber usage.

“At Bunnings we now understand how much we can influence positive environmental performance through the supply chain, and we’re committed to continuous improvement as part of our overall social responsibility.”

***Each store now saves around \$18,000 a year
in avoided waste disposal costs.***



Bunnings retail recycling (EPA)



Bunnings loading dock (EPA)



Bunnings customer recycling (EPA)

Research and Development

Transport and Logistics Study

The tyranny of distance is a major factor preventing the introduction of kerbside recycling to rural and regional communities in Queensland.

The cost of collecting from individual properties and then transporting relatively small quantities of recovered resources to distant markets is often environmentally and economically prohibitive.

The Transport and Logistics Study was commissioned in 2004 to address these issues. Its key purpose was to identify hubs for developing materials recovery facilities. By delivering and sorting recyclable

materials at these hubs, the consolidated material then has a higher value, making council recycling schemes more viable.

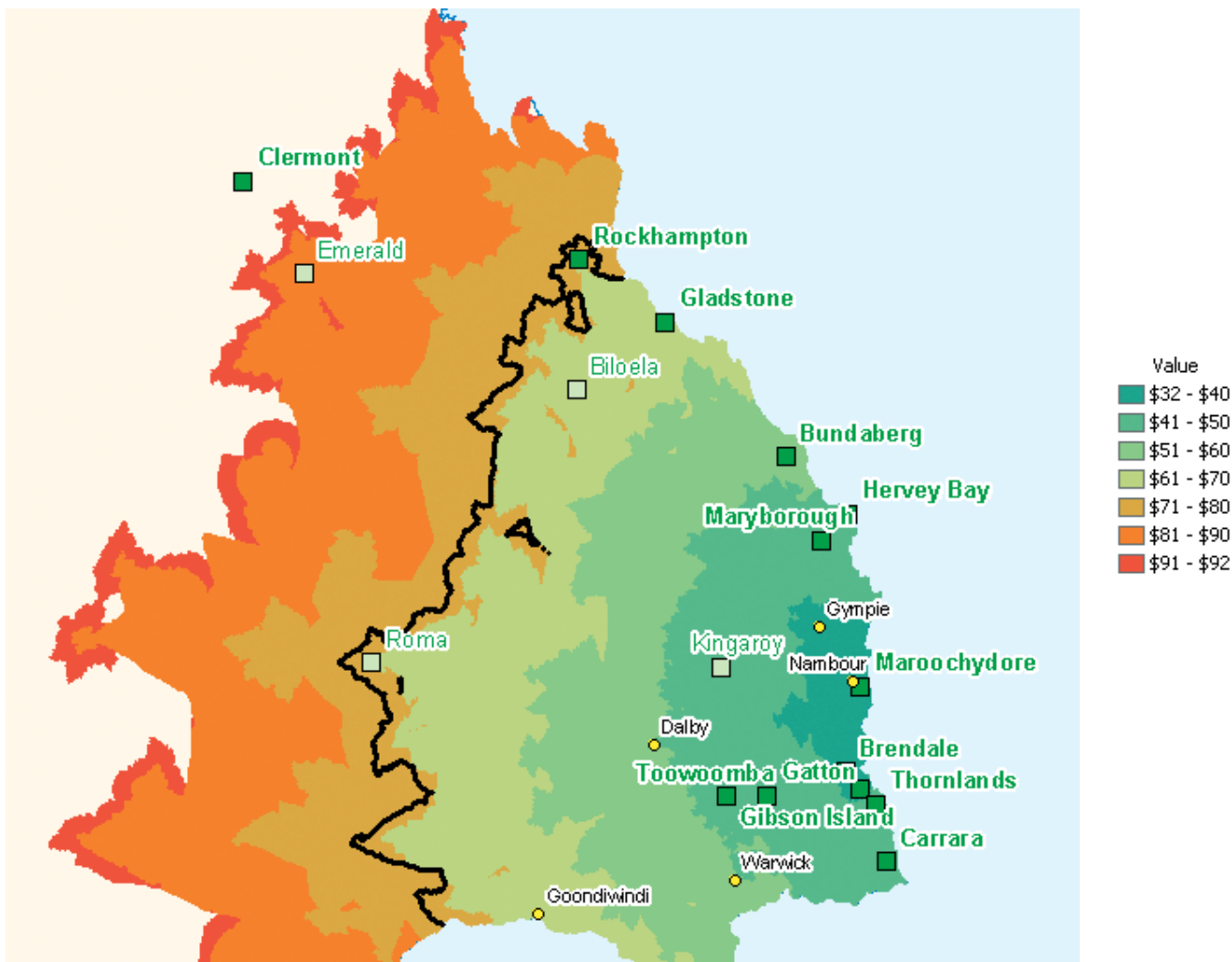
As a result of this study, an electronic decision-making tool – the Recyclable Materials Transport Decision Support System – has been developed to examine data and identify opportunities for collection of both commingled and individual material types.

The transport and logistics model was developed using existing transport routes and applications for delivery of recovered resources to the hubs and to final markets.

Cost/benefit analysis can be undertaken by applying a number of variables to the model, including market prices for recovered resources.

The EPA and LGAQ will have access to the model to assist Councils to make informed decisions about the future of recycling in their area.

The project is a forerunner to studies and programs that support development of secondary markets for recovered resources in rural and regional Queensland.



Catchment map showing the collection catchments based on price for glass being sent to the Maroochy Shire MRF (GHD)



Plastic(HDPE) flakes for reprocessing (EnviroCom)

Community Based Recycling in Queensland

In some Queensland rural communities, small population size means that market-based recycling is not commercially viable. However, community groups and not-for-profit organisations provide kerbside and drop-off centre recycling in a number of areas.

In Rockhampton the award winning materials recovery facility is staffed by correctional facility labour.

Nigel Tuckwood, Rockhampton City Council waste services coordinator said: “Here at Rocky Recycles we recycle 650 tonnes a month with almost no contamination thanks to the continued support of the Rockhampton community. We’re pleased with the support and cooperation of Corrective Services over the last 13 years and the guys themselves appreciate the work opportunity.”

The EPA’s *The state of waste and recycling in Queensland 2003* report places Rockhampton in the top ten recycling programs in the state. With 48.7 kilos of household recovered resources per person per year, Rockhampton outperformed other local governments with higher



Recovered resources (Rockhampton City Council)

populations, including some in south east Queensland.

Community-based organisations deliver effective recycling services as part of a wider social agenda, providing employment for otherwise marginalised members of the community and supporting fund-raising initiatives.

A comprehensive guideline *Sustainable community-based recycling in Queensland: a guide for local governments* is being developed with Covenant funding. The guideline surveys community based recycling schemes in Australia and overseas to establish a framework for local government to develop and manage community-based recycling initiatives.

The guide complements *Towards best practice kerbside recycling in Queensland* and provides a step-by-step decision-making tool for local government.

Secondary markets for recycled plastics

In 2001, the Industry Grant Program funded feasibility studies to determine the viability of developing Queensland-based secondary markets for recovered plastics. The



Sorting plastics (Mackay City Council)

aim was to reduce kerbside collection costs by eliminating the need to transport recovered plastic to southern states.

Two applicants, Visy Recycling and Recycled Plastic Technology, were awarded grants to determine the feasibility of establishing a High Density Polyethylene (HDPE) recycling plant in Brisbane.

The processing of HDPE to produce resin suitable for re-use, and the manufacture of conduit, flood pipe and plastic strapping from the resin were both considered.

High export prices for plastic, competition from existing plants in Victoria and New South Wales and the limited amount of resources recovered from kerbside systems in Queensland meant that developing local processing facilities was not commercially viable.

Since this study was undertaken, there has been a substantial increase in both the number of local governments undertaking recycling and the amount of recyclate collected.

As a result, Australian Plastics Reprocessing has now established an HDPE processing plant at Rocklea.



Rocky Recycles (Rockhampton City Council)



Sorting recyclate at MRF (Visy Recycling)

The way forward – a new and strengthened Covenant

With the current Covenant expiring in July 2005, extensive national and state consultation has been conducted and a draft proposal prepared for a new and strengthened Covenant for 2005-2010.

Key elements of the draft include:

- Specific environmental, social and economic goals
- Overarching targets addressing reductions in the amount of packaging landfilled, the use of non-recyclable packaging, increase in recovered and

recycled packaging and the recycled content of packaging

- Explicit Key Performance Indicators (KPIs) to enable more detailed, transparent and accountable performance reporting
- More rigorous governance and compliance procedures to determine whether signatories are fulfilling their obligations
- Broadened coverage to include distribution packaging and collection systems, and to recover

consumer packaging at public places, workplaces and commercial and industrial premises

- Revised funding arrangements with industry commitment to a minimum of \$3 million a year
- Amendment of the Environmental Code of Practice for Packaging to further reflect product stewardship obligations
- A strengthened NEPM
- More rigorous enforcement by state regulators

Further information

Further information about the National Packaging Covenant is available on the Department of Environment and Heritage website at www.deh.gov.au/industry/waste/covenant

The action plans of signatories to the Covenant can be viewed on the Packaging Council of Australia website at www.packcoun.com.au

Waste education in Queensland: a guide to developing, implementing and evaluating waste education programs is available on the Environmental Protection Agency website at www.epa.qld.gov.au

Towards best practice recycling in Queensland: an information kit for local government and Waste and recycling data collection protocols are available on the LGAQ website at www.lgaq.asn.au



For more information

- > visit www.epa.qld.gov.au/sustainable_industries
- > email sustainable.industries@epa.qld.gov.au
- > call (07) 3225 1999