

NATIONAL PACKAGING COVENANT

**SAY NO TO THE
WASTE CLUB**





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FOREWORD BY IAN KIERNAN AO

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The groups that form the Boomerang Alliance adopt very different public profiles and work on a diverse range of issues. We celebrate our diversity and welcome the appeal of environmental protection by the wide audience we represent. The Boomerang Alliance – The Arid Lands Environment Centre, Australian Conservation Foundation, Environment Victoria, Greenpeace Australia Pacific, NSW Nature Conservation Council, Queensland Conservation Council, Total Environment Centre, Conservation Council of WA and Zero Waste Action Group – represent millions of members, supporters, donors and volunteers who are overwhelmingly sick of packaging rubbish. We unite in our strong and unwavering commitment to reform in the areas of energy, resource recovery, waste management and water conservation.

It is often said that packaging is a small issue compared to global warming and water scarcity. While the magnitude of these threats supports this, it is important to recognise packaging, newspapers and plastic bags are the core fuel for a resource recovery-led shift towards zero waste, both in the community's willingness to embrace issues of social ecology and as a driver of reform from waste management towards resource recovery.

Burgeoning levels of packaging production (which now exceeds 3,000,000 tonnes p.a.) and a growing trend in 'out of home' consumption are putting unacceptable pressure on recycling services, particularly in regional Australia. We must reverse this trend by capturing wasted resources more effectively and limiting consumption. As a builder, I'm surprised many businesses can't recognise the simple idea of embracing efficiency to ensure supply – the only way an industry can become sustainable is to close the loop on waste.

While there has been some improvement overall, litter trends grow across the nation. While there have been some great successes, some of our most beautiful natural environments are buried beneath piles of rubbish. I regularly participate in clean ups in some of the most remote parts of Australia and am constantly staggered by the sheer volumes of wrappers, cans, bottles and cigarette butts we find in these sparsely settled areas.

The review of the National Packaging Covenant (NPC) is a critical process that needs a far stronger solution than that proposed in the draft of the new Covenant 'A Commitment to the Sustainable Manufacture, Use and Recovery of Packaging'. We commend the documents 'Beyond Recycling' by the NSW Local Government Association, and 'Combined Environment Group Submission to National Packaging Covenant Council August 2004' as an outline for key approaches.

It has been said that 'we have left our run too late' which we reject. For over two years we have calmly and clearly stated and restated our concerns with the NPC and packaging waste. We outlined our concerns repeatedly, and made it clear we would not accept the soft option. Increasingly, it seems we have been ignored because we have conducted ourselves in a considerate and constructive manner. We are disturbed that government and industry are making a 'risk assessment' style of judgement that reform isn't necessary because we haven't made a lot of noise – surely this sends a clear signal to our groups that being constructive doesn't work. I hope we can move beyond this approach unless it is an issue of last resort – I appeal to the Environment Protection and Heritage Council (EPHC) to take action to avert this confrontation.

From now until March, the Alliance intends to stimulate significant debate regarding alternative methods, approaches, and strategies, and has planned to undertake research into consumer sentiment, undertake a truly independent report comparing and contrasting an EPR model against the NPC, and hold a series of industry/NGO debates through TEC's Green Capital program. We ask the EPHC to ensure:

③ a clear and public commitment to encourage this debate; ③ that NGOs receive access to NPCC funds to assist in expenses to cost alternative models and have a reputable, independent expert compare and contrast the Boomerang approach with the NPCC MkII proposal; and ③ a formal process to ensure consensus is reached by incorporating Boomerang Alliance and Local Governments' core requirements.

Reject the National Packaging Covenant Council MkII proposal and demand the NPCC enter an urgent process of negotiation that will secure the support of dissenting vital stakeholders including The Boomerang Alliance and Local Government Association by the beginning of March 2005.

It is time we reduced rubbish for good – a cooperative and meaningful review of the National Packaging Covenant is our best and possibly last chance to achieve this critical goal.



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1. INTRODUCTION AND CONTEXT

Each year Australians consume over 3,365,000 tonnes of packaging, with a ‘real’ recovery and recycling rate of just 20%. A boom in single serve consumption has fuelled an out of home market that now represents some 50% of consumption. This locks society into a position where even an 80% success rate

in capturing materials through kerbside recycling cannot hope to achieve an effective recycling rate of better than 36% (nett of contamination).

Key environment groups have formed the 'Boomerang Alliance' with a specific focus on developing an ongoing public response to the National Packaging Covenant Council (NPCC) proposal and are alerting government, industry and the community to the need to stop the NPC and consider effective alternatives.

Our view is that packaging represents a significant challenge to all Australians. It provides important benefits by protecting both the product and human health (in the food and grocery sector). Packaging also offers benefits to business both as primary point of sale advertising for fast moving consumer goods, and as part of the broader logistics and distribution process. Yet packaging has a major impact on our communities:

- Each year Australians consume over 3,365,000 tonnes of packaging;
- The flow of packaging through the economy gives rise to significant environmental impacts arising from materials being disposed of to landfill, litter and hazardous materials in composition. When improperly disposed of, this waste can have disastrous effects on people, marine environments, fauna and flora, the tourism industry and the enjoyment of our day-to-day lifestyle; and
- we capture less than 20% of these materials, leading to the annual loss of 2,748,400 tonnes of resources.

Traditionally, post consumer packaging waste has been managed through the kerbside recycling system. When first introduced, kerbside recycling drove significant environmental improvement, but as the volumes of packaging waste increase and the types of materials used in packaging diversify, the kerbside system is becoming increasingly stressed.

Kerbside rates of recovery have stagnated, and in many cases are declining -over 116,830 tonnes of recovered materials are lost through contamination each year. Over 1,500,000 tonnes of packaging is consumed away from home, of which nearly all is lost to litter or landfill. As a stand-alone system, it has reached the point where kerbside cannot cope; the overall cost to manage this system now stands at nearly \$300,000,000 per annum.

In response, the Federal, State and Territory Governments formed a partnership with the industry representatives of the packaging supply chain to adopt the National Packaging Covenant (NPC) as a method of dealing with these challenges. While the Boomerang Alliance welcomes cooperation between key stakeholders, we see both the current and proposed new Covenant (NPC MkII) proposal as an ineffective, inequitable and irresponsible mechanism to deal with this massive challenge. Rather than minimise the impacts of packaging, the NPC has become a barrier to genuine improvement and policy reform.



IF A DEFINITION OF INSANITY IS TO COMPULSIVELY REPEAT THE SAME ACTIONS AND EXPECT TO RECEIVE DIFFERENT RESULTS, THE NATIONAL PACKAGING COVENANT COUNCIL'S CONTINUED RELIANCE ON INEFFECTIVE POLICY AND ANTIQUATED METHODS OF RECOVERY IS CERTIFIABLE.

In a direct contradiction to the NPCC approach, Australian jurisdictions have increasingly embraced the goal of major resource recovery, 'zero waste' and principles of sustainability and Extended Producer Responsibility (EPR) – but to date have failed to recognise that any decision to commit to a further five years of the NPC will lock out real progress on eliminating packaging-related waste at least until next decade. Allowing the packaging sector to avoid its responsibility will, we believe, make it increasingly difficult to require companies in the computer, mobile phone, automotive and other industries with priority waste streams to reform existing practice to adequately address the NPC.

Costs of packaging disposal by producers and consumers are externalised onto rate payers and become more inequitable in tenancy based occupancy. Around 30% of all residential premises are not owned by the occupier, meaning many consumers make no contribution to the costs of recovering and disposing of the packaging they consume. Industry claims that the consumer rather than the producer should bear the costs of disposal – but the point is irrelevant once we recognise that regardless of who along the supply and demand continuum actually 'pays' for the impacts of packaging, the best and most direct way to recoup the cost of public service is to embed the cost within the supply chain. This rationale is not new, it was a key 'benefit' outlined through the implementation of the GST, and is consistent with current approaches across key markets including: agriculture (water rights); energy (DM funds and step pricing); and in recent trends to remove ongoing subsidies and tariffs from the sugar and automotive industries.

To keep pace with growth and new trends of consumption, a new sustainable approach to managing packaging across the life cycle of the product and packaging chain is essential. Specific economic instruments and EPR approaches need to be designed to support the kerbside system and encourage consumers to participate in recycling. Externalities continue to provide a false price point for virgin plastic, paper, aluminium, and glass resources which limits the market opportunities for the resource recovery industry. This price bias towards the use of virgin materials fails to provide an adequate recovery infrastructure to guarantee feed stocks of recycled resources.

Failure to reform this critical agenda means more pressure on landfills, new landfills being created, more litter, polluted waterways, and less recovery, reuse or recycling of packaging materials. Australian recycling and recovery rates are unacceptably low, and in most states have either declined or remained static at best. This will not change by locking into a further five years of the NPC.



Key deficiencies of the NPC include:

- . • can't deliver minimal or zero waste;
- . • addresses neither sustainability nor EPR;
- . • lacks any hard or numerical targets;
- . • excludes relevant community representation and equitable local government participation;
- . • is dominated by vested interests from industry; *and*
- . • imposes waste and litter clean up costs on local government and ratepayers.

1.1 Timing of this Report

This report follows two years of advocacy by environment groups to express concerns regarding the

National Packaging Covenant and broader issues of waste reform in Australia. Members of the NPCC seem surprised that key groups are opposed to the NPC in its current form and question why we are making an issue of the process at so late a stage. It's quite simple - we have been objecting to the NPC for years. We have made considerable efforts to express our concerns, made suggestions for improvement and participated in the review process in a constructive way. The draft NPC proposal makes it quite clear that, like local government, our views have been ignored.

Our member groups have expended thousands of hours and considerable expense to ensure our views are clear. To illustrate these efforts we offer this synopsis of our recent activities:

1. 1. Both a joint group (ACF, Environment Victoria, NSW NCC, and TEC) and a Clean Up Australia submission were made to the NPCC outlining key concerns and deficiencies.
2. 2. Members of the Alliance attended a number of the consultation forums, repeating our stated views.
3. 3. We have produced papers on packaging waste, how EPR could work, and the use of market based instruments.
4. 4. TEC's Green Capital has undertaken four major business/NGO forums in Melbourne and Sydney to highlight the debate about EPR, market based instruments, and the NPC.
5. 5. Our member groups have met with regulators and Ministerial advisers in most states and territories, the NPCC, and at least three of the industry representatives on the NPCC.
6. 6. We have held one-on-one meetings with more than 100 NPC signatories.
7. 7. We have presented our views at over 20 conferences and undertaken five briefings with specific industry groups.

Having repeatedly expressed concerns that we could not support the current NPC process and outlined grave concerns about the lack of genuine progress in proposed NPC MkII, we are dismayed that industry and government are now surprised and upset that environment groups cannot support a proposal that ignores the minimum standards we have clearly articulated.

The NPCC hasn't listened, and now, the Covenant has been presented to the EPHC without dealing with any of the core requirements necessary to secure the vital support of the local government sector or ourselves. Accordingly, the EPHC meeting to be held on 3 December 2004 has now become the last resort for change. The EPHC must act now or set us on a path that will inevitably lead to a major confrontation, something that none of us want.



We urge NPC signatories, the NPCC and the EPHC to recognise that the members of the Boomerang Alliance have made every possible effort to outline our ideas for reform in a constructive and positive manner. Having been forced into a position where we must reject the proposed NPC MkII, we find industry and regulators complaining that the groups haven't made enough noise for them to understand that we require far stronger outcomes. The situation has become critical not because we have failed to outline our views but rather that the members of the NPCC have ignored us because we haven't threatened, protested or targeted the reputations of brand owners and governments.

The EPHC and NPCC members need to consider that if government and industry ignore our position when

we try to work constructively, they send a clear signal that negative campaign tactics and an adversarial approach are still necessary for reform – surely everyone recognises the significant setback this will represent to the positive steps we have made in seeking common ground within the corporate sustainability arena.

1.2 Aim of This Report

This aim of this report is to provide a critical analysis of the problems arising from packaging flows in the economy and the extent to which the National Packaging Covenant (current and proposed) fails to address these problems. This report documents how over five years, the NPC has failed to keep pace with growing demand for packaging and the trend toward increased 'out of home' consumption. While the National Packaging Covenant Council expresses satisfaction with the Covenant, it is clear that progress has been fuelled more by opportunities for improved operating efficiency and reputational benefits than any direct contribution from the NPC being in place.

The Boomerang Alliance has also sought to outline how the NPCC has failed to secure the support of local government and show how this is leading to a policy approach where industry, government, and local government strategies are locked into direct conflict. It is clear that the NPC process is completely contradictory to the admirable state and territory initiatives like the NSW EPR approach, South Australia's Container Deposit Legislation (CDL), the Tasmanian Parliamentary Enquiry's consideration of CDL, the ACT's Zero Waste strategy, West Australia's sustainability strategy, and national action on plastic bags. This policy contradiction is highlighted by Woolworth's repeated written complaints regarding the NPCC refusal to allow them to use National Packaging Covenant funds to offset their contribution to the Clean Up Australia 'Say No To Plastic Bags' campaign.

Finally, the report aims to outline that government and NPC approaches are dependent on the increasingly strained kerbside recycling systems, but fail to provide any opportunities for enhanced income streams to fund the system. Yet in many areas, the funding for kerbside recycling is reaching a crisis. Local government organisations are now giving serious consideration to alternative approaches, while others are in the process of reducing services to outlying areas – in Queensland, 86 of the 126 local councils do not have a kerbside recycling system. This forces environment groups into a position of criticising approaches we would like to embrace but find consistently miss the mark. This in turn undermines key stakeholders of the NPC process and is eroding community confidence in issues that are at the very core of social ecology principles.

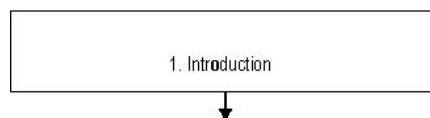


It is clear that the policy and systems approaches are in chaos. Without a clear path to build a consensus with dissenting key stakeholders any approach is doomed to fail. This report makes one final attempt to avoid setting key stakeholders on the path to confrontation by laying out the key considerations necessary to secure the community's support.

1.3 Structure of this Report

The diagram below illustrates the structure of the report.

Following this introductory section, Section 2 explores the benefits and problems of packaging in the context of sustainability principles, outlining a best practice approach to sustainable packaging management for our economy. Section 3 reviews the performance of the National Packaging Covenant in its ability to promote a best practice approach. Section 4 shows that in the development of the NPC MkII, there has been a serious omission of recommendations from stakeholders coming out of three detailed reviews and additional stakeholder consultations. Sections 5 and 6 discuss two outstanding issues not adequately addressed in either the reviews or stakeholder consultations, namely, the detrimental impacts of litter and the failures of kerbside recycling. In light of the failings of the NPC MkII, Section 7 recommends an agenda for action to deliver a best practice approach to sustainable packaging management for Australia.



1.1. Introduction

2. Packaging & Sustainability

2. Packaging & Sustainability



2 PACKAGING AND SUSTAINABILITY

There is ongoing debate surrounding the amount of packaging within our modern industrialised society and its associated environmental impacts. Industry proponents point to the benefits of packaging while

environmentalists highlight the resource depletion associated with single use packaging, lack of recycling and the impacts of litter, wrapped together by an industry-fuelled convenience approach to consumption known as the 'growth fetish'.

Within this argument there is increasing acceptance of the importance of internalising external costs and for opportunities that arise for sustainable development (and packaging) by using nature as a model for structuring our industrial systems. Failure to embrace this opportunity creates significant economic threats e.g. the energy intensive aluminium industry receives substantial greenhouse gas reductions through recycling – every tonne of aluminium recycled achieves a 95% greenhouse reduction. This provides an additional incentive for industry to shift its recycling activities to those nations that are Kyoto signatories (thereby avoiding carbon costs) and focus domestic production on raw materials. Similar experiences will be evident in most recycling industries and recyclers will be encouraged to move offshore unless there is a substantial shift in the price value of recovered resources.

Within the next five year term of the NPC we must achieve substantial gains towards closed loop systems and halt the rate of growth in unrecovered material consumption – if we fail, the debate in 2010 will inevitably be about the need for ultimate caps on packaging volumes. This could create significant economic disruption, and a loss of opportunity for new industries.

Conversely, a failure to embrace the use of economic instruments to offset externalities in turn reduces opportunities demonstrated by: the Global Renewables UR-3R system; the SKM initiative to purchase recyclables from Victorian Municipalities; and the Visy Industries Closed Loop Approach. This is already being demonstrated by difficulties experienced by both the Publishers National Environment Bureau and Visy Industries to guarantee supply of recovered feedstocks.

Other threats arising from a failure to embrace EPR-orientated approaches include continued infrastructure restrictions to embrace other strategies for other resource recovery, and a lost opportunity to develop a strong secondary market for the emerging ethanol industry through the production of bio-plastic packaging and film – an area of significant federal government incentives to achieve greenhouse gas reductions and sustainable agriculture initiatives.

2.1 Benefits of Packaging

The benefits of packaging that are promoted by industry relate to product quality and safety, convenience and labelling. By effectively containing, protecting and conserving products in transit and at point of sale, the amount of decay and deterioration of products is minimised, reducing product wastage. Products are also protected from tampering; an important safety consideration that can have an ongoing protection role as storage for products when contents are only partially used (PCA 1997). Consumer convenience is another heavily promoted benefit of packaging promoted by industry. This convenience also exists for transportation, storage and display at point of sale. Consumers have been trained to expect a 'no mess, no fuss' array of single serve packaging options to provide maximum convenience. In addition to convenience, packaging is also used to convey information such as the safe use of contents, nutrition and health information and use-by dates. As such, packaging has a useful role to play in modern society (PCA 1997).



Packaging provides an important point of sale advertising benefit for brand owners, which is unfortunately diminished by its negative value when found in the litter stream. The value of a responsible approach to managing disposal of branded materials is demonstrated by McDonald's Restaurants which, recognising the 'risks' associated with brand leadership, invest significant proportions of staff labour to conduct litter patrols to ensure that in at least the immediate area of their restaurants their products are not displayed in unfavourable light.

Irrespective of any benefits of packaging, it is also true that consumers do not want to buy packaging *per se*, only the product, although it could be argued that the motivation to buy products is fuelled by the marketing and design of packaging as a main determinant of purchase choice. The fact that packaging is often increased to increase POS opportunities serves as a clear indicator that a share of responsibility lies beyond the consumer.

2.2 Problems with Packaging

The primary problem with packaging arises from its temporary nature, combined with an economy that is essentially linear in its material flows. Packaging is predominately single use only with a short stock life in the economy. The current linear pattern of 'use once and discard' leads to poor resource management and wasting of non-renewable resources.

The inherent problems of packaging are exacerbated by:

- . • Excess generation – the use of more packaging than is necessary ('over packaging'), results in added cost and environmental burden. *While it sounds ludicrous, we have reached a level where an individually wrapped food bar is found inside the retail packaging box of eight bars, which was inside a corrugated cardboard box of 24 boxes and was delivered together with other corrugated cardboard boxes on a plastic shrink-wrapped wrapped pallet.* It is common to find goods that now contain more packaging than product.
- . • The marketing push for a 'convenience' society – the trend in retail consumption is a drive toward greater convenience at point of sale/use to maximise consumption. Greater convenience means more packaging and adds considerably to the weight of evidence that industry **must** start to accept that it now bears a strong proportion of responsibility for its waste.
- . • Just as retailers have embraced a responsibility to pay their fair share of phasing out plastic bags, food and grocery manufacturers now have to pay their fair share of the managing the packaging reduction and recycling stream.
- . • Greater convenience means more packaging. It is arguable that promotion (market push) rather than consumer demand (market pull) is the driver for increased packaging.
- . • The choice of packaging materials can have additional environmental impacts through a reliance on virgin non-renewable resources and/or materials that have hazardous precursors and by-products. PVC continues to be used in product manufacture, and the practice of embedding diverse resources together such as liquid paperboard packaged products has become a nightmare for resource recovery.
- . • There is limited recycled content found in most packaging manufacture. This weakens opportunities to close the loop.
- . • Almost no reuse and poor recycling – limited options exist to adequately capture packaging material at the end-of-life stage. This results in wasted resources, as ineffective recycling systems make no progress in 'closing the loop'.
- . • Externalised costs – the costs of end-of-life management associated with recycling,

disposal and litter are not borne by producers or consumers, but by rate payer contributions to local governments in order to fund the provision of household waste and recycling, street sweeping, education, public place waste and recycling services.

- No value at end-of-life – these externalities subsidise virgin materials and penalise recycled materials, i.e. recycled content material contributes to the cost of recovery while virgin materials do not.

- Lack of costing to pay for externalities leaves virgin material at such a low price that packaging has little to no value (in terms of financial value, re-use value) at the end of its life and is consequently given little care in its management.



Accordingly, packaging consumes excessive resources and has no end-of-life value, resulting in a one way flow of packaging through the economy. This results in a high portion of the packaging stream being thrown away, contributing to litter problems that are difficult to manage.

To date the packaging industry has successfully externalised most of the costs associated with the end-of-life management of packaging materials. Unless this is reversed, reform around packaging waste cannot succeed.

2.3 Externalities – Collateral Damage of the Disposable Society

Externalities are most simply described as real costs to society that are not recognised in the direct price of a product or service. They represent inefficiency, both for industry and the consumer. One major impact on the economy is experienced when business maximises its profitability by externalising the up or down stream costs associated with the production of goods. This can be seen in a wider context where governments build infrastructure such as roads and utilities to support commercial endeavours, removing that cost from business and placing it across a tax-payer platform to reflect the economic 'advantages' of increased industrial activity.

This drive to externalise costs has unfortunate consequences in situations where companies pollute the environment and do not address any downstream impacts arising as a direct or indirect impact of their production activities. In these instances the environment is treated as a 'free' service for the provision of resources and the receipt of waste. For example, in the case of packaging there is no link between packaging choice and costs associated with end-of-life management issues such as re-use, recycling, disposal in landfill and litter. Industry often views economic instruments to correct externalities as unfairly penalising their industry, but they are entirely consistent with both the user and polluter pays principles well enshrined in legislation and current policy. As a result of not addressing this issue, neither the producer nor the consumer pays for the cost of their actions.



Continued externalising of financial impacts for either industry or the individual results in an immediate 'domain of interest' (only care about 'me' here and now, rather than others, elsewhere or later). Accordingly, pollution by packaging entering the environment has a wider domain of impact on others (people, animals and ecosystems). This would be fixed by closing the feedback loop by expanding the domain of interest through the use of economic instruments designed to introduce an immediate cost for polluting – which is in essence the entire point of the Polluter Pays Principle. It is no coincidence that the world governments that demonstrate best practice environmental performances all have strong zero waste strategies driven by EPR schemes and high minimum performance standards for industry. They recognise the importance of this approach to awaken consumer awareness which will drive consumers to the next level of social ecology across the entire resource consumption sector.

Currently, packaging enjoys a position where all of the costs arising from end-of-life management activities such as recycling, disposal in landfill and litter have been externalised through funding by ratepayers via the auspices of local government. This eliminates any feedback loop to either industry or the consumer. This is compounded by the fact that the consumer is often not the rate payer, and the rate payer is not necessarily the household resident. This is discussed further in section 5 of this report. Additionally, local government can only charge a flat fee and only to rate payers, which does not accommodate or encourage desirable changes in behaviour from household to household and which is not fair on owners who do not occupy.¹

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 the internalisation of negative externalities into a pricing signal that promotes desirable activity. This obviously requires a change from the status quo. When considering desirable activity and change, it is suggested that nature acts as an ideal model and reference point.

While the Boomerang Alliance is not directly opposed to the concept of shared responsibility it must be recognised that the current practice produces an externality of some \$294,485,000 (costs of kerbside recycling borne by ratepayers, who are often not the same group as consumers). It is little wonder that industry has 'offered' \$3,000,000 p.a. as its share of the responsibility - at less than 1% of the cost, it's one of the best rorts since 'the bottom of the harbour' schemes.

The first step to eliminate the externalities in packaging is to redirect the charge away from the rate payer and onto the consumer and industry. This approach could take the form of a basic charge or levy, or preferably, some type of economic instrument that allocates a property right to desired sustainability outcomes in a manner that rewards positive actions. The levels of ultimate responsibility that should be allocated between the consumer and industry is irrelevant, as industry will generally

¹ Owners are not responsible for the payment of other services such as electricity, gas or phone, so why should they pay for waste management services?



pass costs up the supply chain to the ultimate purchaser – what is important is that the charges to deal with waste move through the supply chain with the goods (i.e. the charge should start at the point where the

package is manufactured) so each step in the chain fully acknowledges associated costs – this will motivate each area of the supply chain to seek out ways to reduce the costs (and in turn the packaging) in the quest for a market advantage and improved profits.

2.4 Sustainability: Nature as Model

Industrial processes have traditionally been based on one-way resource flows, from extraction to manufacture, use and disposal as waste. There are many problems associated with this linear flow of packaging, including the depletion of non-renewable resources, increased energy and water use, and reliance on landfill as a 'sink' for our waste problems.

IN NATURE THERE IS NO SUCH THING AS WASTE, RATHER ALL 'PACKAGING' IS AN INTEGRATED PART OF THE CYCLE, FORMING AN ENERGY OR NUTRIENT SOURCE FOR SOME OTHER ORGANISM OR SYSTEM.

Applying the nature as a model approach to packaging involves making a transition to cyclic flows of material, with the end point of 'zero waste' as a goal – the Closed Loop Approach. This will involve greater levels of recycling and of purchasing recycled materials in an effort to recover embodied energy and save virgin materials – the end point being a position where producers will use only recyclable materials made from recycled content.

Optimal systems are desired, involving a commitment to ongoing continuous improvement measured in real terms such as an overall reduction of materials sent to landfill rather than supposed increased rates of recycling. This is important as often increases in the rate of recycling are overshadowed by increased economic growth and consumption (on the current trends it requires a 5% increase in recycling rates to keep pace with a 1% increase in consumption in terms of total nett waste to landfill). Accordingly, the first critical step is to take immediate action to guarantee that the minimum standard of recovery **must** ensure that annual total loss of materials is reduced.

RATHER THAN ELIMINATING THE OVERALL LEVEL OF PACKAGING WASTE, THE CURRENT NPCC APPROACH'S BEST POSSIBLE OUTCOME IS TO SLOW THE RATE OF INCREASE IN LOST MATERIALS.

With nature as our model of sustainability, the closed loop cycling of resources is an essential and desirable feature. This begs the question as to why this isn't the way the system currently functions, and more importantly, why is closed loop recycling not the stated goal of any public policy development such as the National Packaging Covenant?

2.5 Best Practice Elements for a Sustainable Packaging Industry

In a sustainable packaging industry there will be a combination of **both** sustainable production and sustainable consumption arising as a result of shared actions between producers and consumers with a common domain of interest in seeing improved environmental outcomes. In order for this to occur there is a need to motivate improved performance and also to ensure accountability for roles and responsibilities.



Outlined below are the essential ingredients of an operating system for a sustainable packaging industry:

2.5.1 Polluter Pays Principle and Extended Producer Responsibility

The 'Polluter Pays Principle' was defined in the 1972 OECD Guiding Principles on the International Economic Aspects of Environmental Policies, as:

'THE PRINCIPLE TO BE USED FOR ALLOCATING COSTS OF POLLUTION PREVENTION AND CONTROL MEASURES TO ENCOURAGE RATIONAL USE OF SCARCE ENVIRONMENTAL RESOURCES AND TO AVOID DISTORTIONS IN INTERNATIONAL TRADE AND INVESTMENT IS THE "POLLUTER PAYS PRINCIPLE". THIS PRINCIPLE MEANS THAT THE POLLUTER SHOULD BEAR THE EXPENSES OF CARRYING OUT THE ABOVE MENTIONED MEASURES DECIDED BY PUBLIC AUTHORITIES TO ENSURE THAT THE ENVIRONMENT IS IN AN ACCEPTABLE STATE. IN OTHER WORDS, THE COSTS OF THESE MEASURES SHOULD BE REFLECTED IN THE COST OF GOODS AND SERVICES, WHICH CAUSE POLLUTION IN PRODUCTION AND/OR CONSUMPTION. SUCH MEASURES SHOULD NOT BE ACCOMPANIED BY SUBSIDIES THAT WOULD CREATE SIGNIFICANT DISTORTIONS IN INTERNATIONAL TRADE AND INVESTMENT.'

The Polluter Pays Principle requires the full costs associated with the environmental impacts, arising both from producing packaging and also its end of life management through recycling, be incorporated into the price of the goods.

The application of the Polluter Pays Principle for the packaging industry finds its expression in Extended Producer Responsibility (EPR).

EPR is defined by the Organisation for Economic Co-operation and Development (OECD) as 'an environmental policy approach in which a producer's responsibility for a product is extended to the post-consumer stage of a product's life cycle' (OECD 2001).

EPR schemes may take a variety of forms but can generally be categorised into one of four groupings:

- . • Take Back;
- . • Specific economic instruments such as Environmental Deposit/Refund schemes;
- . • Broader economic instruments such as Advanced Disposal Fees; and
- . • Performance Standards.

Product stewardship is often described as an EPR approach and it is often the case, but only when the level of responsibility is clearly defined and accompanying policy ensures rather than aims to achieve a desired outcome.

By failing to specify broad overarching targets, defining the level of responsibility in each phase of the supply chain, and mandating minimum standards of performance, the current and proposed NPC can be viewed as a deliberate attempt by industry to avoid responsibility, by advocating that rate payers and local

government bear the cost of responsibility for packaging products in the post-consumer stage of its lifecycle.



Covenant signatories must truly action a 'shared responsibility' approach by adopting a collaborative effort to better define roles, responsibilities and accountabilities against performance targets for the packaging supply chain. Governments must ensure that genuine mutually agreed outcomes will be achieved or they are in fact abrogating their responsibilities to protect the community and the environment.

2.5.2 Internalisation of Costs

A sustainable packaging industry would incorporate externalities associated with environmental impacts across the packaging lifecycle into the cost of packaging and ultimately the product itself. By harnessing market forces to set penalties and rewards for desired actions, a more sustainable supply chain will result. Evidence supporting these outcomes are irrefutable – both the South Australian Container Deposit Legislation and the Publishers National Environment Bureau continue to deliver best practice recycling performance in Australia – the difference between the NPC and both of these schemes involves the use of an instrument that internalises costs, guarantees markets for recovery, and provides strong guarantees of continued feedstocks of recovered materials that secure supply.

As a result, the NPC MkII fails to guarantee any of these outcomes.

Any instrument to internalise the full cost of packaging and recovery will encourage new initiatives that reduce the use of packaging to save costs and unlock the value of the used packaging as a resource. New industry opportunities such as bio-plastic from ethanol fuels, the UR-3R approach of GRL, and SKM 'materials buy back' schemes will flourish. This approach will also stimulate market take-up for recovered resources.

While one approach that can achieve the desired outcome is the development of a specific broad economic instrument for packaging such as an ADF, **another would be to introduce mandatory performance standards** and agreements within an NPC approach, converting it into a genuine vehicle for product stewardship. These standards would need to include:

- . · high standards of recovery and recycling;
- . · milestones to track improvement and develop performance standards;
- . · long term agreements for packaging manufacturers to recycled resources to 'close the loop'; and
- . · incentives to encourage improved materials selection and efficiencies gains.

Ultimate targets for recycling must be set at a high standard of at least 80% by 2010 – milestones must guarantee that the level of recovery is subject to not only continuous improvement but also reduction of the gap between ultimate recovery and consumption.



2.5.3 The Community Licence to Operate

It is generally recognised that industry does not have an uncontested right to operate wherever and whenever it chooses. Companies are also participants in our communal contract. They operate as part of society and not apart from it. As such a 'community licence to operate' is required in recognition that it is ultimately 'the community' that allows business permission to operate. This means that genuine consultation with stakeholders is needed instead of the current attempts at indoctrination by wearing us down through hysterical debate, threats and financial intimidation.

The current process by both the NPCC and regulators along the east coast was in no small part an appalling approach to established standards of corporate and public sector governance. The same alternate views and objections were vocalised at each step of the process and were repeatedly ignored. Where no agreement was found there was no effort to negotiate a consensus view, and the environmental regulators made no effort independent of the NPCC to explore the concerns of local government (where there remains considerable dissent in every state) or the environment movement. In fact it was only when The Boomerang Alliance was formed and the threat of public criticism emerged that key regulators in these states made any effort to even understand our concerns.

IT IS NO LONGER ACCEPTABLE FOR COMPANIES TO DICTATE THEIR PLANS - IT IS ONLY THROUGH SHARING DECISION MAKING WITH STAKEHOLDERS THAT TRUE CONSULTATION AND EMPOWERMENT CAN OCCUR.

EQUALLY, IF THE CONSEQUENCES OF A CO-REGULATORY APPROACH RESULTS IN THE APATHETIC APPROACH DISPLAYED BY SOME REGULATORS DURING THE NPCC REVIEW, THEN RATHER THAN A COOPERATIVE APPROACH WE VIEW IT AS NO MORE THAN A SYSTEMATIC ABDICATION OF RESPONSIBILITY.

2.5.4 Cyclic Material Flows

The model of Zero Waste is identified as where nothing should be allowed to be produced that cannot be used in some other industrial process. This creates cyclic material flows and hence no waste. In order for this to occur, mechanisms that involve the whole system (holistic approach) are required.

Applying this thinking to the packaging industry, it is important that any packaging measure should ensure it positively impacts on the behaviour of producers to achieve sustainable outcomes. The impact should also be felt by consumers through a price signal that encourages them to consider the depletion of natural resources and the generation of waste.



2.5.5 Sustainable Targets that Promote Improvement

A best practice packaging industry must continually strive to improve performance against sustainability targets. Given that 'we measure what we care about and care about what we measure', targets provide the means to benchmark performance openly and transparently. The performance measures must be carefully chosen to reflect progress toward sustainable goals. Performance assessment must be structured to meet targets; otherwise it is unlikely action will be taken to improve performance.

The Boomerang Alliance acknowledges the difficulty in determining what level of intervention is best:

- Command and control behaviour can be problematic – producing mixed results as government struggles with the requisite amount of prescription. This approach is often costly and restricts innovation. However, it is conceivable that with substantial intervention by 2010, society will consider banning some forms of packaging and put caps on total consumption.
- Changes to prices that include externalities will change behaviour, but still allow flexibility in the system recognising that price is not the only determinant of behaviour.

To this end, allowing the market to solve the problem (as argued by the NPCC) is often an acceptable outcome, **but only if the approach specifies an outcome** (a broad overreaching target with KPIs and milestones that will measure progress) **and an approach that meets current public policy objectives**. Once again the apathetic approach of the NPC MkII fails to make the grade. While the waste hierarchy has been 'dropped into' the NPC MkII there is no rationale to link activities to this hierarchy. Nor has any attempt been made to ensure signatories make approaches that are consistent with existing Zero Waste and EPR standards developed by various jurisdictions. It seems the regulators associated with the NPCC are developing an approach that operates within a vacuum and ignores the broader waste and resource recovery agenda of their Departments.



A CRITICAL EXAMINATION OF THE NPC

The existing National Packaging Covenant (NPC) was introduced as a mechanism to address the environmental impacts associated with used packaging materials. This effort has been controversial due to the absence of any targets to drive action or any minimum standards of performance. As a voluntary agreement this may well be satisfactory, but it must also be recognised that in exchange for voluntary agreement, jurisdictions agree to heavily restrict their right to regulate and develop new policy approaches around the issues of the packaging industry.

As such, the NPC has been seen by many as a formalisation of the 'Waste Club' – an agreement for avoidance rather than a sharing of responsibility, especially given the lack of results or impact from the NPC to date. There are similar concerns that the National Packaging Covenant Proposal (NPC MkII) to be tabled for consideration by the EPHC on 3 December 2004 is equally ineffectual at delivering any kind of sustainable outcome and ultimately fails as a solution to the environmental impacts associated with used packaging materials.

Members of the NPCC and governments state that our concerns will be alleviated as the use of targets and goals, and development of specific approaches will occur during the life of the NPC MkII

– but once signed these can only be implemented with the unanimous agreement of the NPCC which includes a number of industry bodies with an obvious conflict of interest in deciding how high to ‘set the bar’.

Given that over the last 6 years the first NPC could not even succeed in securing signatures of over half of local government organisations, or develop a baseline about the ultimate levels of consumption and recovery, we struggle to recognise any processes that will develop the necessary competencies to ensure success. The bar is set so low that nearly every corporate member made it painfully clear that they are prepared to take significantly greater action to ensure the NPC MkII process continues to advance. This begs the question as to why the NPCC is putting forward a draft proposal for Ministers to endorse when nearly everyone clearly agrees that it is not the best community and environmental outcome we could reasonably expect.

Specific inadequacies that remain within the flawed NPC MkII:

- .
 - Rather than demonstrating a commitment to shared responsibility, the NPC MkII makes government complicit in the shared abdication of responsibility for packaging, causing the continuation of perverse subsidies from rate payers and local government to externalise packaging industry costs.
 - .• Far from representing its greatest strength, the number of signatories to the NPC Mark I reveals its greatest weaknesses:
 - a.
 - There are no common and specific targets for industry – each signatory decides its own level of performance [which results in gaming and free riders].
 - b.
 - The process is directionless and makes little attempt to work in manner that is consistent with the various jurisdictions’ waste strategies.
 - c.
 - Majority will look for lowest common denominator – uneconomic to otherwise attempt to integrate with wider issues of public policy.



- There is no independent coordinating agency – the NPCC is a rubber stamp – complying action plans will not guarantee the outcomes that are necessary to make transition to sustainability.
- Reviews and audits are unsatisfactory – and no-one determines what is adequate – 20%, 10%, 5%, 1% or the existing practice of slowing the rate of increase.
- All the NEPM compels is reporting on data and undertaking some level of activity – why wouldn't everyone want to sign it when you get a guarantee of no regulatory action simply for a report?
- As identified by Nolan ITU (as a ‘low hanging’ fruit approach from the first NPC) initiatives like light weighting would probably have happened as an opportunity to reduce the cost of production.

The NPC remains little more than an opportunity to popularise standard business decisions, and a low level

chance to provide some cross-pollination of ideas.

3.1 Context - Rationale of the National Packaging Covenant

The environmental impact of packaging waste has long been a concern for waste management and resource recovery. In 1994 the European Union released its 'Packaging and Packaging Waste Directive' that set out clear targets for the recovery and recycling of packaging materials (EU 2004). In Australia the response to these concerns is seen in the development of the 1991 National Packaging Guidelines, the 1992 National Waste Minimisation and Recycling Strategy and the 1992 National Kerbside Recycling Strategy. In 1996 the Australian and New Zealand Environment and Conservation Council (ANZECC) began the formal process that established the NPC in 1999 (ANZECC 1999).

Ostensibly the purpose of the NPC was to establish effective lifecycle management of used packaging and paper products,² including recovery and reuse, in a self-directed manner that would produce cost effective environmental benefits that were 'real and sustainable'. One of the core foundations of the NPC was that of Product Stewardship. The specific definition of product stewardship under the NPC included an ethic of shared responsibility for the life cycle of products including the environmental impacts of products through to and including their ultimate disposal. This identifies the sharers of responsibility within the 'supply chain' as raw material suppliers, designers, packaging manufacturers, packaging users, retailers, consumers, all spheres of government and collection agencies. The assertion is that each party needs to accept responsibility for the environmental impact within their *sphere of activity* (ANZECC 1999).

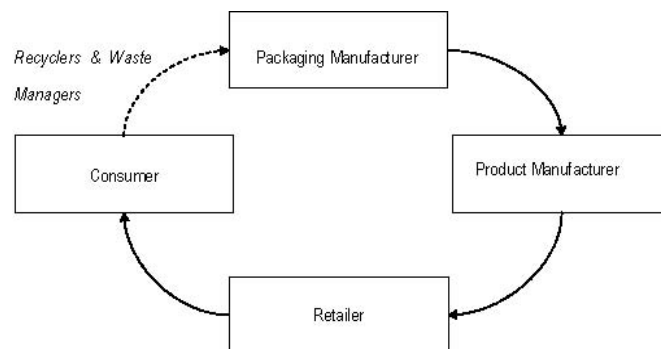
While being responsible for reducing impacts within one's sphere of activity, the initiatives adopted by the NPCC are not currently informed by the drive to improve performance across the supply chain and to share the responsibility for doing so in an equitable manner. Improvements targeted at only one point in the supply chain (e.g. kerbside), may deliver sub-optimal improvements for the supply chain as a whole and may unfairly share the costs of improvements (e.g. costs borne largely by rate payers).

² Used packaging and paper products refer to consumer packaging and household paper. Paper used to publish newspapers or magazines is excluded.



Product Stewardship is generally seen as a weak form of Extended Producer Responsibility (EPR) as previously defined in Section 2.5.1. When applied by the NPCC it is weakened further, by: failing to specify the levels of responsibility for each member of the supply chain; and not recognising that the ultimate cost of disposal of the product must be shared across each stage of the supply chain. Finally, it is nothing more than a process of cost shifting to maintain an externality (without overreaching goals and strategies, and lacking targets).

The NPC also fails to secure key participants in the supply chain. In its simplest terms the supply chain looks as follows:



This diagram highlights the missing aspects of the chain, namely those responsible for the end of pipe recovery or disposal i.e. those best qualified to come up with solutions - local government, recyclers, and waste managers. Rather the NPCC interest in the supply chain is shown to not represent industry and government but those who most benefit from packaging. This results in double dipping of interest – many companies are members of 2 or 3 industry groups – and also ensures that initiatives aimed at closing the loop will never achieve the support through the NPC process. Many companies in the recycling and waste management industry like local government and NGOs are concerned that kerbside recycling is being placed under strains it cannot continue to meet. This concern is supported by the recent submission of the Waste Management Association to the current Tasmanian parliamentary enquiry, which called for Tasmania to introduce Container Deposit Legislation and other EPR approaches.

Roles and responsibilities for improving overall performance of packaging across the supply chain must be better articulated. Currently, the term ‘shared responsibility’ has been used to dilute the responsibility of industry. It has been viewed with concern by many stakeholders as an exclusionary and industry dominated activity. This concern has extended to the point where the packaging industry has been referred to as the ‘Waste Club’.



3.2 Formalisation of the Waste Club

The Four Corners (2003) report by Ticky Fullerton identified that a key group of industry players have consistently fought to avoid Container Deposit Legislation, the so-called ‘Waste Club’. Members of this club include Beverage Industry Environment Council (BIEC), Packaging Council of Australia (PCA), Australian Retailers Association (ARA) and Australian Food and Grocery Council (AFGC). The thread of the program was to point out the industry agenda against reform, namely the rejection of producer responsibility for litter and garbage, continuation of kerbside recycling as a rate payer funded activity and an absolute opposition to Container Deposit Legislation.

The National Packaging Covenant Council (NPCC) was established to have overall responsibility for the management and implementation of NPC MkI, in addition to considering any amendments to the Covenant, and then only with the unanimous agreement of the NPCC (ANZECC 1999). The Waste Club makes up half of the industry representation on the NPCC, with representatives from the:

- . • Beverage Industry Environment Council
- . • Australian Retailers Association
- . • Australian Food and Grocery Council

Furthermore when you consider that the membership of the above organisations, in addition to other industry representatives from Australian Industry Group and Plastics and Chemicals Industry Association is likely to be repeated, it can be argued that industry is double dipping on representation.

This over-representation of industry is contrasted against poor local government representation with only two members from Queensland and Victoria; they represent the minority of local governments that signed the existing NPC and have not been endorsed as representatives by the Australian Local Government Association, nor do they represent all of the local government organisations in the region – hardly a body to be representing the views of Australian local government.

While the Boomerang Alliance makes no comments as to the veracity of the accusations made within 'The Waste Club', we note that while industry groups remain under this type of reputational 'cloud' it is critical that government undertakes its own independent reviews and consultations. Few regulators have undertaken this process, being content to allow the NPCC to run the show. Consequently the obvious self interest of the body undertaking the review has led many to believe it was futile to participate in the debate, and the NPCC felt unconstrained in ignoring any objections or suggestions it didn't favour.

Environment, consumers, and rate payer groups are also excluded from the NPCC, despite that they are identified as the sector the community most trusts and the well established role of public scrutiny they have enjoyed for at least a decade. This leaves nobody to represent the interests of the broader community, despite the fact that the community bears the brunt of the NPCC decisions.

Not only is industry overrepresented in the NPCC, control of the NPC process has been effectively given to the Waste Club due to the unanimous clause for decision making. As a consequence there is no 'shared' responsibility or participation in setting the NPCC agenda nor any shared accountability to assess the performance of NPC Mk1.



Ultimately the current NPCC approach of excluding key stakeholders will result in a community backlash and potential legal action to address growing inequities. Examples of growing areas of legal risk include:

- . • failure by the NPC to move to polluter pays models of funding, will see rate payers (particularly non-residents) seek redress for the costs they unfairly bear; and
- . • the lack of consumer opportunity to avoid packaging will see consumers before the ACCC claiming that packaging is forced upon them, forcing retailers to offer container reuse and refill options.

3.3 Performance of the First National Packaging Covenant

The main commitments made by signatories to the current NPC revolved around: preparation of action plans and annual reports; maintenance of kerbside as the preferred vehicle for resource recovery; and provision of funding for a transitional period of kerbside. Rather than provide yet another review of the already well documented failures of the first NPC we provide a summary of the three existing NPC reviews

undertaken within the supposed consultation.

The review of the NPC by Nolan ITU described the performance acknowledged progress in terms of processes but noted **'there is less evidence of achievement (by the NPC) of "outcomes" intended by these "processes" (e.g. lifecycle management of packaging, sustainable environmental benefits, and reductions in post-consumer packaging waste)' concluding 'the lower hanging fruit has been picked and more needs to be done to achieve tangible gains.'**

The Institute for Sustainable Futures review (commissioned by the NSW NCC) was less generous when describing the NPC systems and reporting: **'The lack of a consistent, independently verified data sets for the production, disposal and recycling of packaging waste is a major impediment to its management and minimisation. After four years of operation, this is a major indictment of the Covenant system's efficacy and usefulness in meeting its own goals, or any reasonable goals expected of a regulatory (or quasi-regulatory) framework for packaging waste'.**

In terms of environmental performance the ISF stated, **'Analysis of other available data sources suggests that packaging waste is increasing and for some materials recovery rates are decreasing, despite increases in kerbside collection tonnages in some jurisdictions.'**

The review undertaken by Meinhardt for the Australian Local Government Association comments **'Local Government lacks confidence that this (The NPC) translates into more effective minimisation, management and recycling of used packaging material throughout its entire life-cycle. There is a view that many industries have focused their efforts on reducing waste at the point of manufacture, and used this in promoting themselves as 'environmentally friendly' companies. However there is seen to be much less commitment to the down-stream effects of used packaging material.'**

These comments clearly demonstrate that the current NPC performance has been appalling – yet the NPCC has asked governments to sign off on 5 years more of the same.



3.3.1 Action Plans under the National Packaging Covenant

Signatories to the NPC agree to take appropriate actions in the areas of design, production, distribution, disposal, research, market development, education, labelling, manufacturing and retail. The level of undertaking was up to each individual company to determine and then advise the NPCC through action plans and annual reports³ (ANZECC 1999).

The NPC set general themes for signatories to address, however as these activities involved unspecified levels of contribution or performance that relied on language such as 'promote', 'coordinate', 'cooperate', 'encourage' and 'as appropriate', the only real commitment that had to be met was one of reporting.

As at 20 October 2004, the signatories list hosted by the Department of Environment and Heritage⁴, numbered 591 industry organisations that were signed up to the NPC. Action Plans and Annual Reports submitted by signatories that gain approval by the National Packaging Council are hosted by the Packaging Council of Australia. ⁵ A search on 22 November 2004 identified 550 industry organisations with some form of Action Plan. However it should be noted that many companies did not have follow up Annual Reports to

report on any progress.⁶

GHD (2002) undertook a semi-quantitative review of 104 NPC signatory action plans, including 92 companies and the remainder from Industry Associations (4), governments (6) and Local Government associations (2). They concluded that

'FEW OF THE ACTION PLANS INCLUDED DETAILS ON DATA COLLECTION, MEASURABLE TARGETS OR WHAT RESOURCES HAD BEEN ASSIGNED FOR THE IMPLEMENTATION OF THE ACTION PLAN.' BASED ON THE GHD SCORES OBTAINED, THE AVERAGE PERFORMANCE OF THE ACTION PLANS REVIEWED WAS 44% (2.19 OUT OF 5),⁷ INDICATING A RESULT THAT WAS UNSATISFACTORY ACROSS THE BOARD. THIS LED LOCAL GOVERNMENT TO EXPRESS THE VIEW THAT THERE WERE SERIOUS DEFICIENCIES IN INDUSTRY ACTION PLANS (MEINHARDT 2004).

ISF (2004) was critical of the methodology employed by GHD, noting that it relies on signatories' action plans as opposed to external evidence or measurable indicators showing progress in the relevant criteria of assessment. This casts even greater doubt on the quality of the plans.

ISF (2004) also note the lack of information protocols or uniform guidelines for signatories to assist in the preparation of action plans with signatories having absolute discretion on report content and format. ISF's review of six action plans identified a lack of direction with regard to increasing recycling and reducing packaging (Packaging Council of Australia), omission of critical data on recovery rates (Beverage Industry Environment Council), limitation of scope (Woolworths), no actions to increase post consumer recovery rates (Coca-Cola Amatil), maintenance of the status quo (Lion Nathan) and no details with regard to the implementation of action items (McDonald's).

³ The voluntary 'Environmental Code of Practice for Packaging' was produced by the AIG, BIEC, PCA and PACIA. Signing the NPC has no obligation to adhere to the Code.

⁴ <http://www.deh.gov.au/industry/waste/covenant/signatories.html#ind-orgs>

⁵ http://www.packcoun.com.au/ap_companies.htm

⁶ A search at the same time identified 209 companies with no Annual Reports – nearly 40% of companies who had submitted an Action Plan.

⁷ This figure was derived from the summary table of scores obtained in the executive summary of GHD's 2002 report.



THIS REVIEW LED THE INSTITUTE FOR SUSTAINABLE FUTURES TO CONCLUDE "THAT FEW OF THE ISSUES MENTIONED IN THE NPC HAD ACTUALLY BEEN ADDRESSED AND THAT THE DETAIL OF ENGAGEMENT WAS HIGHLY QUESTIONABLE".

96 action plans and 39 annual reports were reviewed by the Centre for Design at RMIT University (Lewis and James 2003 in Nolan ITU 2004) as part of the evaluation of the National Packaging Covenant MkI. This included 81 action plans and 36 annual reports from 44 companies with the remainder coming from state and territory governments (7) and industry associations (2). The reviews noted an 'almost universal lack of measurable (quantified) targets' in the action plans reviewed with many plans using vague and non-committal language and no specific action lists. Furthermore most plans had no allocation of resources to

implement specific activities and no data collection plan to monitor progress.

The most positive review of action plans prepared under the NPC was undertaken by Warren (2004) and involved an assessment of 198 industry action plans. However **even this assessment concluded that nearly 50% of the action plans reviewed had not delivered measurable outcomes**. The scoring system used in this assessment also reveals **an average score of 48%** (1.93 out of 4) for the plans reviewed - another unsatisfactory result.

This discussion has evidenced the extensive lack of improvement achieved through weak action plans, which do not seek to measure performance against meaningful industry targets. There are additional problems with the NPC - in particular, its sole focus on kerbside recycling as the panacea for collecting packaging waste, which it doesn't pay for and which can at best only address half the problem (given that half of all packaging is consumed out of home).

While the NPC MkII will provide better reporting and the development of Key Performance Indicators will provide more tangible data sets, no significant progress has been made to drive improvement in terms of waste reduction or environmental protection. Frankly the NPCC needs to accept and understand that it failed miserably. The facts are plain:

- . . . every review described the NPC performance as unacceptable;
- . . . the NPCC failed to provide any evidence of widespread gains achieved through the Covenant; and
- . . . there is no tangible information to review and 40% of signatories failed to report.

It is inconceivable that a process so roundly criticised and patently flawed has been put forward with little modification other than improved administration, a glossary of terms, and a number of nonspecific and intangible goals. The NPCC is tired and undertook a lazy review.



3.3.2 Kerbside Recycling Performance and the National Packaging Covenant

Kerbside collection is identified as the principal vehicle for the recovery and return of used packaging. The costs of delivering a kerbside collection of recyclable materials are the responsibility of local government (ANZECC 1999). In effect, this transfers the cost of funding the recycling collection to rate payers as a cost incorporated into waste services charges.

Kerbside recycling and waste services incorporate no price signal for consumers to increase environmentally responsible behaviour, either at home and away from home, and doesn't enter to away-from-home consumption. This leads to low recovery rates, making kerbside a grossly inadequate mechanism for resource recovery (See also Section 6 for data on current kerbside recycling collection services).

The failure to reverse externalities has seen the kerbside system placed under incredible strain, with costs ballooning to \$294,485,000 and effective rates of recovery falling to 20.1%.

While costs have ballooned and the NPCC has procrastinated, the community has become more and more confused about what can and cannot be recycled. Research undertaken by Roy Morgan Research for Planet Ark in August this year showed that 98% of the community thought recycling important, but nearly half (48%) were confused about what can or can't be recycled. It's little wonder we only recover 1 in 5 packaging items.

3.3.3 Kerbside Recycling Transitional Arrangements and the NPC

Under the NPC, industry signatories committed to 'seek' to raise funds up to maximum of \$17.45 million. Nolan ITU (2004a) reported industry contributions to 6 November 2003 as being \$9.1 million, some \$8.35 million short of the agreed total. The target date for raising the industry contribution was 2 July 2002. There was no Annual Report available on the National Packaging Covenant website hosted by the Department of Environment and Heritage,⁸ so it is difficult to determine accurately the actual target shortfall from industry. However, this lack of performance in meeting funding contributions means future pledges must be viewed with a large degree of mistrust by the broader community.

3.3.4 Five Years of Inaction

To judge the NPC performance it is important to compare it with other approaches. Members of the Boomerang Alliance make no comment on the success of their reform agendas or their overall adequacy, but note that when compared to the NPC the reform in energy, water, land clearing, and solid waste have shifted far more. Demand side approaches, price signals, use of economic instruments and new policy and regulatory approaches have featured in nearly every state or territory across the resource sector – conversely the NPC has, to date, done little more than stall other approaches and become bogged down in administrative detail rather than focus on the problem – that communities are being buried beneath mountains of packaging. Consequently, while Europe and parts of North America have achieved significant progress through the use of targets and EPR schemes, Australia's rate of recovery and waste avoidance for packaging is going backwards.

⁸ <http://www.deh.gov.au/industry/waste/covenant/publications.html>



4 THE PROPOSED NATIONAL PACKAGING COVENANT MkII

The NPC was established on 2 July 1999 for a period of five years. At a meeting in July 2004, the Environment Protection and Heritage Council (EPHC) agreed to extend the National Packaging Covenant to April 2005 and the associated National Environment Protection Measure on Used Packaging Materials until July 2005 (EPHC 2004), to allow an extended period of consultation and review for the development of the

National Packaging Covenant MkII.

4.1 Overview of the NPC MkII

The principal objective of the NPC MkII is to 'reduce environmental degradation arising from the disposal of used packaging and conserve resources through better product design and encouragement for the recovery, re-use and recycling of used packaging materials' (NPCC 2004).

Much of the *rhetoric* of NPC MkII reflects a notion of the general direction of sustainability and as such is likely to receive support at first glance. For example, the NPC MkII aims 'to minimise the environmental impacts arising from the disposal of used packaging, conserve resources through better design and production processes and facilitate the re-use and recycling of used packaging materials'. The inclusion of waste management hierarchy as a principal consideration and the following specific goals with regard to improving total environmental performance also feature (NPCC 2004):

1. 1. 'Packaging optimised to integrate considerations about resource efficiency, maximum resource re-utilisation, product protection, safety and hygiene.
2. 2. 'Efficient resource recovery systems for consumer packaging and paper.
3. 3. 'Consumers able to make informed decisions about consumption, use and disposal of packaging of products.
4. 4. 'Supply chain members and other signatories able to demonstrate how their actions contribute to goals (1) – (3) above.'

However the NPC MkII will attempt to meet the primary overall objective by using a largely similar approach as the first NPC. As such the NPC MkII suffers from all of the limitations that are already inherent in the NPC. The severe limitations, hidden by (albeit positive) rhetoric include policy, regulatory, process and structural deficiencies.

4.1.1 Policy Limitations of the Covenant Mk II

Absence of Performance Targets

The principal policy failing of the NPC MkII is the absence of any performance targets or specific EPR approaches. Without an overarching scheme or targets, the NPC MkII is little more than a 'check-a-box' reporting requirement. While reporting on these issues may cause some companies in the packaging sector to look at certain aspects of their operations, it places no greater burden than, for instance, signing up to the Global Reporting Initiative. As community expectations are changing towards higher expectations of Corporate Social Responsibility, being a signatory to the NPC MkII places no further requirement on a company than what would be expected as part of its community licence to operate. The need to move beyond process related objectives (e.g. introducing a reporting process) to measurable outcome-related objectives against set targets was identified by White *et al* (2004).



Far from being a visionary document, the NPC MkII is directionless - as the old adage states, 'if you aim at nothing, you will surely achieve it'. The absence of any targets represents a policy of maintaining the status quo. It is also diametrically opposed to the zero waste thinking emerging in many jurisdictions

across Australia (for example 'No Waste by 2010' in the ACT, 'Towards Zero Waste' in Victoria, 'Zero Waste SA' in South Australia and 'Towards Zero Waste' in Western Australia). This type of thinking is moving beyond setting recovery targets and toward an economy where nothing can be produced that is unable to be recovered through existing infrastructure. This leaves the NPCC on a collision course with broader waste strategies and in a policy void that is well out of date.

No Movement Toward Sustainability

There are no roles and responsibilities or specified actions for consumers and the community at large within the NPC MkII. The role of consumers is introduced (pg 13): 'That all parts of the packaging supply chain, consumers and governments have a role to play ensuring that packaging is developed and managed throughout its lifecycle in a way that minimizes (sic) the consumption of materials and other inputs during production and adverse environmental consequences'. Yet there is no attempt to outline how consumers are meant to play a role here, and consumers' financial responsibilities are met by rate payers.

The community is mentioned (pg 13): 'That all parts of the packaging supply chain have a responsibility, both individually and jointly, to ensure that the community is provided with sufficient and accurate information on which to make informed purchasing choices'.

Unless there are price signals associated with the provision of this information, education is unlikely to be enough – the focus of producers is to get consumers to buy products – and in turn packaging. It is unrealistic to expect producers to discourage consumption of their product through provision of accurate information.

The NPC MkII recognises 'disposal' at end-of-life (including recovery options) (pg 14) – but the focus isn't on cyclic patterns of production, consumption and recovery and it provides no mechanisms for change.

Limitation on Intelligent Discrimination

The NPC MkII states that 'the Covenant must avoid discrimination between different forms of packaging' (NPCC 2004). As a policy however, this is a contradiction with the central objective of the NPC MkII⁹ which implies that different packaging will have different impacts.

Most importantly, the only way to reduce impacts is to selectively discriminate against those materials and systems of packaging that are resource intensive, not recyclable and degrade the environment through their manufacture, use and disposal.

⁹ "...reduce environmental degradation arising from the disposal of used packaging and conserve resources through better product design and encouragement for the recovery, re-use and recycling of used packaging materials' (NPCC 2004).



This stance in the NPC MkII could be seen as blocking opportunities for biodegradable packaging or other

forms of materials that are more environmentally friendly. Discrimination is bad when applied to humans, but is the long established environmental and economic practice when applied to decisions such as packaging choice.

Rejection of Industry Responsibility

By locating the foundation of the NPC MkII in undefined 'shared responsibility', the NPCC undertakes a policy that explicitly rejects Extended Producer Responsibility (EPR) by the Code's signatories. This is at odds with the stated policy of the NSW Government Waste Avoidance and Resource Recovery Act 2001, which has embedded EPR in legislation.

The NPC MkII is a rejection of responsibility, as opposed to the sharing of responsibility, maintaining the stance developed in the current NPC and firmly 'outlawing' any concept of responsibility being applied to the packaging industry for end-of-life management issues. For example, the provision of recycling services for domestic purchases forces local government – and therefore rate payers – to bear the burden of responsibility. The responsibility for littering is implicitly noted as being in the consumer's sphere of responsibility, with the goal of consumers making informed decisions about the disposal of packaging, which obviously would not include littering as an option.

Ignoring Impacts of Litter

As with earlier discussion on responsibility and the absence of performance targets demonstrate, the NPC MkII reveals a policy stance that litter is not an issue for the packaging industry. There is a serious litter problem in Australia, and a holistic approach is required, based on taking responsibility along the supply chain.

As far back as 1982 it was recognised that there would be an improvement in consumer behaviour and littering habits if packaging design took more account of disposal problems and the need to recycle. More than 20 years later, NPC MkII puts forward the vague proposal that "aspects of litter" be considered, as opposed to achieving tangible outcomes.

Reliance on Kerbside Recycling

Another policy blind spot within the NPC MkII is relying on kerbside recycling as the collection channel for recovery, re-use and recycling. The problem with prescribing a technology to achieve an environmental outcome is that better and more efficient opportunities to realise sustainable outcomes are squeezed out from consideration. This is very similar to the 'command-and-control' style of regulation the NPC MkII is trying to avoid. Given the inherent flaws kerbside contains (see Section 7), a myopic reliance on it to provide the entire solution to the packaging management puzzle provides further evidence of the inadequacy of the NPC MkII.

Industry Dominated Decision Making

The structure of the National Packaging Covenant Council reveals further lip service to any sharing of responsibility – there is no input into the decision making process and it reveals a process run by industry to suit industry desires rather than engaging with sustainability – further evidence of this is provided by its structural and process limitations.



4.1.2 Structural and Process Limitations of NPC Mk II

No Genuine Stakeholder Consultation

The dominance of industry decision making is perhaps best evidenced by the process limitation revealed during the review of the NPC and formulation of the NPC MkII, namely a failure to incorporate stakeholder input into the process. The most blatant evidence of this was the overwhelming conclusion of stakeholders that the core of the NPC **should not be preserved** in the NPC MkII. Stakeholder involvement with no ability to change the outcome is not consultation so much as dishonest inculcation with no sharing of responsibility for decision making.

Added to the rejection by the majority of local government of the NPC (75% are not signatories as reported by Meinhardt 2004) in combination with a lack of collaboration with stakeholders (White 2004) – the inescapable conclusion is that the review was completely ineffective.

Voluntary Initiative

The major process limitation within the NPC MkII is not so much that it is voluntary agreement as much as it is up to signatories to set their own targets in their action plans. The only requirement for signatories is that 'quantifiable targets' be set with key performance indicators developed as part of Covenant Signatory Action Plans (NPCC 2004) - *Of course a plan to increase production by 100%, and illegally dump all waste is also a quantifiable target.*

This leaves the scope of the target up to the individual signatory and results in a classic gaming scenario. For instance, if an individual company sets goals that are too far in front of the rest of the industry, then that company will be at a commercial disadvantage. This has the effect of putting downward pressure on leadership and innovation and results in tokenistic targets. With no overall industry targets to be met, the NPC MkII presents as a rudderless ship.

The NPC MkII also sets industry funding contributions at \$3 million per year [p 50]. With over 600 signatories this represents an average contribution of under \$5,000 – a cheap option for industry to be seen as doing the right thing. Furthermore the Covenant makes it clear that this money will not be available to 'subsidise' collection costs, prop up product prices or any other aspect that is not good practice. It is ridiculous to consider this 'pittance' meets the NPCC commitment to 'Provide financial support for kerbside and other materials recovery systems in co-operation with State and Local Governments' (p17). There is simply not the money to back up the undertaking.

Conflict of Interest within the National Packaging Covenant Council

The NPCC lacks independence. As a body it is dominated by industry representatives with vested interests, has developed the NPC MkII proposal (ostensibly drafted to stop a regulatory approach to used packaging management) and is also the judge and jury of the effectiveness of Action Plans in meeting NPC objectives.

An administration body cannot have such a conflict of interest and be thought of anything else other than a mouthpiece for industry.



4.1.3 Regulatory Limitations of the NPC MkII

Unanimous Decision Making

A primary regulatory limitation of the NPC MkII is the inhibition placed on the ability of jurisdictions to act independently of the NPC process with regard to packaging. Jurisdictions' ability to regulate or change the playing field by introducing an extended producer style of program are severely hampered if they accept the requirement for 'consistent and harmonious policies [with the NPC] and systems for the management and disposal of used packaging' (NPCC 2004).

As the NPC MkII will be unable to be modified except by unanimous decision of the NPCC, there will no opportunity to engage industry seriously on the issue of internalising the existing negative social and environmental impacts associated with their activities, one of the key components of extended producer responsibility. This puts the NPC MkII at a double disadvantage, firstly by not addressing the internalisation of costs it puts signatories at odds with growing calls to make market systems more sustainable (e.g. EBA 2004), and secondly by locking in this stagnation for the next five years.

THE NPC REQUIREMENT OF UNANIMOUS DECISION MAKING LITERALLY REPRESENTS THE ABDICATION OF THE GOVERNMENT'S RESPONSIBILITY TO PROTECT ITS CITIZENS AND IT DELIVERS OUR ENVIRONMENT INTO THE HANDS OF THE 'WASTE CLUB'. THE PROCESS ENSURES THAT INDUSTRY WILL ONLY DO WHAT IT WANTS TO WHILE GOVERNMENTS STAND IDLY BY.

Internal Regulation of Covenant Signatories

If a company does not join the Covenant they are subject to the provisions of the National Environment Protection Measure (NEPM) on Used Packaging Materials (1999). This contains provisions regarding the undertaking or assurance of activities related to the management of end-of-life packaging materials and reporting on recovery data. However, as the NEPM does not stipulate recovery targets, it can be viewed as enforcing a slightly more rigorous reporting regime than the Packaging Covenant, but hardly counts as a severe penalty.

If an organisation does join the Covenant, the principal obligation remains the same as the original NPC, namely to produce an Action Plan in line with NPCC guidance and then to report annually on progress against this plan. Action plans are sent to NPCC who undertakes a pre-registration assessment review according to set criteria. *This is not a review, merely an administrative device to ensure that all the boxes are checked.*

If a report or plan is not received by the specified due date, a lengthy process of overdue, show cause and

non-compliance letters is initiated by NPCC. The worst that can happen as a result of this process is 'expulsion' from the Covenant and being placed under the regulation of the NEPM.

The NPC MkII undertakes to make a number (unspecified) of random reviews of reports and plans in order to ascertain whether the content of the plan or report adequately addresses the signatory's undertakings. An additional number (unspecified) of premises audits will also be carried out in order to assess compliance with NPC MkII.

This represents much effort with little to no enforcement or accountability. The fundamental flaw is that industry sets its own targets for self-regulation. In fact, the NPC MkII provides no reward for companies that set out to achieve environmental best practice and, as noted earlier, establishes a detrimental gaming situation amongst industry members. This means that joining the Covenant is the same as a commitment to maintain the status quo.



4.2 Ultimate Failing of the National Packaging Covenant MkII

Ultimately, NPC MkII fails on four levels:

- . • By its own measure, the review process revealed that it was nothing more than a rubber stamping exercise. There remains no action to define roles and responsibilities along the supply chain or inherent shared responsibility. There are no targets by which industry can gauge performance improvement.
- . • The Covenant fails to engage with the issue of litter or industry responsibility for litter. The litter problem results from the lack of value associated with used packaging, which encourages throw-away behaviour. This is itself a symptom of financial and environmental externalities which have not been adequately represented in the price paid by the consumer.
- . • It has a reliance on kerbside recycling which is a limited mechanism for recovery that needs re-examination. It is funded by rate payers rather than industry or consumers and cannot capture away-from-home discarded packaging which accounts for approximately 50% of the packaging waste stream.
- . • Finally, the proposal continues to ignore the core requirements of local government and the NGO community – how can a program succeed without the support of the majority of these jurisdictions that run the collection services or the support of the stakeholders (Environment groups) that the community most trusts¹⁰?

Each of these failings has been investigated in greater detail in this report.



5 NPC MKII FAILED TO IMPLEMENT STAKEHOLDER RECOMMENDATIONS

A review process was undertaken to determine the effectiveness of the National Packaging Covenant, as background to the development of a revised Covenant (NPC MkII). There are two principal points at which the review process of the NPC broke down:

1. 1. Didn't adequately incorporate recommendations from the three reviews of the Covenant into the Consultation Proposal which was put to stakeholders.
2. 2. Didn't adequately incorporate recommendations from stakeholders, both from the limited proposals which were presented for feedback, and on issues raised by stakeholders across Australia.

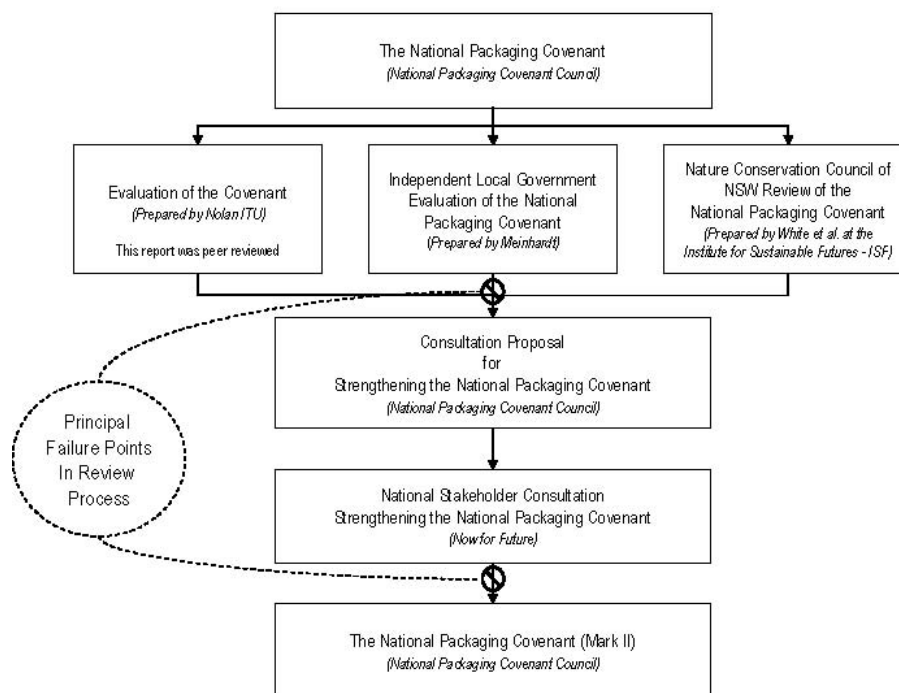
An illustrative example is highlighted herein and further discussion is provided in the remainder of Section 4. A detailed evaluation of how recommendations from each review were or were not addressed is provided in Appendices.

One example of the failure to incorporate recommendations identified from the reviews into the Consultation Proposal regards the recommendation to set targets. The Meinhardt review (p.68) recommends 'minimum targets for recovery and recycling of all packaging waste, together with targets for recovery and recycling of each type of packaging material'. Similarly, the ISF review (p.60) recommends implementing 'a consistent reporting framework for measuring the generation of packaging waste and the recovery, recycling or reuse of packaging material, measured against set targets'.

There is not a single reference to targets in the Consultation Proposal, except in Annexure 1 when quoting the Meinhardt recommendations, which the Consultation Proposal falsely purports to address. The consultation proposal instead uses the term 'measurable outcomes' which is grossly inadequate. The Covenant must move beyond measuring performance to improving performance, by adopting performance targets.

Another example of the failure to incorporate recommendations from the National Stakeholder Consultation (Now for Future 2004) regards Extended Producer Responsibility (EPR). There was a reasonable level of support to 'make EPR explicit as an underlying principle' (Now for Future 2004, p.13), yet EPR is not mentioned at all in the Covenant, not even in the glossary. Instead, the concept of product stewardship and 'shared responsibility' is used which requires better definition of roles and responsibilities along the packaging supply chain. Currently, 'shared responsibility' is actioned as rate payers via local government being largely responsible for end-of-life management of packaging waste.

These examples alone reflect a significant failure to act on important recommendations, which undermines the integrity of the review process.



Above: Outline of the review process undertaken for the National Packaging Covenant

5.1 Nolan ITU recommendations

The goal of the Nolan ITU (2004a) report was to evaluate the extent to which the National Packaging Covenant achieved its aims, without questioning the appropriateness of the aims themselves. Considering the available evidence, the Covenant was judged a 'limited and qualified success' (p.iv). The detailed examination of implemented recommendation is given in Appendices and summarised here.

There were five key recommended actions from the Nolan report regarding:

- A) Strategic goals for NPC MkII and minimising environmental impact of consumer packaging across its lifecycle;
- B) Incentives for optimal supply chain performance to minimise environmental impact of consumer packaging across its lifecycle;
- C) Enhancing measures for performance compliance and penalising non-participation or sub-par

performance; D) Establishing a comprehensive communications strategy for NPC MkII; and E) After reviewing needs, continue gathering funding from industry and state jurisdictions but better direct gathered funds.

Of the five key actions, the implementation of key actions B (supply chain performance) and D (communications strategy) are largely ignored. Key actions A (environmental performance measures) and C (improved funding) were partially implemented. In particular, KPIs in the NPC MkII are more limited in scope than those recommended in the Nolan report and have a much lower value in the absence of performance targets. Only key action C (strengthening compliance) was addressed, however, this is still inadequate due to its dependence on the full adoption of appropriate measurement criteria under key action A which should be linked to targets. Furthermore, the outcome of non-compliance is limited and may be inadequate to ensure compliance.



5.2 Local Government Recommendations by Meinhardt

The aim of the Meinhardt review was to determine the issues and outcomes of the National Packaging Covenant for Local Government. The review identified a series of recommendations under the title of “post-Covenant” initiatives. The effectiveness of their inclusion into the review process and Covenant (Mark II) is presented in Appendices.

A summary of key recommendations which failed to be included in the Consultation Document and NPC Mk II are:

- . • major overhaul of Covenant, based on EPR and lifecycle management and supported by legislation;
- . • targets for recovery and recycling;
- . • NPC approved packaging;
- . • rationale on industry approach to stability of commodity prices for recyclables;
- . • financial incentives connecting purchase price for consumer with cost of disposal for used packaging; • overcoming perceptions of partisanship through greater Local Government representation; and
- . • greater communication of information and education on roles and responsibilities of all stakeholders.

5.3 Nature Conservation Council of NSW Recommendations by ISF

The aim of the Nature Conservation Council report (prepared by the Institute for Sustainable Futures at the University of Technology Sydney and authored by White *et al* 2004) was to evaluate the effectiveness of the Covenant in achieving its stated objectives and (unstated) reduction in generation of packaging waste, reduction of virgin material usage and reduction in packaging material disposed to landfill.

Ten criteria were selected from the NPC’s stated objectives and those of best-practice waste management policy. Recommendations are grouped accordingly. These recommendations were given very little attention and the lack of the implementation of these recommendations into the review process and NPC MkII is presented in Appendices.

A summary of key recommendations which failed to be included in the Consultation Document and NPC MkII follows:

- . • set strong achievable targets, progressively raised over time, to reduce generation of packaging waste and the recovery and productive reuse or recycling based on the best available life cycle analysis;
- . • non-compliance penalties should be sufficient to act as a deterrent;
- . • establish clear public reporting, on both targets and on the use of funds;
- . • recommend LCA to assist in fairly distributing costs and responsibilities along supply chain;
- . • establish a mechanism for collecting away-from-home sector packaging (ensuring brand owners and retailers contribute);
- . • develop an approval system for new products and packaging;
- . • recommend inclusion of full life cycle financial costs as well as environmental and social costs in calculating cost effectiveness; and
- . • develop national education and communication strategy aimed at community, industry and local government.



This list highlights a serious failure to act on the recommendations from the review process and incorporate these elements into the Consultation Proposal and NPC MkII.

5.4 Specific Feedback on Proposals for Stakeholder Consultation

The review process also failed to incorporate stakeholder feedback from the National Stakeholder Consultation into the NPC MkII. The absence of significant actions resulting from feedback aligns the stakeholder consultation process more closely with 'an exercise in spin' rather than 'genuine dialogue'.

Significant opposition and caution were expressed for the proposals to 'retain core Covenant document' and to 'continue Covenant for 5 years' and yet it is proposed that the core Covenant document be retained and continued for 5 years.

There are 16 additional proposals suggested by stakeholders for which a reasonable level of support was identified and yet remain unaddressed in the NPC MkII. They are:

- . • set targets and milestones;
- . • more strongly address litter management;
- . • make EPR explicit as an underlying principle and strengthen;
- . • restructure/review membership of NPC Council to include consumer/environment/NGO groups;
- . • transparency and public access to information;
- . • fund data collection;
- . • on-going funding for local government;
- . • strategy for increasing industry/SME signatories;
- . • environmental goal for NPC and holistic approach to environmental benefits of reduced packaging waste;
- . • incorporate supply chain conditions into the Environmental Code of Practice for Packaging (ECOPP);

- . • process for dealing with non-compliant packaging;
- . • strengthen markets for recycled products;
- . • fund education programs for the community but also industry and local government;
- . • R&D into alternative packaging;
- . • responsive to new disposal technologies; and
- . • cater for unique requirements of rural, regional and remote areas, via communication, programs, and strategies.



5.5 Summary

The consultation proposal compiled by the National Packaging Covenant Council fails to adequately incorporate the recommendations from the reviews of the Covenant, particularly with respect to the following areas:

- . • setting measurable targets;
- . • adoption of supply chain approach, life cycle assessment principles and extended producer responsibility;
- . • defining roles and responsibilities for within the supply chain;
- . • financial incentives connecting purchase price for consumer with cost of disposal for used packaging;
- . • mechanism for collecting away-from-home sector waste; and
- . • increased communication and education.

Stakeholder input has not been incorporated into the NPC MkII, in particular with respect to:

- . • setting measurable targets;
- . • more strongly address litter management;
- . • more diverse composition of council including consumer/environment/NGO groups; and
- . • increased communication and education.

The analysis reveals a flawed review and consultation process which undermines trust and the opportunity for results. The International Association for Public Participation notes five stages of stakeholder engagement: inform; consult; involve; collaborate; and empower. Analysis reveals that the process was simply one of informing, without the intent of collaboration. It is problematic that the NPC MkII, as with the original NPC, states it is founded on 'shared responsibility', yet if there is to be shared responsibility there needs to be shared empowerment. Stakeholders must be able to engage with and impact on the outcomes of the process. This has not occurred and shared responsibility is revealed as a convenient piece of rhetoric to hide behind.

Other submissions were made to the review process, for example, that of the Western Australian Local Government Association (2003), but are not available through the NPC website and do not appear to have been considered.

Symptomatic of the lack of a holistic approach to improve performance and 'shared responsibility' is the

failure to include litter and away from home recycling initiatives in the NPC MkII. These issues are further explored in Sections 6 and 7.



6 LITTER AND THE NATIONAL PACKAGING COVENANT MkII

Litter has been a significant problem in Australia for many years. The Litter Control Committee was established in 1979 to better understand the litter problem and develop a national approach to litter control. This led to a Report on Litter Control being published in 1982 (Australian Environment Council 1982). The Litter Control Committee were 'firmly convinced that if packaging design took more account of disposal problems and the need to recycle, this would affect consumer behaviour and littering habits for the better' (Australian Environment Council 1982, p. xiii). More than 20 years later, NPC MkII simply puts forward the vague proposal that 'aspects of litter' be considered. There is still a serious litter problem in Australia, and a holistic approach is required to address it.

6.1 Magnitude of the litter problem

The definition of litter used by the Australian Productivity Commission (1996) is "misplaced solid waste discarded outside the established collection and disposal system".

Litter is a serious problem in Australia. Over 6,000 tonnes of litter was collected on Clean Up Australia Day in 2003 (Clean Up Australia 2003). 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 below highlights that seven of the categories in the top ten are related to packaging, or eight if glass pieces arising from broken bottles is included. It also reveals that packaging waste accounts for approximately one third of total litter collected (31%-35%).

Table 1 – Top ten items collected and their percentage of total litter collected * Denotes a packaging item

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

Other items outside top ten	50%
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Littering results from away-from-home consumption (White *et al* 2004). The NPC MkII fails to address litter and the away-from-home sector overall, in a substantial way.

'Throw-away' approaches to packaging have affected community behaviour (Australian Environment Council 1982). Litter is not only a problem in urban centres; litter volumes are enormous in rural and remote Australia particularly on highways, beaches, recreational parks and marine environments. A recent report regarding litter on the 18,500 km of highways connecting our capital cities found over

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13,146 items from 100 audited sites (Keep Australia Beautiful 2000). It further reports that over 7 million litter items are found across our highways nationally, assuming the surveyed sites are representative. Thirty percent (30%) of this litter is from beverage containers (Keep Australia Beautiful 2000).

The problem of litter is not only confined to local communities, but also impacts marine life and locations far from the litter source. A British zoologist, Tim Benton, found 953 pieces of litter in the early 1990s on Ducie Atoll in the Pitcairn Islands, South Pacific Ocean – over 450km from the nearest inhabited island and over 4,500km from the nearest continent (Rathje and Murphy 1993). This included 171 glass bottles from 15 countries. Further research found similar litter densities on a beach in south west Ireland, showing that beaches thousands of miles from industrial centres are similarly polluted to those that are closer to the litter source (Benton 1995). Litter at sea also has impacts. For example, turtles often swallow plastic bags, mistaking them for jellyfish (Healey 2004).

The litter problem in Australia, and its impacts beyond our borders, is of a magnitude which requires immediate attention.

6.2 Cost and Impact of Litter

The inquiry into Packaging and Labelling by the Australian Government Productivity Commission (1996) reports that there are four major costs imposed by litter:

- . • Litter is ugly
- . • Litter poses a danger to wildlife
- . • Litter can present a danger to human health
- . • Litter is costly to collect.

6.2.1 Aesthetic Impacts of Litter

These findings are consistent with an earlier report on litter by the Australian Environment Council who noted that litter contributes to solid waste disposal problems, affects resource conservation, public health

and has an aesthetic impact (Australian Environment Council 1982). The aesthetic impact is difficult to quantify in monetary terms, but such a measure is not required to indicate its importance. Its detrimental impact manifests at beaches, parks, roadways, in waterways, and in urban, industrial, regional and remote environments.

6.2.2 Danger Posed to Wildlife by Litter

Litter 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 seal (Australian Platypus Conservancy 2004)

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 death (Healey, 2004).

Plastic litter is often found in the bowels of marine species and has significant impacts on turtle populations.



6.2.3 Danger Posed to Human Health by Litter

Litter also poses a danger to human health by harbouring disease and through direct injury such as from glass cuts (Australian Government Productivity Commission 1996) or by being hit by flying debris during strong weather conditions. Broken glass on roads and cycleways 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).

Glass bottles thrown from cars into bushland also cause fires, igniting due to the sun magnified through the glass (Kelly, 2000) posing an on-going danger to human health.

Disease is spread more easily in a littered environment by encouraging pests including rats, mice and pigeons (Ecorecycle 2004).

6.2.4 Costs Associated with Litter

Addressing the litter problem comes at considerable cost. 'Litter pick up alone is worth on average \$80,000 to each individual local government. That makes it a \$70 million problem to start'.¹¹ This is in fact a \$70 million problem for rate payers. The total cost when considering actions such as community clean ups is hundreds of millions of dollars.

Victoria alone spends approximately \$50 million p.a. on litter.¹² 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 ratepayers. The disparity between rate payers and consumers is mostly due to the presence of two important groups:

- . • rental tenants
- . • tourists

Only 70% of all homes are owner-occupied, leaving up to 30% of tenants enjoying a free ride¹³. 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 products.¹⁴ All of these consumption activities are associated with packaging, whose eventual contribution to the litter problem is borne by rate payers. A better system would ensure the cost of litter 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 reduce littering behaviour, other than the threat of a fine. There is also no financial incentive for packagers to create products which are less likely to be littered.

¹¹ Australian Government Productivity Commission (1996). *Inquiry into Packaging and Labelling*. Report No. 49. Available at <http://www.pc.gov.au/ic/inquiry/>.

¹² Victorian Litter Alliance (2003). *Litter Ally Newsletter*. August 2004, Issue 10. Available at <http://www.litter.vic.gov.au/default.asp?casid=3844>. Link checked November

2004. ¹³ ABS (1999). *Australian Social Trends 1999. Housing national summary tables*. Available at <http://www.abs.gov.au/>. Link checked. November 2004. ¹⁴ ABS (2003). *Australian National Accounts: Tourism Satellite Account*. Available at <http://www.abs.gov.au/>. Link checked. November 2004.



The solution lies in expanding people's domain of concern, for both the producer and consumer, through the principle of shared responsibility. Concepts of Extended Producer Responsibility (EPR), Life Cycle Assessment and Supply Chain management help in structuring roles, responsibilities and costs for shared responsibility. The need to incorporate this approach was specifically identified in the reviews of the Covenant (Meinhardt 2004, Nolan ITU 2004a, White *et al* 2004). Section 6.3 explores the implementation of these principles into the National Packaging NPC MkII.

6.3 National Packaging Covenant MkII and Litter

The principle of shared responsibility is mentioned in the Covenant, but not actioned. The consumer must pay full price for the costs and impacts associated with manufacture, purchase and disposal. Currently the rate payer pays for the cost of disposal – not the producers and consumers.

The packaging industry must take responsibility for the impacts associated with the use of its 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. It is not acceptable to simply blame the consumer. 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 desired good.

There was an explicit failure to action extended producer responsibility in the Consultation Proposal for strengthening the National Packaging Covenant. This predictably resulted in little focus to consider the

entire supply chain and hence for litter. However, the need to 'more strongly address litter management' was raised at the stakeholder forum with a reasonable level of support (Now for Future 2004), and yet is still not implemented in NPC MkII.

There was also little emphasis on defining roles and responsibilities along the supply chain, including the setting of performance targets which is an essential part of the 'shared responsibility' to which the Covenant subscribes.

The lack of targets and implementation of shared responsibility in the NPC MkII is a way for the industry to keep gathering data, under the guise of improving environmental performance, whilst failing to take significant steps to deliver improved outcomes.



7 KERBSIDE RECYCLING AND THE NPC MKII

NPC MkII entrenches kerbside recycling as the primary mechanism for resource recovery. This is grossly inadequate for several reasons which will be discussed herein. First, there is a lack of current data on the performance of kerbside recycling and overall recycling rates by materials, making claims on the success of kerbside tenuous. To address this deficiency, current estimates of recycling rates are synthesised. Second, kerbside recycling is based on a flawed model in which rate-payers, rather than consumers, pay for the service via local government. This is often unfair and inhibits the development of price signals for consumers to increase environmentally responsible behaviour, both at home and away from home. Finally, kerbside can only ever address half the problem, as the away from home sector represents a very significant proportion of packaging waste – 50% in the case of beverage containers and other convenience items such as confectionary, chips, fast food etc.

7.1 Current Performance of Kerbside Recycling

It is a perverse truism that the only consistent feature present in Australian statistics on the performance of domestic kerbside recycling is the lack of consistency.

- . • There are difficulties estimating the amounts of materials collected for recycling through kerbside collection systems by material type and the amounts of contamination and sorting losses at materials recovery facilities (MRFs), let alone assessing what proportion of materials consumed are actually recovered for recycling.
- . • Add to this a range of conflicting industry and government estimates and the net result is one where all numbers must be viewed with a certain amount of scepticism.

This section aims to analyse the current data and establish a realistic national estimate of the current performance of kerbside recycling. The most current and comprehensive data on kerbside recycling performance was derived from the National Environment Protection Council Service Corporation Annual Report 2002 – 2003 (NEPCSC 2004). All states and territories reported on the performance of the local government sector except for West Australia. (Note that national averages were applied on a 'kilogram per

capita' basis to estimate the performance of West Australia.)

A summary of this kerbside performance data is presented in the Table 3. The data tables with the contributing calculations are included as Appendices. It should be noted that the collection and recovery figures are based on reports from 91% of local governments (excluding West Australia), and as such is likely to represent a slight underestimation, especially in Queensland and Tasmania which had lower reporting rates of 84% and 69% respectively. However, as this represents the first time that kerbside recycling collection statistics have been brought together based on reporting by local government themselves (as opposed to estimates from third parties), the amounts reported here are felt to be sufficiently accurate so as to warrant their use as the baseline for comparison.

The proportion of households with access to a kerbside recycling collection system in Australia is 91%, leaving some 670,000 residences with no access to kerbside recycling services. This is a lower figure than the 97% that is claimed by the Beverage Industry Environment Council (undated) apparently based (mistakenly) on a report from the Australian Bureau of Statistics (2002) that included old clothing and plastic bags, that is, items not included in kerbside recycling.



In total it was reported that approximately 1,351,000 tonnes of materials were collected through the kerbside system, of which some 117,000 tonnes were contaminated, a contamination rate of 9% (rounded to the nearest percentage point). This figure for contamination seems low, given other reported figures ranging from 2 – 35% (Nolan ITU and SKM 2001). One explanation may be that the local government data did not include 'losses from sorting' arising at the MRF, or recognition that while waste to energy "catches" contaminated materials it should hardly be defined as recycling.

To clarify the difference between contamination and sorting losses, contamination occurs at the kerbside collection point, while sorting losses occur at the Materials Recovery Facility. Different rates of material loss were provided based on different collection systems.

Over and above these stated figures is significant loss of resources too contaminated for recycling, but diverted from landfill. While this is a useful activity in terms of gain some value from the waste, waste to energy consumes the resource rather than capturing it for ongoing use. It is important that materials sent to waste to energy are segregated out of recycling figures so they do not continue to optimistically distort the picture of recycling performance.

The local government data was also compiled to give national statistics on the breakdown, by material type, of materials that were collected and recycled for the year 2002/03. These figures are shown in Table 9 (Appendices). This shows glass is the most collected packaging material through kerbside collections (in terms of tonnages), with old newsprint being the most collected material through the kerbside. As newsprint is not considered a packaging material, its inclusion here is only to identify the level of likely packaging left as Paper/Cardboard.

It is interesting that newspaper and magazine recycling rates are much higher than any packaging material (74% vs 20.1%). Newspapers' success comes through a significant commitment (through the Publishers

National Environment Bureau's own "product stewardship" program) that ensures guaranteed markets for recovered paper and overreaching standards of performance.



Table 2: Summary Information on Kerbside Recycling Collection Across Australia 2002-2003¹⁵

Category	NSW	Vic	Qld ¹⁶	WA ¹⁷	SA	Tas
Population	6,640,355	4,850,364	3,688,632	1,952,200	1,016,554	474,000
Total Councils	173	79	125	142	34	42
Councils Reporting	166	79	105	-	32	29
% of Total Councils	96%	100%	84%	-	94%	69%
Residential Premises	2,248,163	1,952,649	1,391,933	732,522	491,657	175,000
Kerbside Recycling Collection Services to Residential Premises	2,132,103	1,856,644	1,058,962	663,610	460,370	148,000
% of Residential Premises Serviced	95%	95%	76%	91%	94%	85%
Average Charge for Kerbside Residential Collection	\$81.54	\$31.11	\$27.80	\$27.80	\$15.39	\$25.00
Amount spent on Kerbside Residential Collection	\$73,851,679	\$57,760,195	\$29,439,144	\$18,448,369	\$7,085,094	\$3,700,000
Tonnes Collected Through Kerbside Residential Collection	518,792	395,009	168,507	138,581	65,644	22,700
Tonnes Recycled (Net of Contamination) ¹⁸	485,047	367,979	145,857	126,531	50,407	22,200
Contamination Rates	7%	7%	13%	10%	23%	2%
Average Participation Rate	80%	75%	-	-	60%	62%

¹⁵ 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).

¹⁶ Queensland did not report on average contamination rates.

¹⁷ National averages were calculated and used to estimate the performance of Western Australia, as such 'Councils reporting', '% of Total Councils' and 'Average Participation Rates' have been left blank.

¹⁸ Note that 'Tonnes Recycled (Net of Contamination)' includes 528,396 of old newsprint.

Table 3: Estimates of material tonnages collected through Kerbside Recycling¹⁹

Table 3: Estimates of material tonnages collected through Kerbside Recycling¹⁹

Kerbside Material Collected	Current Analysis	
	Total Tonnes Collected	Fraction of Total Material Collected
Paper/Cardboard	224,275	17%
Glass	329,989	24%
PET Plastic	37,483	3%
HDPE Plastic	28,862	2%
Other Plastic	7,366	1%
Aluminium (cans)	11,598	1%
Steel (cans, tins, etc)	38,051	3%
Other (unspecified)	27,706	2%
Contamination	116,831	9%
Sub-Total -Packaging	822,160	61%
Plus Old Newsprint ²⁰	528,393	39%
Total	1,350,553	100%

Table 9 summarises the tonnes of each material recycled, but not the recycle rate for each material. It is the recycle rate which is required to assess the effectiveness of the current kerbside recycling program. The amount recycled and recycle rates are defined as follows:

$$\text{Recycle} = \frac{(\text{t}) \text{ Recycled Amount}}{(\text{t}) \text{ Consumed Amount}} \times 100 \quad (\%) \text{ Rate}$$

The amount recycled is known (see Table 9 in Appendices) but an estimate is required for the total amount consumed, in order to calculate the recycle rate and assess kerbside performance more accurately. Figures on total consumption are taken from current sources and used to establish national recycling rates for Australia, by material type.

¹⁹ The state by state breakdown of contributing source data for this summary can be seen in Table 8 for total materials collected, Table 9 for total materials recycled and Table 10 for total contamination. ²⁰ Sourced from Publishers National Environment Bureau (PNEB) Newspaper Recycling Statistics 2003 (PNEB 2004).



Table 4 – Recycling Rate Estimates of Packaging Materials through Kerbside			
Packaging Material Type	Consumption Tonnes	Kerbside Recycling ²¹	
		Tonnes	Rate
Paper/Cardboard ²²	1,709,000 ²³	224,275	13%
Glass	850,000 ²⁴	329,989	39%
PET Plastic	117,930 ²⁵	37,483	32%
HDPE Plastic	160,842 ²⁶	28,862	18%
Other Plastic	368,224 ²⁷	7,366	2%
Aluminium (cans)	45,166 ²⁸	11,598	26%
Steel (cans, tins, etc)	113,900 ²⁹	38,051	33%
TOTALS:	3,365,062	677,624	20.1%
Plus Old Newsprint ³⁰	718,482	528,393	74%

Table 4 – Recycling Rate Estimates of Packaging Materials through Kerbside

Looking at the Australian performance based on consumption of packaging for both domestic and industrial sources gives a different picture of the effectiveness of kerbside recycling based on a holistic view, as opposed to estimated recycling rates for the domestic sector only.

Many of the recycling rates in the public domain appear to be overstated. For example, aluminium cans are shown as 26% in the table above. This is compared to publicised figures which claim two thirds recovery rate (for example 67% and 63% from Nolan ITU 2002 and Ha and Dee 2004 respectively). This may be as a result of recycling through other sources than kerbside, such as CDL in South Australia and can drives by community service organisations such as Scouts, rather than inaccurate industry estimates. Most

importantly, the rates of recovery highlight the limitations of the kerbside recycling system.

The results presented are in keeping with other findings such as White *et al* (2004) who cite data from Euromonitor – an independent global market information database, which suggested that the overall consumption of beverages could be double that reported by the Beverage Industry Environment Council (BIEC), due perhaps to omissions in certain types of beverage containers from the BIEC figures. Based on these figures it was concluded that glass recycling rates had actually decreased from 53% in 1997 to 38% in 2002.

The clear picture emerging is that kerbside recycling only plays a minor role in the recovery of packaging materials with recovery rates ranging from 13 -39%, and an overall average of 20.1%.

²¹ All recovery figures from compiled local government reports as presented in the NEPC Service Corporation Annual Report 2002/2003 (NEPCSC 2004) – except for recycled newsprint which was from PNEB (2003) – Also note that missing from this table is the amount of 27,706 tonnes under 'Other Unspecified' in Table 9. When this is totalled with recycled newsprint we get 677,624 + 528,393 + 27,706 = 1,233,723, which is the total materials recycled (nett of contamination) in Table 9.

²² Totals exclude the major non packaging paper item – newsprint whose volumes are shown below the totals in the table

²³ Sourced from Australian Paper Industry Council, total packaging consumption for 2002/2003 including industrial (APIC 2003).

²⁴ Sourced from Hassan (undated) 'Glass Recycling - ACI Packaging' presentation on 2002 glass packaging consumption.

²⁵ Sourced from the 'National Plastics Recycling Survey 2004' on data for 2003 (Nolan ITU 2004c). This figure is not broken up between industrial and domestic packaging

consumption, however for PET the industrial packaging uses is unlikely to be significant. ²⁶ Ibid. This figure is not broken up between industrial and domestic packaging consumption, however for HDPE the industrial packaging uses is unlikely to be significant. ²⁷ Ibid. This figure is not broken up between industrial and domestic packaging consumption and is likely to have a majority of industrial uses (for example shrink film). ²⁸ Sourced from 'Figures - Australian Aluminium Beverage Recycling Can Rates' from the Aluminium Can Group and derived from reported recovery tonnages and

proportions (ACG undated). ²⁹ Sourced from the 'Steel Can Story' from the Steel Can Recycling Council, and using an average of 67 grams per tin (15,000 tins for one tonne of steel – CanSmart) ³⁰ Sourced from Publishers National Environment Bureau (PNEB) Newspaper Recycling Statistics 2003 (PNEB 2004).



7.2 Business Model of Kerbside Recycling – Funded by Rate Payers

The average annual charge to ratepayers for kerbside residential collection services reported by local governments around Australia was \$45.50. NSW was the highest with an average annual cost of nearly \$82, while SA was the lowest with an annual average costs slightly over \$15. It was assumed that as this cost was passed on to rate payers, represented through the cost of recycling nett of any income received from the materials sales at MRFs. The total net annual cost to Australian local governments (and thus to rate payers) for 2002/2003 was approximately \$295 Million. This is significantly higher than previous estimates of \$158 million per year (Nolan ITU and SKM 2001).

7.2.1 Subsidised by Rate Payers

The most important feature of kerbside recycling services is that all costs are borne by local government, who in turn passes costs onto house owners via local government rates. Note that it is only house owners who pay rates, not residents. Therefore rate payers are subsidising the costs of recycling and garbage collection and management for renters. This is important given that only 70% of homes are owner occupied³¹; meaning 30% of all residences enjoy a free ride.

Even though kerbside was endorsed as the collection mechanism of choice by the NPC MkII, there was only limited and peripheral support structures proposed in the NPC MkII.

The NPC MkII would 'seek to raise' industry funding contributions of \$3 million per year. With over 600 signatories, this represents an average contribution of under \$5,000, and represents around 1% of the costs associated with collection, a very cheap option for industry to be seen as doing the right thing. Given that industry did not meet their required contributions under the current NPC it is highly questionable as to whether this token contribution would even be made.

Furthermore the Covenant makes it clear that this money will not be available to 'subsidise' collection costs, prop up product prices or any other aspect that is not good practice. This amount of money collected makes a mockery out of any commitment to 'Provide financial support for kerbside and other materials recovery systems in co-operation with State and Local Governments, including the development of infrastructure for reprocessing of collected materials'. There is simply not the money to back up this undertaking. This places the responsibility for infrastructure development on local government, even though the packaging industry profits from the consumption of packaging materials.

The NPC MkII represents a 'get out of jail free' card for industry. Far from a shared responsibility it represents a complete abdication of responsibility from industry. The financial contribution of \$3 million a year is a token gesture and represents a least cost approach to maintaining the status quo, where there is no internalisation of any costs associated with the end-of-life management of packaging.

The NPC MkII calls for the 'expansion of recovery systems and re-use of packaging and paper to include material consumed away from home and in workplaces – commercial, industrial and government premises – as well as in the home' (p. 11) [new] but does not address how this will occur. Notably, the NPC MkII omitted from the current NPC 'Forces of Change' (p. 12): 'The cost of

31 www.rba.gov.au/PublicationsAndResearch/StatementsOnMonetaryPolicy/Boxes/2002/2002_08_a_box.pdf



providing these (kerbside recycling) services to the community, however, has increased and, in recent years, there has been a decrease in the value of materials collected. The combination of increased supply and reduced value has affected the financial viability of many of these services.'

This points to the fact that the NPC MkII is ignoring the reduced viability and escalating costs of kerbside services and instead guarantees that financial burdens will remain with local government and rate payers rather than where they belong with industry and consumers.

7.2.2 Absence of Price Signal

In one sense there is a trap in debating the cost of kerbside as an issue. Cost is certainly one issue, however, as the previous section identifies, the bigger issue revolves around who is paying those costs. With rate payers ultimately funding the kerbside recycling collection costs through a flat fee to local government, there is no price signal or feedback loop to consumers. Excessive consumption does not lead to an increase in costs to the consumer for the end-of-life management of purchased packaging (whether this be resource recovery or landfill).

Under the NPC MkII there is no adherence to the polluter pays principle, where those causing the pollution (industry and consumers) bear the cost. This would become a price signal to consumers and in turn ensure the tragedy of the 'packaged commons' is avoided.

7.3 Limited Coverage of Kerbside Recycling

The NPC MkII seeks 'an improvement in the efficiency of good practice recovery and waste management systems'. The main mechanism for achieving this is through 'the recovery and re-use of consumer packaging and related materials from kerbside collections'. Unfortunately kerbside recycling is structurally limited in that it does not address away from home consumption (and litter) and relies on the good will of residents to sort correctly all recyclable materials with no incentive.

7.3.1 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% respectively (BIEC 1997). These figures relate to non-alcoholic beverage containers and result in an average away-from-home consumption rate of 48%. While the away-from-home consumption of alcoholic beverage containers was not estimated, it was suggested that the likely rate would be greater than 48% (BIEC 1997). This is comparable to other authors, like White *et al* (2004) and ISF (2001) who estimate that for some of the major categories of packaging materials (such as 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 will only ever get 50% recovery rate because of public place and commercial consumption (cafes, restaurants, 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 price paid by the consumer.



7.3.2 Resident Participation in Kerbside Recycling

Participation rates for the kerbside recycling system are estimated to be 76%. On a simplistic level this would suggest that the actual participation in recycling by households was 69%.³² 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 the 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.

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) recycle all of the materials that can be recycled (ABS 2002).

This evidences the community confusion and lack of understanding of the importance of recycling – 76% participate for an effective recovery of 20% - 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 failed 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 does not reflect 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 the resources currently wasted.

While industry will hate the idea, ultimately the only effectively deal with the problem is to:

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

³² 76% of the 91% of residential premises that have recycling collection services equals 69%.



7.3 Ongoing Role for Kerbside Recycling

The Boomerang Alliance recognises that kerbside recycling is a positive activity that allows the contribution of the wider public 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, it is equally true that kerbside recycling has reached the limit of its performance as was identified in the previous section and has been borne out in previous studies identifying that only marginal increases in recovery rates are possible through local government kerbside collection of recyclables (BIEC 1997).

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 ratepayers), the NPC MkII reliance on kerbside recycling as the primary mechanism for resource recovery is highly questionable at best and disastrous at worst. Kerbside systems should be retained but need to be recognised as just one component of the infrastructure required to maximise recovery of valuable resources, collection depots, waste mining activities, public place recycling, and the intelligent development of price signals are also required to optimise performance.

With the NPC MkII preventing non-contradictory arrangements from jurisdictions, i.e. stopping states and territories from taking action on used packaging materials, the ability to explore alternatives and provide supplementary support to kerbside is effectively blocked at the State and Territory level.

The sole focus of NPC on kerbside collection and its failure to engage with other options has the end result of locking local government into an antiquated system and perpetuating overall low recovery rates in used packaging materials.

Despite the manner in which industry and government analyse the data, the effective recycling rate for packaging materials is just 20%. The community is buried beneath over 3.3 million tonnes of packaging and we experience a nett loss of over 2.7 million tonnes of valuable glass, aluminium, plastic, steel and paper going to landfill or relying on recycling other than kerbside.

All materials should be returned for resource recovery, irrespective of material type. Both the current NPC and the NPC MkII do not support this approach, instead pointing to difficulties associated with fluctuations in commodity prices. It is conceivable that under the NPC all support for recycling would be removed if there was negative value for recycle such as PET or HDPE.

A change to a new approach to managing packaging that is sustainable across the life cycle of the product and packaging chain is essential.



AGENDA FOR ACTION – THE REAL WAY FORWARD

The first step is to send the NPCC back to the drawing board, with a specific and urgent directive from the EPHC to engage with key dissenting stakeholder – local government and the NGO sector – and enter into critical negotiations until all parties reach an agreement. An independent and mutually agreed facilitator should be appointed to steer this process.

Specific requirements that the EPHC should require of the NPCC to move forward should include:

1. 1. Development of overreaching targets to achieve key goals in resource conservation, waste avoidance, recycling rates, and wider issues within ecological life cycle – such as 80% recovery by 2010;
2. 2. A mandatory commitment to continuous improvement with a minimum acceptable performance standard that ensures trends for overall loss of resources are reducing, not increasing;
3. 3. Definitions of the level of responsibility that the supply chain bears and a plan to shift (over time) a fair share of the burden onto industry;
4. 4. A critical independent assessment of EPR and other economic instruments; and
5. 5. Funding for an independent assessor to compare and contrast different approaches against the NPC so that an impartial and informed assessment can be made.

Long term, we need to embed the waste hierarchy into the NPC and ensure that it pursues an approach that is consistent with the public policy approach.

Attached in the Appendices is a detailed assessment of the specific failing of the NPC MkII and NPCC approach. Rather than repeat earlier requests, we provide this brief summary of the key issues that have already been identified to the NPCC:

1. 1. The strengthened Covenant must provide compulsory benchmarks for the improved environmental outcomes which can be achieved by avoidance, reuse and recycling. The Covenant must set sector-wide targets, which focus on reduction, reuse and recycling of packaging materials. These sector-wide targets must translate into compulsory, individual targets for signatories.
2. 2. The NPC MkII must drive substantial changes in the way goods are delivered to consumers and the way packaging users are provided with options and incentives for reuse and recovery.
3. 3. Action plans should include detailed actions, targets or measurable outcomes (that reflect the higher level targets that have been set for the industry sector or packaging material type), timeline, responsibilities, funding allocations, measures to adopt the Environmental Code for Packaging and information on how data will be collected to measure performance. Compulsory components must be highlighted and reported on.
4. 4. Abandon the 'should not discriminate between different forms of packaging' clause – which is contrary to a genuine commitment to product stewardship. In the case of raw material suppliers, signatories should commit to develop, or continuously search for and specify, the lowest impact materials available.
5. 5. Appoint a multi-stakeholder group including technical and academic expertise and environmental and consumer affairs representatives to revise the current environmental code of practice for packaging. The Code should act as a screening mechanism to prevent new packaging materials entering the market that contain hazardous elements and that are not fully compostable, reusable or recyclable.
6. 6. The composition of the Council should be prescribed so as to provide for a balance of all interests consistent with the philosophy of shared responsibility embedded in the Covenant and so as not to be at the discretion of industry and government representatives.
7. 7. We support proposals for better oversight and evaluation of signatories' action plans and the notification and follow up of non-signatories. However, consistent with the intent of the NEPM, sufficient resources must be allocated to ensure compliance. Failure to reach targets embedded in action plans should trigger the mandatory imposition of policy instruments aimed at achieving the relevant target for material efficiency and recovery.
8. 8. Companies should be required to conform to AS/NZS 14021: 2000 Environmental Labels and Declarations – Self declared Environmental Claims and Labels. This requires environmental claims to be relevant and specific. For recyclable packaging we recommend the use of *mobius* loop (as per the Standard) but with specific information added such as percentage and type of recycled content ('50% post consumer recycled content') and instructions for take back or recycling.



Regardless of any policy framework developed within the NPC process, a stronger reform agenda to develop specific solutions will also need to be developed. This should include the development of specific EPR and other 'end of pipe' schemes at the state and national level need ongoing attention.

Specific actions for investigation should include:

- ③ Land Fill Bans on all packaging waste materials;
- ③ Mandatory 'plain english' labelling indicating the packaging's recyclability;

- ③ Investigation of market based 'take back' schemes to recover high quality, uncontaminated resources (glass, aluminium, steel, PET).

The Boomerang Alliance suggests that these steps will deliver a long term strategy that doesn't disadvantage industry and will significantly reduce the ultimate levels of packaging litter and losses to land fill, whilst maximising the recovery of valuable resources.

A schematic of the best practice approach will effectively look as follows:



A NATIONAL PACKAGING STRATEGY – THE COVENANT AND BEYOND

Aim: A national strategy to ensure manufacturers, retailers and consumers achieve resource efficiency through minimising packaging, increasing reuse and recycling and reduced litter.

Goal: By 2010 at least 80% of all packaging materials will be recovered for recycling and no packaging material will Land Filled.

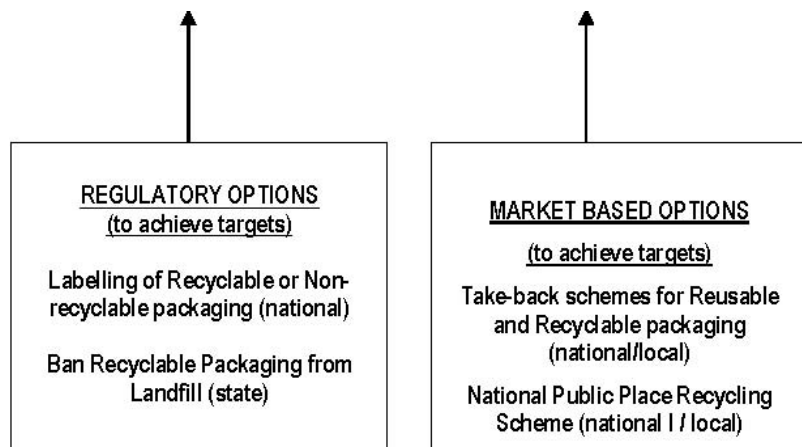
National Packaging Covenant with TARGETS

- ③ % Reduction in packaging waste to landfill
- ③ % Increase in recycling of each material
- ③ % Increase in recycled content
- ③ % Increase in reusable packaging
- ③ % Reduction in packaging litter
- ③ Reduction in ratio of packaging to product (light weighting of packaging)
- ③ Phase out of non-recyclable materials (eg plastics 4-7)
- ③ Reduction in heavy metals and toxic materials in packaging



ECONOMIC OPTIONS (to achieve targets)

Introduce an Advanced Disposal Fee on Non-recyclable Packaging (national)



Finally, while The Boomerang Alliance can accept that industry sees schemes like Container Deposit Legislation as discriminatory, there is an urgent need to develop some form of penalty and reward system that will encourage better community participation and refresh the strong social ecology values associated with recycling.

8.1 The Boomerang Approach

An example of how an economic instrument could be used to drive environmental improvement and redirect externalities to the appropriate party:

While the Boomerang Alliance has yet to undertake detailed modelling and costings to identify the best practice approach, the use of an Advanced Disposal Fee applied to each item of packaging with a variety of price points (based on broad groupings of materials selection and volumes) is one instrument that could drive strong performance and incorporates many of the necessary features outlined above. Price points would be established with a relative measure by product type, which can be readily calculated. In fact the formulaic approach to measuring litter developed by Nolan ITU and Nestlé (presented at the Changing Disposal Conference 2004) used a direct impact calculation (number of items X product volume, X length of time to breakdown) and a multiplier effect (called the cumulative litter indicator, the multiplier being environmental impact X risk level [likelihood of regulatory intervention & reputational damage]) to produce a quantitative measure. This was successfully trialled to assess litter collected on Clean Up Australia Day – tangibly proven that a ‘baseline’ can be readily established.



This approach both redirects the costs to those most responsible for the problem, and creates an affordable price signal for consumers (which in the overall economic context is offset by subsequent rate reductions due to significant decreases in the costs of recycling and waste to landfill) to save money if they consume less packaging.

A bias could also be established – that creates incentives for:

1. Industry to minimise the impact of packaging by encouraging manufacturers to:
 - ③ Seek high recycled content;
 - ③ Use the best and lightest materials available; and
 - ③ Consider reuse and voluntary refund schemes in areas where packaging is particularly

- profic or problematic (e.g. paint and chemical containers).
2. 2. New eco-friendly industry to flourish. Examples include: ③ The emergent ethanol fuel market would enjoy a strong secondary market manufacturing biodegradable plastic film and sheet driven by the price advantage created by ADF; ③ New collection centres fuelled by the increased value of recovering recyclables would create the physical infrastructure to tackle recovery of white goods, electronics, computers, and other wastes of concern; ③ Stronger market conditions for recovery would provide greater security of feed stocks and better financial operating environments for closed loop operations like Visy and Publishers

National Environment Bureau; and ③ New recovery focused waste management operations like GRL's UR-3R approach.

Other initiatives we recommend to State and Territory jurisdictions include:

- . . Investigation into implementing landfill bans for common packaging materials;
- . . Mandatory, clear recycling labelling of packaging; and
- . . Specific phase-outs of problematic packaging materials such as PVC, ovenproof glass, embedded plastics etc.

Over the next 3 months, The Boomerang Alliance intends to develop a detailed model of this approach and undertake a series of economic costings to identify the best price point to achieve maximum environmental gain for the minimum economic impact.

We welcome the opportunity to enter into open dialogue to discuss the merits of this and other approaches and negotiate with industry to achieve a consensus view – to this end we issue an open invitation to all areas of progress business, government, and the community to work together to achieve the best possible outcomes.



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10 APPENDICES

Existing Reviews of NPC

Table 5 – Summary of issues raised by Nolan ITU review of NPC for the NPCC

<i>Recommendation / required actions from Nolan ITU</i>	<i>Inclusion in Consultation Proposal</i>	<i>Feedback from Stakeholder Consultation</i>
1. The Covenant with its regulatory safety net should be retained for a minimum of three years	Yes – Retain for 5 years (p.6)	Mix between support and opposition to 'Continue Covenant for 5 years' (proposal 3) with significant opposition and caution noted overall
2. The operational elements of the existing Covenant / NEPM should be substantially improved	Retain core Covenant and substantially strengthen operational components (p.6) Retain core NEPM document, with focus on substantially strengthening and usability for enforcement and compliance	Significant opposition and caution to 'Retain core Covenant document' Caution from stakeholders to 'Retain core NEPM document'
3. NPC MkII should focus on achieving measurable quantitative outcomes in managing the environmental footprint of consumer packaging on a nationally consistent basis	Yes (p.6, p.13)	Strong support to 'Adopt goals and KPIs'
A. Clarify strategic goals for minimising environmental impact of packaging across lifecycle	Yes (p.6, p.12)	Strong support to 'Adopt goals and KPIs'
B. Create appropriate incentives for optimal packaging supply chain performance in minimising the environmental impacts of consumer packaging across its lifecycle	Supply chain focus as a means to guide shared responsibility largely ignored – instead focus is "to optimise environmental outcomes associated with their sphere of activity" (p.12)	Proposal not included for consultation <i>Stakeholder-led support for making EPR an explicit underlying principle and incorporating supply chain conditions into Environmental Code of Practice for Packaging (ECOPP)</i>



C. Enhance measures for performance compliance by signatories and penalisation of non-participation or sub-par performance	Partial (p.8), ignores target setting	<p>Targets not included in proposals for consultation</p> <p>Caution tending to opposition to proposal that 'Signatories develop 3 yr action plan'</p> <p>Strong support for 'Process for dealing with non-performers'</p> <p>Caution / opposition- 'substantiating 1 market share exemption'</p>
D. Establish a comprehensive communications strategy for the revised framework	Given minor focus, mentioned under "Funding the next phase of the Covenant" (p.25)	<p>Establishment of communications strategy not included as core proposal</p> <p><i>Stakeholder-led support in multiple cities to fund education programs for community, industry and local government</i></p>
E. Following a review of needs, continue to gather funding from industry and State jurisdictions by better direct gathered funds	Yes (p.9)	<p>Cautious support for identified priority areas of improving kerbside recovery, public place recovery, aspects of litter reduction and sectoral or specific partnership programs (proposal 25)</p> <p><i>Stakeholders noted that consultation proposal was very focused on collection need to move toward avoidance.</i></p> <p><i>Stakeholders also noted "aspects of litter reduction" needs clarification</i></p>



Table 6 – Summary of issues raised in local government evaluation of National Packaging Covenant Mark I by Meinhardt

<i>Recommendations from Local Government Review</i>	<i>Inclusion in Consultation Proposal</i>	<i>Feedback from Stakeholder Consultation</i>
1. Strong view that a major overhaul of the Covenant is required and that this should be based on Extended Producer Responsibility (EPR), lifecycle management and be supported by appropriate legislation and enforcement	No – Claims to address the recommendation to “embed the principle of EPR” (p.29) within the framework but does not – no mention of EPR anywhere else in the consultation proposal	Proposal not included for consultation <i>Raised as stakeholder concern</i>
a) targets for recovery and recycling should be set for all packaging waste and for each type of packaging material	No - Claims to address this recommendation point (p.29) but no targets are set	Proposal not included for consultation <i>Raised as stakeholder concern</i>
b) introduce NPC approved packaging for signatories whose packaging meets environmental criteria	No	Proposal not included for consultation <i>R&D into alternative packaging raised as stakeholder concern</i>
c) use quantifiable objectives in industry action plans with penalties for non-achievement	Yes	Strong support to “Adopt goals and KPIs” Strong support for ‘Process for dealing with non-compliance’
d) greater industry accountability, including data reporting consistent with Local Government requirements	No	Proposal not included for consultation <i>Transparency & public access to information raised as concern</i>
e) rationale on industry approach to stability of commodity prices for recyclables	No	Proposal not included for consultation
2. Financial incentives connecting purchase price for consumer with cost of disposal for used packaging	No – this key recommendation was ignored	Proposal not included for consultation
3. Support NPC Council taking greater management role in post-Covenant initiatives	Yes	Support for specific funding for ‘Resources for NPC administration and communication’

a) establishing a formal process to monitor and report on industry achievements	Yes	Cautious support for 'Signatories rep against overarching and sector-speci KPIs' Support for 'Annual reporting against Cautious support to 'Standardise acti plans and reports using templates' a 'Strengthen audit and verification'
b) strengthening the process to manage non-compliance with Covenant principles and industry Action Plans	Yes	Strong support for 'Process for dealin with non-performers'
c) overcoming perceptions of partisanship through greater Local Government representation and/or commitment of NPC Council representatives to the principles of the post-Covenant framework	No	Proposal not included for consultation <i>Stakeholder concern raised that not enough detail for local government to determine benefits</i>
4. More emphasis on communication and dissemination of information	Scant consideration	Proposal not included for consultation <i>Stakeholder-led support in multiple cr fund education programs for commun industry and local government</i>
5. Education on roles and responsibilities of all stakeholders and their contribution to principles and objectives of any post-Covenant framework	No	Proposal not included for consultation <i>Stakeholder-led support in multiple cr fund education programs for commun industry and local government</i>
6. Greater flexibility in funding application guidelines and greater accountability in funding	Partial – included flexibility	Cautious support for including 'More flexibility in program funding' <i>Stakeholders noted confusion as to w was meant - not enough detail for co to determine what's in it for them</i>
7. Delivery of industry funds and their increase to cover participation of Local Government in post-Covenant initiatives	No	Proposal not included for consultation <i>Stakeholder opposition to local government signatories being compu</i>
8. Engagement of State / Territory Local Government Associations in post-Covenant process	Partial	Proposal not adequately included for consultation

Table 7 – Summary of issues raised in Nature Conservation Council evaluation of National Packaging Covenant Mark I by Institution

<i>Recommendations by Nature Conservation Council</i>	<i>Inclusion in Consultation Proposal</i>	<i>Feedback- Stakeholder Consultation</i>
<p>1. Reduction in generation of packaging waste</p> <p>need to set strong achievable targets which are progressively raised over time to reduce generation of packaging waste and the recovery and productive reuse or recycling based on the best available life cycle analysis</p>	No – targets not included	<p>Proposal not included for consultation</p> <p><i>Raised as stakeholder concern</i></p>
<p>2. Compliance</p> <p>a) Non-compliance penalties sufficient to act as a deterrent</p> <p>b) Clear processes should be outlined to address non-compliance by signatories, clearly stating what is to be complied with and guided by the collective goal to reduce packaging waste</p> <p>c) Compliance should go beyond current priorities of increasing signatories and preparation of action plans</p>	Partial – questionable whether penalties are sufficient to act as a deterrent	<p>Strong support for a 'Process for dealing with non-performers' (proposal 18), but focus on the 'process' sidesteps the issue of the outcome of the process, namely, the severity of the consequences for the non-complier</p>
<p>3. Measurability</p> <p>a) Consistent reporting framework for measuring the generation of packaging waste and the recovery, recycling or reuse of used packaging materials for each sector, measured against set targets</p> <p>b) Develop key performance indicators for each sector, data required for each criterion and period of reporting</p> <p>c) Construct baseline data on trends for production, disposal, collection and productive reuse and recycling of packaging, by material and by sector ...</p>	Partial – (a) not measured against targets, (b) mostly addressed, (c) included need for baseline data	<p>Support for KPIs being "on the right track"</p> <p>Caution tending to opposition for 'Timelines for action plans and baseline data'</p> <p><i>Lack of targets and baseline data highlighted by stakeholders as a concern.</i></p>
<p>4. Transparency</p> <p>establish clear public reporting, on targets and on the use of funds</p>	No	Proposal not included for consultation
<p>5. Clear Objectives</p> <p>recommend outcome related criteria to measure objectives rather than process related criteria</p>	Yes (p.6)	<p>Strong support to 'Adopt goals and KPIs' (proposal 4)</p> <p><i>However, stakeholders questioned link between objectives and KPIs</i></p>
<p>6. Shared Responsibility</p> <p>a) recommend LCA to assist in fairly distributing costs and responsibilities along supply chain</p> <p>b) establish a mechanism for collecting away-from-home sector packaging (ensuring brand owners and retailers contribute)</p> <p>c) develop an approval system for new products and packaging</p>	Partial – only (b) included	<p>Parts (a) and (c) not included as proposal for consultation</p>



7. Cost Effectiveness a) recommend inclusion of full life cycle financial costs b) recommend inclusion of environmental and social costs c) investigate impact of co-mingled collection on contamination rates	Partial – only (c) contamination rates mentioned	Parts (a) and (b) not included as proposed for consultation
8. Consultation and participation include public participation in formation of objectives, scope and targets	Partial	Stakeholder input was largely directed around support for 29 proposals forward which did not fully reflect recommendations from Nolan, Meade and ISF reviews
9. Education and communication develop national education and communication strategy aimed at community, industry and local government	Limited – national education and communication strategy not proposed	Support for allocating 'Resources for administration and communication' <i>Broad support from stakeholders for education</i>
10. Administrative simplicity implement simple administrative procedures directed toward reducing generation of packaging waste, including clear requirements and exemptions	Yes	No – opposition to locating administration for national support in one place



Table 8 – Residential Kerbside Recycling Collected (in tonnes) 2002-2003

Material Code and Type	NSW	Vic	Qld	WA	SA	Tas	A
A081 Paper - white office	3,942.44	4,383.00		1219.78	1,718.51		
A00 Paper mixed	178,487.36	152,944.00	76259.75	51170.86	18,895.87	8973.46	219
A01 Cardboard	151,137.79	70,820.00	32234.83	31724.70	4,614.30		
A06 Liquid Paper Board	926.57	2,538.00	54.04	449.60	232.89	457.29	10
D0121 Glass White	15,659.51	38,388.00		6779.69	2,101.65		
D0122 Glass Green	4,562.41	33,506.00		4623.07	506.77		
D0123 Glass Brown	12,713.97	39,053.00		6416.87	894.80		
D01 Glass	109,644.52		45239.43	18562.17		9858.91	848
E01 PET	14,925.12	16,790.00	3521.99	4327.95	762.61	935.49	
E0221 HDPE (clear/opaque)	2,740.88	11,112.00	2822.13	2062.65	535.89		
E0222 HDPE (coloured)	744.46	2,658.00	706.21	506.80	120.09		
E02 HDPE	5,750.91			715.59		686.11	
E03 PVC	362.90	796.00	12.82	144.60	34.84		
E04 LDPE	23.08			2.77			
E05 Polypropylene	117.34		144.32	31.36			
E07 Plastic (other)	412.79	1,825.00	1861.8	497.15	48.64		142
G01 Aluminium (cans)	2,635.18	5,901.00	1612.22	1258.39	170.65	459.80	15
F01 Steel (cans, tins etc)	14,005.13	14,295.00	4037.91	4080.88	1,580.12	1378.94	80
Other (unspecified)				4006.05	33,426.77		
Total	518,792.36	395,009.00	168,507.45	138,580.93	65,644.40	22,750.00	32,8

Yellow data = no reported numbers from that area - nat. averages used where appropriate.



Table 9 - Residential Kerbside Recycling Sold or Sent for Secondary Use Including Energy Recovery (in tonnes) 2002-2003

Material Code and Type	NSW	Vic	Qld	WA	SA	Tas	ACT
A081 Paper - white office	3,736.50	4,115.00		1,140.74	1,717.51		
A00 Paper mixed	162,109.03	143,581.00	63,135.27	46,285.46	12,782.51	8645	18,934
A01 Cardboard	147,522.39	66,485.00	28,165.89	30,210.09	4,596.23		
A06 Liquid Paper Board	880.38	2,383.00	46.74	415.58	215.69	455	80.0
D0121 Glass White	14,810.68	34,938.00		6,054.18	1,820.80		
D0122 Glass Green	3,933.95	30,056.00		3,993.08	491.15		
D0123 Glass Brown	11,349.48	35,611.00		5,635.25	770.27		
D01 Glass	102,290.75		42,186.44	17,425.74		9782.5	7,786
E01 PET	13,673.29	15,644.00	2,503.51	3,948.84	713.90	910	
E0221 HDPE (clear/opaque)	2,432.93	10,354.00	2,362.87	1,891.70	487.56		
E0222 HDPE (coloured)	701.75	2,477.00	606.22	469.58	104.02		
E02 HDPE	5,449.03			661.84		682.5	
E03 PVC	339.92	742.00	11.09	131.67	28.40		
E04 LDPE	22.80			2.71			
E05 Polypropylene	92.11		134.43	27.68			
E07 Plastic (other)	399.49	1,700.00	1,803.53	475.46	48.08		140
G01 Aluminium (cans)	2,402.96	5,712.00	1,420.24	1,186.92	164.52	455	114.0
F01 Steel (cans, tins etc)	12,900.03	14,181.00	3,480.83	3,873.52	1,461.52	1365	673.0
Other (unspecified)				2,701.26	25,004.55		
Total	485,047.47	367,979.00	145,857.04	126,531.28	50,406.71	22,295.00	28,994

64 Yellow data = no reported numbers from that area - nat. averages used where appropriate. Green data = Tas estimates derived from reported material percentages and av. household collection yield of 2.5 kg per week. Yellow data = no reported numbers from that area - nat. averages used where appropriate. Green data = contamination % estimate used for Tas and reported ACT total (nat. averages used to proportionally spread these totals). 65



Table 10 - Residential Kerbside Recycling Residual Fraction (Contaminants) Disposed of to Landfill (in tonnes) 2002-2003

Material Code and Type	NSW	Vic	Qld	WA	SA	Tas	ACT
A081 Paper - white office	210.16	268.00		79.04	1.00		
A00 Paper mixed	15,979.51	9,363.00	13124.48	4,885.40	6,113.76	328.46	2997.4
A01 Cardboard	4,135.23	4,335.00	4068.94	1,514.61	17.93		
A06 Liquid Paper Board	47.37	155.00	7.30	34.02	17.20	2.29	20.87
D0121 Glass White	863.03	3,450.00		725.51	280.86		
D0122 Glass Green	600.72	3,450.00		629.99	15.62		
D0123 Glass Brown	1,319.53	3,442.00		781.62	124.53		
D01 Glass	7,335.21		3052.99	1,136.43		76.41	697.2
E01 PET	1,228.33	1,146.00	1018.48	379.12	48.71	25.49	
E0221 HDPE (clear/opaque)	297.10	758.00	459.26	170.95	48.33		
E0222 HDPE (coloured)	43.18	181.00	99.99	37.22	16.07		
E02 HDPE	307.92			53.75		3.61	
E03 PVC	23.03	54.00	1.73	12.93	6.45		
E04 LDPE	0.38			0.06			
E05 Polypropylene	23.76		9.89	3.68			
E07 Plastic (other)	14.43	125.00	58.27	21.69	0.56		13.31
G01 Aluminium (cans)	227.13	189.00	191.98	71.46	6.13	4.80	43.85
F01 Steel (cans, tins etc	1,088.86	114.00	557.08	207.37	118.60	13.94	127.2
Other (unspecified)				1,304.80	8,421.92		
Total	33,744.88	27,030.00	22,650.41	12,049.65	15,237.67	455.00	3,900.0