

Submission to the Tasmanian Parliamentary Inquiry

‘Waste Management in Australia’

December 2004

The Alliance members:



NATURE CONSERVATION COUNCIL OF NSW Inc.



GREENPEACE

Local Government
Association of NSW



Shires Association of NSW



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Attachments

Attachment A: EPHC communiqué, 3 December 2004

Attachment B: *Say No to the Waste Club – a Review of the National Packaging Covenant*

Attachment C: *Understanding Beverage Container Recycling: A Value Chain Assessment*

Attachment D: *The Great Waste Debate – Discussion Paper on Extended Producer Responsibility and Waste Avoidance*

1. Introduction

This submission has been prepared in response to the Tasmanian Joint Standing Committee on Environment, Resources and Development's terms of reference to investigate and make recommendations to the Government concerning domestic, industrial and hazardous waste management.

The Boomerang Alliance wishes to thank the Committee for allowing a late submission.

The Boomerang Alliance is a coalition of organisations working towards zero waste in Australia via introducing Extended Producer Responsibility (EPR) across the packaging sector. The 'goal of zero' demands that Australia changes course on waste as a matter of urgency, or risks falling further and further behind world's best practice.

The Alliance is committed to the introduction of EPR models to deal with waste across a range of industry sectors, and our members have been actively engaged in this objective for many years.

Australia's continued failure to recover waste through effective recycling and reuse of products results in: wasted resources, water and energy; groundwater contamination and leaching of toxic waste into water courses; and terrestrial and marine litter – harming wildlife and spoiling the countryside.

It is important to note that Container Deposit Legislation (CDL) is just one approach in the EPR sphere, albeit an important one, to reduce beverage container waste. We would equally highlight British Columbia's (Canada) paint, solvent and aerosol return scheme based on 'ecofees' as an example of how a deposit mechanism can drive recovery.

The Alliance believes that it is untenable for local governments and their rate payers to continue to be expected to subsidise individual consumers and businesses that fail to deal responsibly with the waste they create and discard. EPR redirects the costs of managing the waste stream to those industries and consumers that are responsible for production of waste and litter in the first place, penalising poor performers and creating a more equitable cost base for responsible companies that embrace cleaner production and waste avoidance.

Problems associated with waste mismanagement are fundamental issues for Tasmania and Australia as a whole. Successful waste practices that deliver sustainable environmental and economic outcomes for the long term will benefit the community at large.

In particular the current approach to minimise packaging waste – The National Packaging Covenant (NPC) – is an area where individual states and territories need to consider reform. 83,939 tonnes of packaging are consumed in Tasmania each year, and just 18% is collected for recycling through the kerbside system.

Implementing take-back schemes such as Container Deposit Legislation (CDL) for pervasive forms of packaging, combined with wider spread zero waste initiatives such as a landfill ban or an Advance Disposal Fee (ADF), will double recycling rates and provide local rate payers with financial relief from the estimated \$3,700,000 burden to fund kerbside recycling.

The Boomerang Alliance congratulates the Committee for taking the initiative in calling for public comment on this important State issue, and in pre-empting the need to move beyond the limited measures of the NPC.

2. The National Packaging Covenant

All States and Territories bar the Northern Territory adopted the National Packaging Covenant (NPC) in August 1999. The NPC is a self-regulatory agreement between industries in the packaging chain and all spheres of government.

It is 'based on the principles of shared responsibility through product stewardship, and applied throughout the packaging chain'. The Covenant aims 'to minimise the environmental impacts of consumer packaging waste throughout the entire life cycle of the packaging product, close the recycling loop, develop economically viable and sustainable recycling collection systems and ensure that the voluntary process continues'¹.

The original NPC ran from 1999 to 2004, with limited success. A 2001 evaluation of the Covenant by Nolan ITU² found that 'when progress toward the Covenant's explicit objectives is looked at more closely, it becomes apparent that achievement has been particularly evident in terms of "**process**" aspects (e.g. establishing a framework, forum, and collaborative approaches). However, there is less evidence of achievement of "**outcomes**" intended by these "processes" (e.g. lifecycle management of packaging, real and sustainable environmental benefits, and resolution of post-consumer packaging waste issues). Effectively, the "**lower hanging fruit**" has been picked and more needs to be done to achieve tangible gains.'

Past action plans of NPC signatories show that industry has generally chosen 'opportunistic' targets, largely pursuing light weighting and waste reduction in production. While environmentally advantageous, there is no evidence that the NPC stimulated these actions. In fact, a wealth of sustainability success stories around the world demonstrate that profit and reputation rewards alone are sufficient to deliver these outcomes. Du Pont and Fuji Xerox have achieved waste reductions of over 40%, while NPC champions have been satisfied with comparatively insignificant improvements. Any smart business will strive for 'waste avoidance' by simply pursuing efficiency processes that make the business more successful.

Recognising these inherent weaknesses in the NPC, Federal, State and Territory Environment Ministers at a meeting of the Environment Protection and Heritage Council on 3 December 2004 decided to incorporate robust targets into the NPC Mark II.

¹ Department of Environment and Heritage website: <http://www.deh.gov.au/industry/waste/covenant>

² Nolan ITU and SKM (2001). *Independent Assessment of Kerbside Recycling in Australia – Revised Final Report Volume I*. Prepared by Nolan ITU and Sinclair Knight Merz for the National Packaging Covenant Council. Available online at <http://www.packcoun.com.au/NPC-FINAL-01.pdf>. Link checked December 2004.

The packaging industry will now be required to meet tougher targets for reducing the amounts of packaging going to landfill, increasing recycling rates, increasing amounts of recycled content in new products, and reducing the use of non-recyclable packaging. Phasing out plastic bags is one key component of the plan. See Attachment A for the EPHC communiqué, 3 December 2004.

The Boomerang Alliance will, in addition to high targets, be campaigning for the necessary practical mechanisms to achieve them such as landfill bans, deposits, refillables, advanced disposal fees, and measures to address all materials individually. Targets will be meaningless unless there are programs in place to reach them.

3. Extended Producer Responsibility

Essentially, EPR means producers' responsibility for their products is extended to the post-consumer stage. In other words, under EPR, a company must be concerned not only with making the product and how it functions, but also with what will become of the product at the end of its useful life. In the case of consumer goods, this principle shifts responsibility for recycling and waste disposal from local government to private industry, thereby internalising the costs of waste management into product prices. Under such a scheme, citizens pay for waste management as consumers when purchasing products, rather than as homeowners through local taxes. EPR programs typically are aimed at increasing recycling and often contain mandated recycling targets.

While EPR is intended to reduce the amount of materials going to landfill, it is also aimed "upstream" – at every stage from product design to material selection. Its underlying theory is that if producers must pay for waste, they will have an incentive to make products that are less wasteful. EPR provides the missing link between product design and materials reuse and recycling – a link that is vital in making recycling efficient and economic. The movement toward designing for disassembly, developing reverse logistical systems, and 'demanufacturing' are strategies industry has used in response to the new incentives posed by EPR.

EPR can be applied to all waste streams as it is based on a preventative approach to waste management rather than dealing with 'post consumer stage' issues. The physical, financial and environmental responsibility of a product's life cycle is therefore passed onto the producer.

EPR was first initiated in Germany under its Packaging Ordinance of 1991. This, in effect, shifted responsibility for packaging waste (one-third of the municipal waste stream) from local government to private industry. The concept has been endorsed by the European Union (EU) and is being implemented in EU member countries for packaging and other products. The idea has subsequently spread around the world, including Asia, where Japan passed EPR legislation for packaging in 1995. The Japanese government has been funding studies to document EPR programs in the Organisation of Economic Cooperation and Development (OECD). It has found that 18 OECD countries have EPR policies.

There is no "universal model" for EPR programs. They vary by country and by the products being targeted. Germany shifted full responsibility for packaging waste to industry, whereas in Japan and France, government and private industry share this responsibility. There is great variation in the level of recycling mandates and in the definitions of recycling and "producer". EPR is most often applied to packaging, but it is also being employed for products such as end-of-life vehicles, electric and electronic goods, paints, batteries, and graphic papers.

PRODUCTS covered by EPR schemes INTERNATIONALLY include:

- Waste Products
- Waste Oils
- Hazardous Material
- Packaging
- Bio-Waste
- Consumables
- Vehicles
- Tyres
- Carpet
- Batteries
- Refrigerators
- Computers
- Electronic Equipment
- Washers/Driers
- Mobile Phones
- Paints
- Aerosols
- Printer Cartridges & Toner
- Newspapers
- Bottles & Cans

EPR legislation requires the manufacturing or packaging sector to look towards truly sustainable solutions in regards to product manufacturing, waste minimisation and life cycle management. Change would therefore be quantifiable rather than a 'token gesture'.

Former US President Bill Clinton created the President's Council on Sustainable Development (PCSD) in 1993 to follow up the Rio Conference goals on sustainability. In its February 1996 report, the Council fully supported EPR, and organised a follow-up workshop on EPR at the White House Conference Center in October 1996. The workshop was intended to showcase U.S. company initiatives that involve EPR principles. Following are some of the highlights from the presentations at the workshop:

- **Comprehensive lifecycle approach to products.** "Asset management", a corporate-wide program at Xerox, has changed materials selection and product design. Xerox's comprehensive program involves product take-back, reverse logistics, design for disassembly as well as reuse, remanufacturing, and recycling. The company has environmental guidelines for the preferred management of the products it takes back.
- **Companies extending their responsibility to post-consumer products.** Through a national take-back program for spent Nickel-Cadmium (Ni-Cd or NiCad) batteries, launched by manufacturers of batteries and the products that contain them, industry is paying for collection and recycling. The program is operated by the Rechargeable Battery Recycling Corporation (RBRC) a non-profit company set up by industry. Another product take-back program is run by DuPont which is voluntarily taking back plastic (PET) films which the company chemically reprocesses into feedstock for new PET.

Historically, packaging generally, and beverage containers specifically are the most common target to start the shift towards the EPR approach. The rationale for this is that while packaging may not be the most hazardous form of waste, it is certainly the most pervasive.

Packaging:

- is a problem every Australian has to deal with;
- represents between 30-50% of all litter;
- makes up nearly 25% of all household domestic waste.

This means that an EPR approach commenced by targeting packaging has an immediate effect both environmentally and economically.

An EPR scheme on packaging also creates the infrastructure for other waste reduction programs. Because packaging is the most pervasive and widespread “waste of concern” it can provide the “critical mass” to develop recycling centres and new collection infrastructure. This infrastructure in turn allows governments to introduce cost-effective schemes for electronics, batteries, paint and chemical residuals, mobile phones etc.

4. Successful EPR Implementation

Many countries have adopted EPR including Canada, USA, Japan, Taiwan, Israel, Belgium, Korea and the Netherlands. But the best results from EPR legislation have undoubtedly been achieved in Europe in Germany, Denmark, Switzerland and Sweden.

The three main industry sectors that are utilising EPR are:

- Packaging and manufacturing
- Electronic and electrical waste
- Vehicle production and take-back

In Australia, EPR schemes are becoming common. The South Australian CDL program has enjoyed outstanding success, reducing litter by up to 50%. National programs to recover newsprint (Publishers National Environment Bureau voluntary scheme), tyres, used agricultural and veterinary chemical containers, and waste oil have made significant gains.

NSW introduced widespread EPR legislation in 2001 and is moving into the implementation phase. Western Australia is moving into the consultation process to also introduce EPR into legislation.

4.1 Packaging and manufacturing

As EPR policies for packaging began to spread throughout Europe, the European Union issued its own Packaging Directive in 1994 to harmonise policies in its member countries. This directive embraced the concept of EPR and mandated recycling targets for packaging waste of 25 to 45 per cent, with a minimum 15 per cent recycling rate for each material.

As a result, all 15 member countries have EPR systems for packaging, although the policy is taking different forms in different countries. Many of these systems are already in operation, while others are still under development. Japan's law requiring EPR for packaging was passed in 1995 and went into effect in 1997. 28 countries now have packaging take-back laws.

The variations in EPR programs for packaging are substantial, with major differences relating to:

- allocation of responsibility between government and industry actors in the packaging chain;
- level of mandated recycling rates;
- time frame for achieving mandated recycling rates;
- what counts as recycling;
- the packaging materials included in the program;
- types of collection systems used;
- use of deposit/refund mechanisms; and
- implementation through third-party organisations.

The most common form of EPR on packaging is CDL. Almost uniformly, implementing CDL schemes increases recovery rates dramatically and halves litter levels. Implementation of CDL in California has proven that CDL complements kerbside recycling, rather than damaging kerbside systems as the bottling industry claims.

4.2 Electric and Electronic Equipment

Electric and electronic equipment (ewaste) is a major focus of EPR policies around the world. In Europe, the pattern of policy development has been similar to that for packaging – a number of countries have mandated EPR for these products and now the EU is developing its own directive in an attempt to harmonise policies. EPR legislation for ewaste has already been adopted in Switzerland, the Netherlands, Italy, and Norway, and is close to adoption in many other countries.

The EU's 1998 draft directive is sweeping in scope, covering a very broad range of electric and electronic products such as household appliances, communications and lighting equipment, clocks, toys and electric shavers.

Manufacturers and importers would be responsible for taking these products back and for meeting a range of collection and reuse/recycling targets (e.g. 80 to 90 per cent of items such as large household appliances and personal computers would have to be collected, and 70 to 90 per cent of that amount would have to be reused/recycled). Take-back would be free to households, with the costs built into the price of new products. Waste-to-energy recovery would not count toward the targets and phase-out of heavy metals in the equipment would be required.

Unlike the European countries, which preclude end-user fees for take-back, Japan is permitting industry to cover its actual costs by charging end users for the service. Japan's Ministry of International Trade and Industry (MITI) estimates the fees as follows: \$37 per refrigerator; \$30 per air conditioner; \$22 per TV; and \$18 per washing machine. Japanese manufacturers are running pilot collection and recycling projects in anticipation of the EPR mandate.

Application of EPR to the 'ewaste' sector has raised issues different from those pertaining to packaging take-back. Manufacturers are generally willing to take back products that were designed for recycling but have strongly resisted this responsibility for "existing" products – those designed prior to the implementation of EPR policies. There is also the problem of assigning responsibility for "orphan" products that outlast their manufacturer, such as a TV discarded 20 years after the date of sale, when the "producer" is no longer in business.

4.3 Vehicles

Unlike packaging and electric and electronic equipment, vehicles are among the most highly recycled products in the world. Vehicles consist of about 75 per cent metal by weight – mostly iron and steel – which have always been recycled in industrialised countries.

The target for EPR is the remaining 25 percent: the mixed materials (plastic, rubber, glass, textiles, fluids, and paint) that are often contaminated with hazardous substances such as lead, cadmium, waste oil, and PCBs. In some countries, these materials are designated a hazardous waste. EPR for vehicles aims to keep this waste out of landfills and reduce the number of vehicles disposed of illegally.

The EU directive on end-of-life vehicles (ELVs) is still a work in progress. The current draft holds manufacturers responsible for take-back and mandates recycling rates of 80 and 85 per cent, respectively, for vehicles that go on the market after 2005 and 2015. Recovery targets (which allow waste-to-energy) are 85 per cent for 2005 and 95 per cent for 2015. To avoid paying fees, vehicle owners would have to obtain a "certificate of deregistration" signifying that the vehicle had been brought to an authorised recycling facility.

A number of countries with EPR policies for vehicles already in place have recycling and recovery targets similar to those under consideration by the EU. Both France and Germany have negotiated ELV take-back agreements with industry, and Germany passed legislation in 1998 to facilitate enforcement. In Sweden, 1996 legislation requiring EPR for vehicles supplements its 1975 vehicle scrapping law (which focused on reducing litter caused by abandoned vehicles).

In Japan, MITI has been developing EPR legislation for ELVs that sets recycling/recovery goals similar to those of the EU and individual European countries. A common target in most programs is a 95 per cent recovery rate for 2015, meaning that only 5 per cent of ELVs would be permitted in landfills by that date.

In fact, vehicles are an excellent example of how Extended Producer Responsibility can have an impact on product design. Even in the United States, where no EPR policies are in place for ELVs, marketing goals and the desire to pre-empt EPR legislation can lead to design innovations. For example, members of the voluntary Vehicle Recycling Partnership (which includes Chrysler, Ford, and General Motors) are working on design changes that would make it easier to recycle discarded vehicles.

5. Container Waste – a global problem

In the context of today's sustainability challenge, beverage container waste is far more than just a litter issue. Most wealthy economies face both a physical crisis around landfill capacity and growing community demands for better environmental performance including zero waste, no litter and dramatic improvements in energy efficiency.

The following extract from an article commissioned by the Worldwatch Institute provides an insight into the scale of the problem, and the challenge to provide a solution:

“In 2002, thirsty Americans consumed 189 billion sodas, juice drinks, and other beverages packaged in plastic or glass bottles and aluminum cans. That's over 650 containers per person per year — or almost two containers a day for every person living in the United States. Sadly, fewer than half of these bottles and cans were recycled; the majority were trashed — landfilled, burned, or littered along roads, beaches, parks, and other scenic places. This is a huge amount of wasted resources: a quarter of a million tons of aluminum metal, a million and a half tons of plastic bottles, and nearly 7 million tons of glass bottles — and just for one year in the United States! On a global scale, the quantity of wasted containers — and their contribution to the world's trash burden — is mounting steadily as sales of throwaway beverages outstrip recycling efforts.”³

This year the authoritative annual ‘State of the World Report’ from the Worldwatch Institute focused on consumerism and the “consumer society”, estimating that 1.7 billion of the world's 6.3 billion people, with hundreds of millions of Chinese and Indians in particular, are joining the traditional consumer society strongholds of North America, Western Europe and Japan. The report says that sales of even the most basic packaged beverage imaginable, bottled water, have reached \$US35 billion globally and are rising fast.

Of course, promoting and then meeting consumer demand for soft drinks, alcoholic beverages, juices, water and other products sold in containers is a huge and lucrative business. And, if done badly, it has huge and costly consequences for human health and the environment. Worldwatch's 2004 report says:

“In 2002, people drank 185 million liters of carbonated soft drink, making it the third most popular commercial beverage in the world after tea and milk. The average bottling plant churns out more than 300,000 liters of soft drink each day and uses up to 1.5 million liters of water — enough to meet the minimum requirements of at least 20,000 people. In the United States, as annual soda consumption doubled to 185 liters per person between 1970 and 2001, milk consumption fell 30 percent. The Coca-Cola Company and PepsiCo, the two largest soft drink firms, are among the world's biggest advertisers, together spending \$2.4 billion on advertisements in 2001.”⁴

³ Giltitz, J. (2002). *The price of quenching our thirst*. Container Recycling Institute. Available online at <http://www.worldwatch.org/pubs/goodstuff/beverages>. Link checked December 2004.

⁴ Worldwatch Institute (2004). *State of the World 2004*. Available online at <http://www.worldwatch.org/press/news/2004/01/06/#b2>. Link checked December 2004.

6. Beverage container waste in Australia

Australians consume approximately 5 billion drink containers every year. With approximately 50% of these being consumed outside of the home and away from recycling facilities⁵, this means a major proportion are littered or not recycled. For example, beverage container recovery rates in NSW are just 29%, compared with over 80% in South Australia where Container Deposit Legislation has been in operation since 1975 (ISF).

Over 8,000 tonnes of litter were collected on Clean Up Australia Day in 2004⁶. The results of surveyed rubbish from the day give a valuable insight into the composition and types of litter being discarded in Australia (calculated on a per item basis). The table below highlights that four of the categories in the top ten are related to beverage containers, or five if glass pieces arising from broken bottles are included:

<i>Item</i>	<i>Percentage of Total Items Collected</i>
1. Cigarette butts	15%
2. Chip and confectionary bags	7%
3. Plastic bottle caps/lids*	5%
4. Glass alcoholic and beverage bottles*	5%
5. Glass pieces (probably packaging related)	4%
6. Small pieces of paper	4%
7. Plastic water/soft drink bottles*	4%
8. Metal/aluminium soft drink cans*	3%
9. Plastic packaging	3%
10. Plastic straws	3%
Other items outside top ten	47%

Addressing the litter problem comes at considerable cost. Victoria alone spends approximately \$50 million p.a. on litter⁷. The total cost when considering actions such as community clean ups is hundreds of millions of dollars.

Significant time and money is spent on education and advertising projects to reduce littering. A key problem is that the cost of managing litter is borne largely by rate payers (managed through local government), rather than the manufacturer or consumer of the goods. Consumers are not always rate payers. The disparity between rate payers and consumers is mostly due to the presence of two important groups:

- rental tenants
- tourists

⁵ BIEC (1997). *Away from Home Recycling*. Prepared by BGI Waste Consultants for Beverage Industry Environment Council, Sydney.

⁶ Clean Up Australia (2004). *Rubbish Report 2004*. Available at <http://www.cleanup.com.au>. Link checked December 2004.

⁷ Victorian Litter Alliance (2004). *Litter Ally Newsletter*. August 2004, Issue 10. Available at <http://www.litter.vic.gov.au/default.asp?casid=3844>. Link checked December 2004.

Only 70% of all homes are owner-occupied, leaving up to 30% of tenants enjoying a free ride⁸. Tourists also account for a significant share of consumption, with 39% of tourist spending in Australia in 2002/2003 going on shopping, takeaway and restaurant meals and food products⁹. All of these consumption activities are associated with packaging, whose eventual contribution to the litter problem is borne by rate payers. Paying for the collection of packaging waste through rates (whether directly as owner/dweller or indirectly as tenant) is a very “blunt” tool which doesn’t reward good environmental behaviour – nor does it impose a cost on careless behaviour. Point of sale levies and deposit/refund systems do both.

A better system would ensure the cost of litter waste management is built into the price of goods, which the consumer then pays for directly. This is at the core of the ‘polluter pays principle’. In the current system, there is no financial incentive for the consumer to change behaviour. There is also no financial incentive for packagers to create products which are less likely to be littered, or easier to recycle.

The beverage packaging industry must take responsibility for the impacts associated with the use of their products, in the same way that the tobacco, alcohol, gambling and mobile communications industries have been called upon to take responsibility for the potentially harmful effects of the products they profit from selling. Similarly, recent action by retailers supporting programs by Clean Up Australia is an important precedent where industry has finally accepted responsibility for the post consumer waste they create. It is time for the beverage industry to do the same.

Equally, the consumer must pay a price which reflects the true cost of both the good, and the end-of-life management for the packaging associated with the good.

⁸ ABS (1999). *Australian Social Trends 1999. Housing national summary tables*. Available at <http://www.abs.gov.au>. Link checked December 2004.

⁹ ABS (2003). *Australian National Accounts: Tourism Satellite Account*. Available at <http://www.abs.gov.au>. Link checked December 2004.

7. Limitations of kerbside recycling

This section aims to analyse the current data and establish a realistic estimate of the performance of kerbside recycling in Tasmania. The most current and comprehensive data on kerbside recycling performance was derived from the National Environment Protection Council Service Corporation Annual Report 2002-2003¹⁰.

The collection and recovery figures are based on local government reporting. It should be noted that these figures are likely to represent a slight underestimation due to Tasmania's reporting rate of 69%.

Summary Information on Kerbside Recycling Collection in Tasmania 2002-2003¹¹

Category	Tasmania
Population	474,900
Total Councils	42
Councils Reporting	29
% of Total Councils	69%
Residential Premises	175,000
Kerbside Recycling Collection Services to Residential Premises	148,000
% of Residential Premises Serviced	85%
Average Charge for Kerbside Residential Collection	\$25.00
Amount spent on Kerbside Residential Collection	\$3,700,000
Tonnes Collected Through Kerbside Residential Collection	22,750
Tonnes Recycled (Net of Contamination) ¹²	22,295
Total consumption of packaging in Tasmania (tonnes)	83,939
Recovery rate	18%
Contamination Rates	2%
Average Participation Rate	62%

These figures clearly show that kerbside recycling only plays a minor role in recovering packaging waste in Tasmania, with only 18% of materials being recovered. It is therefore obvious that kerbside systems cannot be considered as the sole solution to the problem of packaging waste.

¹⁰ NEPCSC (2004). *NEPC Service Corporation Annual Report 2002 – 2003*. National Environment Protection Council Service Corporation, Adelaide. Available online (in parts) at http://www.ephc.gov.au/pdf/annrep_02_03. Link checked December 2004.

¹¹ This data is based on the combined state and territory reports included as part of the National Environment Protection Council Service Corporation Annual Report 2002 – 2003 (NEPCSC 2004).

¹² Note that 'Tonnes Recycled (Net of Contamination)' includes 528,396 of old newspaper.

7.1 Cost of kerbside

The most important feature of kerbside recycling services is that all costs are borne by local government, who in turn pass costs onto house owners via local government rates. This cost has ballooned in recent years to a whopping \$274 million nationwide every year, or \$3.7 million for Tasmania alone.

Local governments are tired of packaging manufacturers' total reliance on kerbside recycling to deal with their waste. The NSW Local Government and Shires Association (LGSA), representing all 173 Councils in NSW, prepared a submission to the *Independent Review of Container Deposit Legislation in NSW* in December 2000 supporting CDL for NSW and criticising industry's role in disingenuously supporting kerbside in order to avoid "producer responsibilities". Similarly, it is our understanding that the Tasmanian Waste Management Association has made a submission to this enquiry supporting CDL.

The NSW LGSA submission stated: 'Over the past decade, local councils have been coerced, particularly by the beverage and packaging industries, into providing more and more kerbside collection services. These industries have gone to great lengths to ensure collection, by councils, of their (supposedly) recyclable material. Initially there was little or no net cost associated with such collection services as the price received for the material collected tended to off-set collection costs – largely because industry subsidised the payback price during the establishment of kerbside collection services. This created an artificially favourable market situation and attracted councils to enter what was ultimately to become an unsustainable market. Once these collection services were established, ratepayers "depended" upon them as a means of satisfying their desire to "protect the environment". Industry then quickly withdrew the financial support it initially provided.¹³

The net result is that the packaging industry and consumers are receiving a 'perverse' subsidy from rate payers. When considering the way forward, it is imperative to look at systems that involve the provision of direct feedback loops to industry and the consumer through internalising negative externalities into a pricing signal that promotes desirable activity. At present, excessive consumption does not lead to an increase in costs to the consumer for the end-of-life management of purchased packaging. This obviously requires a change from the status quo.

¹³ Local Government and Shires Associations of NSW (December 2000). *Submission to Independent Review for Container Deposit Legislation in NSW*. Available online at <http://www.lgsa.org.au/docs/Policy/Environment/IndependentReview.pdf>. Link checked December 2004.

It is worth noting that in addition to the price of kerbside recycling, externalities associated with packaging waste are also a major cost and environmental burden. Examples include the costs of litter collection, the health impacts of glass injuries and cost of treatment, bush fires caused by glass litter and the extra energy and water consumption associated with utilising virgin materials rather than recycled materials in packaging manufacturing. This has obvious importance for greenhouse policy when the manufacture of an aluminium can from virgin materials utilises 95% more energy than a can made from recycled materials¹⁴.

7.2 Away from home consumption

The proportion of glass bottles, PET plastic bottles and aluminium cans being consumed 'away from home' and entering the non-residential waste stream has been estimated by industry to be 55%, 39% and 54% respectively¹⁵. These figures relate to non-alcoholic beverage containers and result in an average away from home consumption rate of 48%¹⁶. This is comparable to other authors, like ISF (2001 and 2004) who estimate that in the case of beverage containers, 50% of the waste packaging is consumed away from home.

This can be interpreted as saying that even if kerbside is 100% effective, a significant proportion of packaging materials can only ever achieve a 50% recovery rate because of public place and commercial consumption (cafés, materials, pubs and clubs). A 50% loss is a significant systemic problem which kerbside recycling alone cannot overcome. Furthermore, recycling systems for public places should not be subsidised by rate payers through local government, but rather the full cost of collection should be incorporated into the cost paid by the consumer.

7.3 Resident participation in kerbside recycling

Tasmania's recycling participation rate is estimated at 62%. However, this is problematic in that participation rates are generally calculated as the number of actual pickups divided by the theoretical maximum pickups for the year. Thus a family that avoided consumption of excess packaging and only required a collection every four weeks would be reported as 50% participation if it was a fortnightly scheme and 25% participation if it was a weekly collection service.

¹⁴ Hudson, P., in association with Cole Solicitors (March 2000). *Container Deposit Legislation: Economic and environmental impacts*. Report prepared for the South Australian Environment Protection Authority. Available online at http://www.environment.sa.gov.au/epa/pdfs/cdl_report.pdf. Link checked December 2004.

¹⁵ BIEC (1997). *Away from Home Recycling*. Prepared by BGI Waste Consultants for Beverage Industry Environment Council, Sydney.

¹⁶ As above

What the participation rate does indicate is the overall limitations of kerbside as a mechanism for resource recovery. Even with strong resident participation, there is no measure of how successfully a residence recovers all recyclables and avoids contamination. In fact, it has been identified that only a small proportion of Australian households (just under 7% in March 2000) recycled all of the materials that can be recycled¹⁷.

This evidences the community confusion and lack of understanding of the importance of recycling – 62% participation for an effective recovery of 18% – where is the rest going?

A lack of effective product labelling and the industry fuelled drive to more diverse packaging materials have left communities uncertain to the point where they no longer understand how to do the right thing. Roy Morgan Research undertaken for Planet Ark in August 2004 indicated that 48% were confused about what they recycle, and that nearly a third incorrectly thought that oven proof glass could be recycled.

The high proportion of participation and low overall performance highlights the fact that while the community values the environment, this is not necessarily easily reflected in their behaviours – particularly when out of home. The idea of taking your waste home with you is seen as extremist, but if we continue to rely on the kerbside system and half our materials are consumed away from home, there is no other way we can capture resources currently wasted.

Research undertaken by Newspoll on behalf of The Boomerang Alliance shows community concern about packaging waste is increasing. The research showed:

- that 94% of the population is concerned about packaging waste and litter;
- 77% felt that packaging manufacturers were responsible for the problem, with 56% saying retailers were responsible; and
- 91% wanted government to take action to make industry responsible for the problem and the associated costs.

Ultimately, the only effective way to deal with the problem is to:

- eliminate the source of the problem i.e. make a deliberate decision to move away from convenience packaging; OR
- introduce deposit/refund schemes so consumers understand that the packaging is an item of value.

¹⁷ ABS (2002). *Environmental attitudes and behaviour in Australian households*. Year Book Australia 2002. Australian Bureau of Statistics, Canberra. Available at <http://www.abs.gov.au/Ausstats/abs@.nsf/0/5c659730e0a80e01ca256b35007ace02?OpenDocument>. Link checked December 2004.

7.4 Ongoing role for kerbside

The Boomerang Alliance recognises that kerbside recycling is a positive activity that allows the public to contribute to an immediate environmental goal. It brings people in direct contact with ideas of cyclic flow and engaging in restorative behaviours and has value for this function.

However, given contamination issues, away from home consumption of packaging materials, and the ongoing cost of kerbside recycling to parties that are not directly involved in the consumption of packaging materials (local government and rate payers), reliance on kerbside recycling as the primary mechanism for resource recovery is highly questionable at best and disastrous at worst. Kerbside systems will be retained for many non-deposit items, but need to be recognised as just one component of the infrastructure required to maximise recovery of valuable resources. Collection depots and the intelligent development of price signals are also required to optimise performance and provide a level of uniformity to both at home and public place consumption of beverage containers.

8. The CDL solution

Container deposits are seen as a mechanism to assign responsibility more closely to the consumer of a product. A deposit-refund system provides a powerful incentive for consumers to ensure that materials are returned to collection centres for reprocessing or reuse.

Container Deposit Legislation (CDL) enables deposits to be paid on the purchase price for certain containers (usually beverages, but not exclusively), and the deposit is refunded on the container's return.

This approach is widely applied throughout Europe and North America as an important weapon in the armoury to combat littering, encourage recycling and reuse, and help achieve zero waste.

Implementation of a CDL scheme in Tasmania could achieve the following benefits:

8.1 Increase viability of kerbside recycling systems

A major argument utilised by industry in their ideological rejection of CDL is that it would have a negative effect on kerbside recycling. However, CDL actually complements kerbside recycling by focusing on the huge 50% of containers that are consumed away from home, which kerbside systems are unable to recover.

A deposit/refund system can also improve the economic viability of kerbside by:

- setting up an alternative container return mechanism for materials. Currently, the cost of collection exceeds the monies received for the materials – in Sydney alone, the gap between kerbside costs and the funds received from material recovery is \$36 million per year¹⁸. Not only is kerbside recycling financially fragile, it is a major cost imposition on local government;
- reducing the number of collection services and sorting operations which need to be provided;
- reducing landfill and associated levy costs by increasing return rates and therefore reducing the residual waste stream;
- providing councils with potential income from refunds when householders elect to use the kerbside collection system for deposit-bearing materials (Councils in South Australia have reported income of up to \$90,000 per year from unredeemed deposits – as opposed to significant expenditure experienced by other councils on other states¹⁹); and
- reduced burden on litter management and the associated costs.

¹⁸ Institute for Sustainable Futures (2004). *Beyond Recycling: An Integrated Waste Management Framework for Local Government. Part B: Recycling in Context – the current situation*. Available online at <http://www.lgsa.org.au/docs/policy/environment/PartB.pdf>. Link checked December 2004.

¹⁹ Hudson, P., in association with Cole Solicitors (March 2000). *Container Deposit Legislation: Economic and environmental impacts*. Report prepared for the South Australian Environment Protection Authority. Available online at http://www.environment.sa.gov.au/epa/pdfs/cdl_report.pdf. Link checked December 2004.

Two studies (ISF 2001, BEAR Report 2002 – US) found unit costs in deposit/refund systems were lower than kerbside systems alone and could help to reduce the net costs of kerbside collection (cited in ISF, 2004²⁰). In addition, CDL is crucial to take the financial pressure outlined in the previous section off local government and rate payers, and achieve a more equitable distribution of costs in managing recycling schemes. It is also a highly effective way to overcome major litter problems faced by councils and state governments – by placing a value on waste, CDL encourages voluntary litter collection.

CDL has shown itself to be particularly suitable for communities which are geographically autonomous, such as South Australia and Hawaii. In these cases, desert, or sea barriers make it more difficult for “cross border” movement of containers to skew the return figures. Tasmania is ideally suited to such a scheme.

8.2 Reduce recycling contamination rates

The quality of recycled content from kerbside is often highly inferior to that from deposit collection systems, with contamination issues such as broken glass mixed with paper posing a serious threat to recycling machinery. CDL addresses the highly problematic area of recycling contamination by ensuring that materials are properly sorted at collection depots, avoiding the common scenario where recyclable materials are not correctly sorted at the kerbside and therefore end up in landfill rather than being resorted.

Correct sorting of materials under CDL also enables the best resource recovery outcome to be achieved. An example is plastics recycling – due to the large variety of new and specialty plastics on the market, kerbside services do not have the capacity or sophistication to sort these plastics and ensure that each material is reused in the best possible manner e.g. a PET bottle being recycled into another PET bottle. As a result, plastics are usually commingled and recycled into products such as insulation for the overseas market, which is clearly not the best resource recovery outcome as the end product is not available for further reuse.

²⁰ Institute for Sustainable Futures (2004). *Beyond Recycling: An Integrated Waste Management Framework for Local Government. Part B: Recycling in Context – the current situation*. Available online at <http://www.lgsa.org.au/docs/policy/environment/PartB.pdf>. Link checked December 2004.

8.3 Motivating consumers

CDL is a highly effective way of educating the community on environmental matters by raising the profile of litter control and recycling. It also provides motivation to consumers to recycle by placing a value on a resource that is otherwise afforded no value.

According to Ian Kiernan, chairman and founder of Clean Up Australia, this is clearly the case in South Australia:

“The lack of drink bottles and cans found in South Australia on Clean Up Australia Day is telling us something – and that is that Container Deposit Legislation works and should be embraced by all states and territories. Rubbish does not have to be wasted, it is a resource which has a financial value that is reinforced via such schemes as a Container Deposit system.”²¹

This view is supported by the very high beverage container recovery rates experienced in South Australia²²:

Beverage container	Return rate						
	1993	1997	1998	1999	2000	2001	2002
Aluminium cans	89%	80%	84%	85%	88%	86%	87%
Glass bottles (soft drink, beer)	90%	84%	84%	75%	81%	82%	88%
Plastic (soft drink)	62%	74%	74%	72%	72%	72%	72%

It therefore comes as no surprise that CDL receives extremely strong public support in South Australia. A telephone survey conducted by the South Australian Environment Protection Agency (EPA) in 1993²³ revealed that 95% of respondents supported the concept of a refundable drink container deposit. In addition, an EPA survey conducted in June 2004²⁴ found that:

- 60% of survey respondents returned beverage containers to collection/recycling depots;
- 32% did not collect the refund and disposed of containers using kerbside service;
- only 4% generally throw empty beverage containers covered by CDL into garbage bins; and
- 80% said they would still purchase the same amount of beverages per week if an increase in the refund amount drove beverage prices up.

²¹ *Urgent Calls to Fast Track Container Deposit Legislation*. Available online at <http://www.lgsa.org.au/docs/NewsandInfo/MediaReleases/2003/March/cdl.doc>. Link checked December 2004.

²² SA Environment Protection Authority (2004). *Amount of waste materials recycled*. Available online at <http://www.environment.sa.gov.au/reporting/human/waste/recycled.html#beverage>. Link checked December 2004.

²³ Cited in Hudson, P., in association with Cole Solicitors (March 2000). *Container Deposit Legislation: Economic and environmental impacts*. Report prepared for the South Australian Environment Protection Authority. Available online at http://www.environment.sa.gov.au/epa/pdfs/cdl_report.pdf. Link checked December 2004.

²⁴ McGregor Tan Research (2004). *Community awareness and acceptance of Container Deposit Legislation*. Prepared for the South Australian Environment Protection Authority. Available online at http://www.environment.sa.gov.au/epa/pdfs/cdl_survey.pdf. Link checked December 2004.

8.4 Financial benefits

The high popularity of CDL in South Australia indicates that consumers are willing to pay the small extra cost on their drinks in return for reduced waste and litter.

In addition, CDL provides materials for remanufacturing that offset the need for virgin materials. CDL in South Australia contributes in the order of \$720,000 or 40% towards the total value of replacement of virgin materials each year. In addition to this figure, energy savings from utilising recycled material rather than processing virgin materials are estimated to be up to 95%, resulting in not only cost savings but reduced greenhouse gas emissions²⁵.

Unclaimed deposits should be factored in to any consideration of the costs/revenue/savings which may result from the introduction of a CDL system. Based on a deposit of 5 cents and associated 85% return rate for beverage containers, which is the case in South Australia, annual income from unclaimed deposits would be around \$30 million²⁶.

The annual income from such unredeemed deposits to Coca-Cola Amatil in South Australia is estimated at around \$8 million. This income stream highlights that the beverage industry's opposition to container deposits is not based on financial impacts, but rather on an ideological opposition to regulation and producer responsibility. This opposition is untenable if sustainability and zero waste objectives are to be achieved, particularly from companies that hold themselves up as the environmental leaders like CCA.

It is also imperative to consider the financial benefits generated by CDL in the areas of job creation (around 500 new jobs are created for every million people through the introduction of CDL²⁷), landfill reduction, environmental and community outcomes, and lowering the cost of kerbside recycling services. More detail on these benefits is provided throughout this section of the submission.

²⁵ Hudson, P., in association with Cole Solicitors (March 2000). *Container Deposit Legislation: Economic and environmental impacts*. Report prepared for the South Australian Environment Protection Authority. Available online at http://www.environment.sa.gov.au/epa/pdfs/cdl_report.pdf. Link checked December 2004.

²⁶ Local Government and Shires Associations of NSW (December 2000). *Submission to Independent Review for Container Deposit Legislation in NSW*. Available online at <http://www.lgsa.org.au/docs/Policy/Environment/IndependentReview.pdf>. Link checked December 2004.

²⁷ Local Government and Shires Associations of NSW (December 2000). *Submission to Independent Review for Container Deposit Legislation in NSW*. Available online at <http://www.lgsa.org.au/docs/Policy/Environment/IndependentReview.pdf>. Link checked December 2004.

8.5 Provide recycling services to remote communities

CDL can also be successfully utilised in remote communities where it is not financially viable to run kerbside recycling, thereby providing a vital service to these areas. It can be implemented via mobile balers which move from town to town, maximising container densities for shipping and helping to reduce transport costs, or by placing Reverse Vending Machines in locations close to retail operations.

The Arid Lands Environment Centre (ALEC) in Alice Springs recently ran successful drink container deposit trials²⁸:

- 8,000 containers collected at the Alice Springs Show, July 2004 (5c each)
- 17,000 containers collected at the Yeperenye Festival, September 2004 (10c each)

8.6 Wildlife protection

Packaging waste poses a threat to Australian wildlife. For example, field research shows that over 10% of platypuses (and up to 60% in some areas) become entangled in litter, including the plastic bottle rings attached to the lid to make a tamper-proof seal²⁹. Littered six-pack rings from beer can packaging can also easily get entangled with birds, fish and sea mammals. Many of those unable to free themselves suffer a long, painful death³⁰.

Countless billions of plastic fragments are being consumed by sea birds and other marine creatures, and even the most pristine environments on earth such as Lord Howe Island are affected:

'Birdwatchers and scientists on the island have been shocked to discover the colony of flesh-footed shearwaters are ingesting plastic mistaken for food ... and then regurgitating the plastic straight into the mouths of their chicks, inadvertently killing the offspring. A tour operator and naturalist, Ian Hutton, said he began to notice shearwater carcasses stuffed full of plastic pieces in 2002. "After I had collected the plastic items from each fledgling carcass I measured the area and volume of the plastic that each bird had been fed," he writes in *Nature Australia*. "Spread out flat, the plastic pieces covered areas that ranged from 66 to 182 square centimetres, with volumes of seven to 33 millilitres." ... In a scientific paper soon to be published, a senior research scientist with the Department of Environment and Conservation, Dr David Priddel, says densities of plastic at sea may be as high as 4000 pieces per square kilometre, and what makes them so hazardous to birds is that they resemble crustaceans and fish eggs.'³¹

By removing these items from our natural environment, CDL has a major role to play in reducing the harmful impacts on wildlife.

²⁸ Cole, S., *Container refund trials successful*. The Paper, Edition 021. Available online at http://www.thepaper.org.au/issues/021/021drinks_container_refund_trials_successful.html. Link checked December 2004.

²⁹ Australian Platypus Conservancy. *Litter and fishing*. Available at http://platypus.asn.au/litter_and_fishing.html. Link checked December 2004.

³⁰ Healey, J. (2004). *Waste and recycling. Issues in society*, Vol 208. Spinney Press: Thirroul.

³¹ Woodford, J. (2004). Sydney Morning Herald, 3 November 2004. *An ocean of old plastic stuck in seabird craws*.

8.7 Protection of human health

Beverage container litter also poses a danger to human health by harbouring disease and through direct injury such as from glass cuts³² or by being hit by flying debris during strong weather conditions. Broken glass on roads and cycle ways is a problem for cyclists where glass causes frequent punctures. While no specific data is available, reports indicate that around 8,000 children are treated in hospital (with many more treated in private practice) for glass injuries to the feet and legs. Conversations with staff at The Westmead Children's Hospital indicate that the overwhelming majority of glass injuries are caused by children stepping on broken glass lying in public places (litter).

The U.S. experience shows that CDL can dramatically reduce these injuries. In the year after Massachusetts enacted a bottle bill, outdoor glass-related injuries to children treated at the Boston Children's Hospital dropped by 60%, while other childhood accidents remained steady or increased slightly³³.

Glass bottles thrown from cars into bushland also cause fires, magnify sunlight and igniting other litter³⁴ and posing an ongoing danger to human health.

CDL is therefore also vital in protecting the health of the community.

8.8 Improved environmental aesthetic

Beverage container waste has a major aesthetic impact – its detrimental effects manifest at beaches, parks, roadways, waterways, and in urban, industrial, regional and remote environments. While it is impossible to quantify the aesthetic impact in monetary terms, tourism peak bodies such as See Australia argue that a cleaner environment has flow-on financial benefits by enhancing tourists' enjoyment. Outdoor adventure and eco-tourism play a significant role in the Tasmanian economy. The levels of litter found in Cradle Mountain, The Franklin and other wild places have a significant impact on visitors' enjoyment of their visit to Tasmania.

8.9 Environmental edge for business

A survey of beverage fillers/distributors in South Australia found that CDL can offer a unique environmental marketing edge for these companies because their containers are not seen as litter, and the deposit label helps to promote the companies as being 'green'³⁵.

³² Australian Government Productivity Commission (1996). *Inquiry into Packaging and Labelling, Report No. 49*. Available at <http://www.pc.gov.au/ic/inquiry>. Link checked December 2004.

³³ Stutz, J. & Gilbert, C. (10 July 2000). *Michigan Bottle Bill - A Final Report to Michigan Great Lakes Protection Fund*. Available online at <http://www.deq.state.mi.us/documents/deq-water-greatlakes-protection-michiganbottle.pdf>. Link checked December 2004.

³⁴ Kelly, A.B. (2000). Debate on PROTECTION OF THE ENVIRONMENT OPERATIONS AMENDMENT (LITTERING) BILL. NSW Legislative Council Hansard, 4 May 2000, Pages 5218 - 5222 (article 11). Available online at <http://www.parliament.nsw.gov.au/Prod/Parliament/HansArt.nsf/0/ca256d11000bd3aaca2568f2000e56f4?OpenDocument>. Link checked December 2004.

³⁵ Hudson, P., in association with Cole Solicitors (March 2000). *Container Deposit Legislation: Economic and environmental impacts*. Report prepared for the South Australian Environment Protection Authority. Available online at http://www.environment.sa.gov.au/epa/pdfs/cdl_report.pdf. Link checked December 2004.

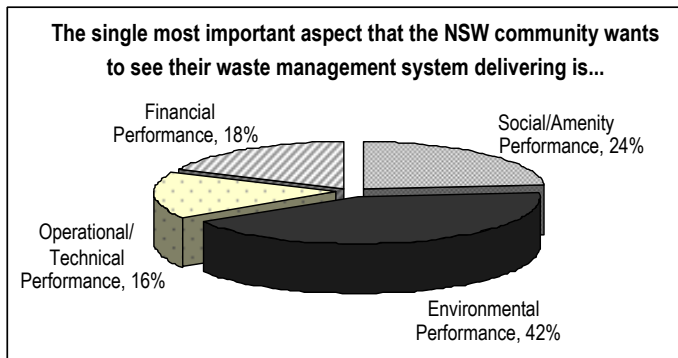
8.10 Prevent a major source of environmental damage

The beverage industry frequently argues that CDL unfairly discriminates against one form of waste. However, intelligent discrimination between materials is the long established environmental and economic practice when applied to decisions such as packaging choice. The only way to reduce environmental degradation is to selectively discriminate against those materials and systems of packaging that are resource intensive, not recyclable and damage the environment through their manufacture, use and disposal. It makes sense to focus on items that can be easily collected and sorted with technology that is readily available here and now.

8.11 Address the community's needs

Studies have shown that the community overwhelmingly wants a waste disposal and recycling system that delivers superior environmental performance.

For example, a survey conducted by the NSW Department of Environment and Conservation in 2004³⁶ found that environmental performance was the most important feature that communities wanted from their waste management system:



³⁶ Nolan ITU (2004). *Getting more from our recycling systems – Assessment of domestic waste and recycling systems*. Report prepared for the NSW Department of Environment and Conservation, Publishers National Environment Bureau and NSW Jurisdictional Recycling Group. Available online at http://www.resource.nsw.gov.au/data/Domestic%20Waste%20and%20Recycling%20systems%20-%20Final%20Report_webV2.pdf. Link checked December 2004.

9. Mutual Recognition Act

The Boomerang Alliance has received legal advice that the introduction of Container Deposit Legislation would not contravene the provisions of the *Mutual Recognition Act (1992)* or the Constitution.

If legislation included restrictions on the manner in which beverages, products or containers are sold, then it may be considered to be a law expressly governing the sale of goods and therefore, be exempted from the mutual recognition principle by virtue of section 11 (2) of the Act.

Secondly, if the legislation (insofar as it deals with inspection or transportation) has an objective to protect the environment or control pollution, it may be considered to be exempted from the mutual recognition principle by virtue of sections 11 (3) and (4) of the Act.

Thirdly, Tasmania could seek to have the legislation exempted from the operation of the Act either permanently (as is the case in South Australia) or temporarily. In light of the precedent set in South Australia, it is assumed that this would not be a difficult exercise.

10. Conclusion

The Boomerang Alliance supports the introduction of Extended Producer Responsibility mechanisms to deal with Australia's waste crisis, and supports the introduction of Container Deposit Legislation in Tasmania and indeed nationally as an extremely effective mechanism to drive high recovery rates for beverage containers.

Kerbside recycling collection puts the cost of recovery on local authorities and their rate payers, while CDL laws can use a range of requirements beyond the levying of the deposit to shift the financial burden to the producers who make the products, the retailers who sell them, and the people who buy and consume them. In addition, CDL can assist in making financially fragile kerbside services more economically viable.

The wide range of economic, environmental, community and health benefits offered by CDL make a strong case for its introduction in Tasmania. These benefits can also be expected to receive strong public support, as is the case in South Australia.

The Boomerang Alliance would be happy to elaborate on the points raised in this submission and make a presentation to the Parliamentary Inquiry at the Committee's convenience.

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Attachments

Attachment A: EPHC communiqué, 3 December 2004

Available at http://www.ephc.gov.au/pdf/EPHC/communique03_12_04.pdf

Attachment B: *Say No to the Waste Club – a Review of the National Packaging Covenant*

Available at

http://www.boomerangalliance.org/000_files/5_Say_No_to_the_Waste_Club.pdf

Attachment C: *Understanding Beverage Container Recycling: A Value Chain Assessment*

Available at <http://www.globalgreen.org/bear/Projects>

Attachment D: *The Great Waste Debate – Discussion Paper on Extended Producer Responsibility and Waste Avoidance*

Available at

<http://www.tec.nccnsw.org.au/member/tec/projects/upload/full%20Briefing%20Paper%20on%20EPR%20and%20Waste%20Avoidance.pdf>