Submission
No 38

Local Government
Association of NSW

Shires Association of NSW

Our ref: R90/0561
Further contact: Robert Verhey
23 March 2006

The Committee Manager
Standing Committee on Public Works
Parliament House
Macquarie Street
Sydney NSW 2000

Dear Sir/Madam

The Local Government and Shires Associations of NSW, the representative body for NSW local councils, welcome the opportunity to provide a submission to the Standing Committee on Public Works Inquiry into Municipal Waste Management in NSW.

We note the Inquiry's terms of reference, to examine:

1. The effectiveness and appropriateness of current municipal waste management.
2. Impediments and incentives to best practice municipal waste management.
3. Best practice methods, including cost effectiveness, of planning and providing municipal waste management services.
4. The development of new technology and industries associated with waste management.
5. Minimising harm to the environment in the provision of waste management services.

Our submission will make comments relevant to each of these terms of reference. We also note that this Inquiry intends to complement the recent Productivity Commission Inquiry into municipal waste management, so we have attached a copy of the Associations' submission to that Inquiry. A copy can also be accessed at the PC's website http://www.pc.gov.au/inquiry/waste/subs/sub098.pdf We also draw the Committee's attention to the "Beyond Recycling" Guidance document produced by the Associations in 2003, to assist councils in their decision making relating to Waste Management. This can be accessed at http://www.lgsa.org.au/resources/documents/Beyond_Recycling_Part_A.pdf and http://www.lgsa.org.au/resources/documents/Beyond_Recycling_Part_B.pdf . In particular, Part B provides a clear overview of the Associations policy positions relating to waste management.

We would be happy to provide any further clarification of matters relevant to the terms of reference and to present to any hearings conducted as part of this Inquiry.

Yours sincerely

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President
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Associations' Comments on Terms of Reference

1. The effectiveness and appropriateness of current municipal waste management.

The Associations, as a general policy position, believe that the management of municipal waste should remain in the hands of the public sector. Local Councils and State Government, as elected spheres of government, are by definition, reflective of community expectations and can provide a waste management service which is responsive to social, economic and environmental needs. The provision of a socially and environmentally beneficial waste system may involve some economic cost, and the private sector has not historically shown the capacity or willingness to balance these needs.

As the Committee has pointed out, most councils do contract out the physical service delivery of waste and recycling collection to the private sector. Importantly, however, councils retain ultimate control over the tendering process and contractual arrangements that are put in place, and these, as pointed out above, reflect community values and aspirations. The Associations have, through their "Beyond Recycling" document (referenced in covering letter), attempted to assist councils to better reflect their communities' values and needs when establishing ,

In the Sydney metropolitan area, municipal waste disposal and treatment facilities are provided by WSN Environmental Solutions (previously Waste Service NSW). Outside of the metropolitan area, councils, either individually or jointly, own and /or operate these facilities, or hold a licence over the activities which occur at those facilities. This requirement for public ownership, (as established by Section 87 [3] of the Protection of the Environment Act 1997, which states "A licence in respect of any such waste facility may be granted to a person other than a public authority only if a public authority holds a separate licence granted in respect of the facility [in this section called a *supervisory licence*]") is seen as appropriate. If the provision of municipal waste disposal / treatment facilities was deregulated, it is likely that large, multinational, private waste corporations would be more aligned to the "single bottom line" in a highly competitive marketplace.

2. Impediments and incentives to best practice municipal waste management.

The Associations consider that some of the impediments to best practice waste management include:

a. Ever increasing volumes of municipal waste which result from a lack of effective regulation by State and National Governments over producers of goods which become waste and discarded packaging. The council "wheelie bin" has become the receptacle for many goods for which there is not an effective reuse / recycling system in place. These includes appliances, car batteries, computer monitors, polystyrene, plastic bags and many other types of packaging.

b. Councils attempt to prevent the inclusion of inappropriate items in their regular collection, and the illegal dumping of materials, by providing council "clean ups" at regularly spaced intervals. These collections are provide at great expense. The Associations would support alternative systems which are industry funded, and require industry to take responsibility for the goods they produce. For example a washing machine at the end of its life, rather than ending up dumped along the roadside or included in a council clean up, should be recovered by the manufacturer for reuse,

refurbishment or recycling. Industry is very much geared to "one-way traffic" for its products, with responsibility shifting from party to party along the life cycle. The Associations feel that many waste related problems stem from the lack of correct assigning of responsibility to the producers of commodities.

c. The great cost to councils of providing recycling services to their communities. Recent estimates place this cost at some $50 per household per year or $290 nationally. The community seem to be firmly of the view that councils should maximize the number of materials and products that are collected for recycling, irrespective of the economic/environmental / social costs and benefits, or potential for cross-contamination of materials. The Associations believe that the cost/benefits of each commodity should be assessed individually, and collection services established accordingly.

3. Best practice methods, including cost effectiveness, of planning and providing municipal waste management services.

The Associations believe that there is no one "best practice" method of service delivery for waste management. There are many forces at play in determining the best system, including:

a. Composition of the waste stream (eg amount of potential garden waste)
b. Density of settlement (inner city, outer suburbs, regional centre, rural community)
c. Physical characteristics of the council area (eg width of streets / lanes)
d. Occupational Health and Safety issues
e. Nature of demographic and waste stream.

Councils are well placed to decide the best type of service to provide, and consult with their communities in the preparation of tenders and provision of services. This consultation either occurs voluntarily, or as part of council's responsibility to consult with its community on any new charging systems.

For an inner city suburb with a high proportion of hard surface, a voluntary, minimal garden waste service and small bins to facilitate access to confined spaces may be appropriate. At the other end of the scale, for a semi rural community, there may be no net benefit in collecting recyclables from kerbside and they may be better managed through drop off facilities. The simple assertion that the "three bin" system equals best practice is overly simplistic.

The Associations have encouraged councils, through the "Beyond Recycling" document (reference in covering letter) to develop their waste and recycling services with a "triple bottom line" approach, which weighs up the environmental, economic and social costs and benefits of collecting each type of commodity and then makes individual decisions about those commodities. This process needs to be geared locally, to factor in issues such as demographic, distances and likely nature and composition of waste stream.

4. The development of new technology and industries associated with waste management.

The Associations strongly support the waste hierarchy and the premise that recovery, reuse and recycling are preferable to disposal. This does not mean, however, that an assumption can be made that alternative waste technology (AWT), is by definition preferable to landfilling in every case. With regard to AWT, the Associations make the following observations:

a. AWT is expensive: to establish, and to operate.

b. The value resources recovered by AWT (whether soil conditioners or scrap metals or plastics) is not necessarily competitive, in a market place where extraction of virgin resources can be undertaken at a comparatively low cost. This can further jeopardise the financial viability of AWT, or, more likely, increase the cost to the customer.

c. Not all forms of AWT are created equal, and we should not assume that AWT = good. Each type of AWT, whether a vertical composter, or energy recovery facility, or Bedminister, or UR-3R, even a "bioreactor", even a landfill, needs to be objectively assessed for its triple bottom line (social, environmental and economic) costs and benefits.

d. We need to be particularly cautious of AWT that actively discourages source separation. Some AWTs, whether explicitly or in an inferred way, profess to be able to accept waste with a wide variety of compositions, and levels of contamination that will make a council's life easier in terms of how much separation they need to achieve prior to material being fed into the "black box". This is not necessarily a criticism, but an important observation. Some types of AWT actually need a significant organic component for their processes to operate, and the prior removal of garden waste and paper may actually be undesirable for those processes.

It is worth noting that councils are under pressure from the State Government to achieve greater levels of separation of waste at the front end by the adoption of "best practice" bin configurations and services. Further, they are being actively discouraged from committing to long term landfilling in future contracts. Consequently, councils are facing two conflicting cost increase forces: on the one hand councils are being strongly encouraged to pay a premium for best practice kerbside recycling service delivery which maximises source separation, and they also being encouraged to pay a premium to use AWT instead of landfill. In some cases the input needs of the AWT are not consistent with maximum separation at the "front end".

The Associations suggest that all types of AWT and landfill should be subjected to a rigorous, objective analysis to facilitate a clear comparison and informed decision making process.

5. Minimising harm to the environment in the provision of waste management services.

This principle is strongly supported by the Associations and should underpin the decision-making process regarding waste management. The waste management area is characterised by a prevalence of untested hypotheses, long accepted, undisputed wisdoms and seemingly objective, independent studies (which are in fact, corporate funded).

The Associations, as outlined above, believe that decisions relating to waste management need to be mindful of the economic, social and environmental costs and benefits, and decisions need to be made which achieve optimal outcomes for all three of these criteria.

Two aspects of the principles of ecologically sustainable development are particularly relevant here: The principle of **intergenerational equity** means that these economic, social and environmental considerations need to look further than immediate or short term political or economic cycles. The principle of **true environmental valuation** means that environmental benefits and costs need to apply value, both in intangible or tangible terms, to the impact of waste management activities on the quality of the environment.

Productivity Commission
SUBMISSION COVER SHEET
(not for publication)

Waste Generation & Resource Efficiency Inquiry

Please complete and submit this form with your submission to:

Waste generation & resource efficiency inquiry
Productivity Commission
LB2 Collins Street East
MELBOURNE VIC 8003

OR

By facsimile (fax) to:
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Fax: 03 9653 2305
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Our Ref: R90/0561 Out-13347
Further Contact: Robert Verhey
3 March 2006

Mr Philip Weickhardt
Presiding Commissioner
Waste Generation & Resource Efficiency Inquiry
Productivity Commission
LB2 Collins St East
MELBOURNE VIC 8003

Dear Mr Weickhardt

The Local Government and Shires Associations of NSW are the representative organization for local councils in NSW. All 152 local councils in NSW are members of the Associations. The Associations have a long standing interest in matters relating to waste management and recycling, reflecting the pivotal role that member councils play in ensuring that waste and recycling services are provided in NSW.

The Associations welcome the opportunity to make a submission on the Productivity Commission's Waste Generation & Resource Efficiency Inquiry. We have noted the terms of reference of the inquiry namely:

1. *What are the economic, environmental and social costs and benefits of waste and waste-related activities?*
2. *What are the market failures (including externalities) associated with the generation and disposal of waste?*
3. *What strategies should be adopted by government and industry to improve economic, environmental and social outcomes in regard to waste and its management?*

We have also noted that a series of questions are posed in each section of the Inquiry Discussion Paper. This submission will be structured around these questions, providing a composite answer to each group of questions. This should ensure that the terms of reference are addressed.

This submission is being provided in draft form in order to meet the Productivity Commission's timetable. Full endorsement of the submission will occur at the Associations' April Executive meetings. The submission has however been prepared in a manner consistent with long standing waste policy positions held by the Associations and Local Government, and may be considered to reflect the views of this sector. I will advise you of any variations to this submission after the 6 April Executive meeting.

Thank you for the opportunity to make this submission. The Associations' Presidents would welcome the opportunity to make a verbal submission at any hearings held by the Productivity Commission to discuss the issues raised in this submission and any other relevant matters.

Yours Sincerely

Bill Gillooly AM
Secretary General

1. Introduction

The Associations are pleased to provide a response to the Productivity Commission's Waste Generation & Resource Efficiency Inquiry. This response attempts to address each of the sets of questions posed in the Inquiry Discussion Paper

2. Types of waste covered by the inquiry

Are there any items (either specifically noted above or not listed) that should be included or excluded from this inquiry? What are they and why should they be included/excluded?

The Associations support the scope of materials included in this Inquiry. Local Councils mainly deal with the domestic (household) waste stream. The domestic waste stream is generally perceived as an environmentally benign mixture of organic (food/garden) and inorganic (mainly inert packaging) waste. In reality, the prevalence of items such as batteries, mobile phones, appliances, electronic goods, paint, oil, unwanted household chemicals etc, do influence the potential environmental and health impacts of domestic wastes.

Further, the traditional concept of "hazardous" as being related to the chemical composition of waste may not be sufficiently broad to reflect the potentially hazardous nature of seemingly inert fractions of the domestic waste stream. Plastic bags, expanded polystyrene, even organic garden waste and soil can be considered "hazardous" in certain scenarios, where they disrupt the ecological balance or may be ingested by organisms.

Historically, the practice of landfilling of domestic waste has effectively placed this domestic waste (and its hazardous fraction) "out of sight, out of mind". The growth in volumes of this hazardous fraction (in gross terms and also as a proportion of the domestic waste stream) and the expansion of resource recovery through alternative waste technologies means that we can less afford to ignore the inclusion of these materials in the waste stream. Alternative means of separation / recovery of these materials have formed a major thrust of waste policy around Australia over the last decade.

The Inquiry's life cycle approach to waste is supported. For too long, waste has been considered an inevitable part of the consumption process, without giving due consideration to the waste that occurs, or is "designed in" at the extraction, production and distribution stages. Our attempts to manage and reduce waste by only dealing with the end point (ie post consumption) have therefore been ill-fated, because we have not sufficiently explored opportunities to design waste out of the front end of the production process.

3. Overview of solid waste

Where is solid waste coming from, and how much is being recycled and disposed?

To what extent is the lack of disaggregated data (that is, the lack of information about quality and composition of waste) a problem?

What are the most significant data gaps?

What are the costs and benefits of collecting more comprehensive and disaggregated data?

How would the data set be used?

What countries collect and use data on waste more effectively than we do and what are the lessons for Australia?

What role can web-based exchanges play in promoting the efficient disposal of waste and the recovery of recyclables? What role should government play in developing such exchanges?

The Associations support the need for reliable, defensible data on the waste stream. In the waste policy arena, data is often derived and interpreted to assist in supporting a case. Recycling is a good case in point. The Inquiry discussion paper quotes the ABS as follows:

Australian households appear to have high degree of commitment to sorting their waste. About 95 per cent of Australian households undertook some recycling activities in 2003. Around 83 per cent of households reused waste and only 2 per cent did not recycle or reuse their waste at all (ABS 2003).

Taken on face value, this oft-quoted figure would indicate that recycling is running at 95% efficiency, with only 5% of gains to be pursued. Little wonder that Ministers and industry are keen to publicly profess, when alternative mechanisms are proposed, that "kerbside recycling is overwhelmingly successful and should not be jeopardized".

In fact, if the efficiency/ success of current systems of recycling (almost wholly kerbside) is measured in terms of packaging material return rates, as the National Packaging Covenant Mk 2 does, a significantly different picture emerges. Claimed current rates are:

- paper & cardboard 64%
- glass 35%
- steel 44%
- aluminium 64%
- plastics 20%

Clearly the ABS definition of "participation rate" is misleading, and incorporates the full range of participants, from "once a year" participants to "all day every day" zealots. Participation rate calculation may also be based on availability of service, which fails to reflect level of commitment to using that service. The Inquiry is misguided in interpreting the ABS figures as reflecting a high commitment. Only the disaggregated empirical return rates can give a true picture of the recycling system's performance.

The Inquiry discussion paper highlights some major discrepancies between states in terms of garden waste return rates, recycling rates etc. The Associations suggest that methodologies often differ, depending on the position or case which is being put forward.

This intentionally confusing, rubbery statistical debate has clouded the waste policy arena for too long. A return to empirical, outcome/results based data, with consistent methodology across Australia, is required. Further, there should be a fundamental requirement on waste producing industries to quantify and monitor the amount of waste produced by their sector, using a consistent, objective methodology set by Government.

4. Benefits and costs

The waste hierarchy

How has the waste hierarchy influenced waste management policy?

What are the advantages and disadvantages of using the waste hierarchy approach to waste management?

Under what circumstances, and for which wastes, is it appropriate to proceed sequentially through this hierarchy?

When would it be more appropriate to consider these approaches as options rather than an ordered sequence? For example, under what circumstances would it be appropriate to forgo reuse or recycling in favour of energy recovery?

The Associations are strongly supportive of the Waste Hierarchy, however it is acknowledged that it is not an exact law of physics that can be applied to all situations. It is a guide to assist with the decision-making process. It does not act as an alternative to the "life cycle" or "triple bottom line" rationales that should rightly be applied to the decision making processes about waste management. It is however a valuable, complementary tool.

In the case cited in the Inquiry discussion paper (the environmental, economic and social costs and benefits of increasing the rate of newsprint recycling), the "avoid" and "re-use" options in the waste hierarchy could be applied to reduce the generation of the newspapers that create newsprint in the first place. On-line newspapers and workplace newspaper sharing would be two obvious examples.

The Waste Hierarchy has been increasingly neglected by Waste Policy makers in favour of a greater scrutiny of "end of pipe" solutions such as alternative waste technologies (AWTs). One of the issues arising with AWT, in light of the mechanized, less labour-intensive processes, is the inclusion of inappropriate items. A great amount of effort is expended and technology applied by AWT designers and operators, for example, to ensure that car batteries are removed from the incoming waste stream. In fact, the solution is clearly "upstream" in waste hierarchy terms, with programs to enhance the longevity, recovery, reuse and recycling of these batteries, coupled with economic and/or regulatory incentives to ensure high diversion from the waste stream.

The Inquiry raises the issue of the relative merits of energy recovery. This is a complex issue. Some waste streams do not lend themselves readily to the higher order hierarchy options such as avoid and reuse. Motor vehicle tyres would be a good example. There are viable options for recycling of crumb rubber derived from shredded tyres for roadbase and playground services etc. This would also avoid the need for production of new materials for these surfaces. However a case could be made that the use of tyres for fuel for kilns and power generation, with appropriate safeguards, could have benefits over the use of virgin fossil fuels which surpass the use of tyres for roadbase. As a backdrop to this comparative analysis of two fairly "low order" options in the hierarchy, however, there are options such as reducing vehicle kilometers travelled through provision of alternatives to the use of private vehicle (public transport, urban design etc), and research into greater longevity of tyres.

The Associations maintain that the waste hierarchy should continue to underpin all decision-making, whether policy or operational, with regard to waste management.

Resource efficiency

Are there any other interpretations of resource efficiency that should be taken into consideration when considering policy in the waste management area?

How can Australia improve the economic efficiency with which resources are used in waste management and disposal?

Are the levels of waste generation and disposal in Australia too high? If so, what is the basis for assessing this?

What are the costs and benefits of the different approaches to waste management (such as reuse, recycling and energy recovery)?

The Associations feel that the Inquiry Issues Paper has somewhat unnecessarily complicated the definition and rationale behind resource efficiency. Resource efficiency, is, after all, a simple principle of ecosystem operation, which results in little or no residual waste. Human industrial processes have resulted, for the first time in the earth's long history, in the creation of waste materials which cannot be assimilated into the ecosystem and for which there is effectively no use. Resource efficiency is simply about reducing the creation of those "non-useful" materials, either by making the production process more efficient and extracting maximum or multiple uses/benefits from resources, or by finding a use for those by-product materials. The Associations attempted to visualize this concept in their 2004 publication 'Beyond Recycling':

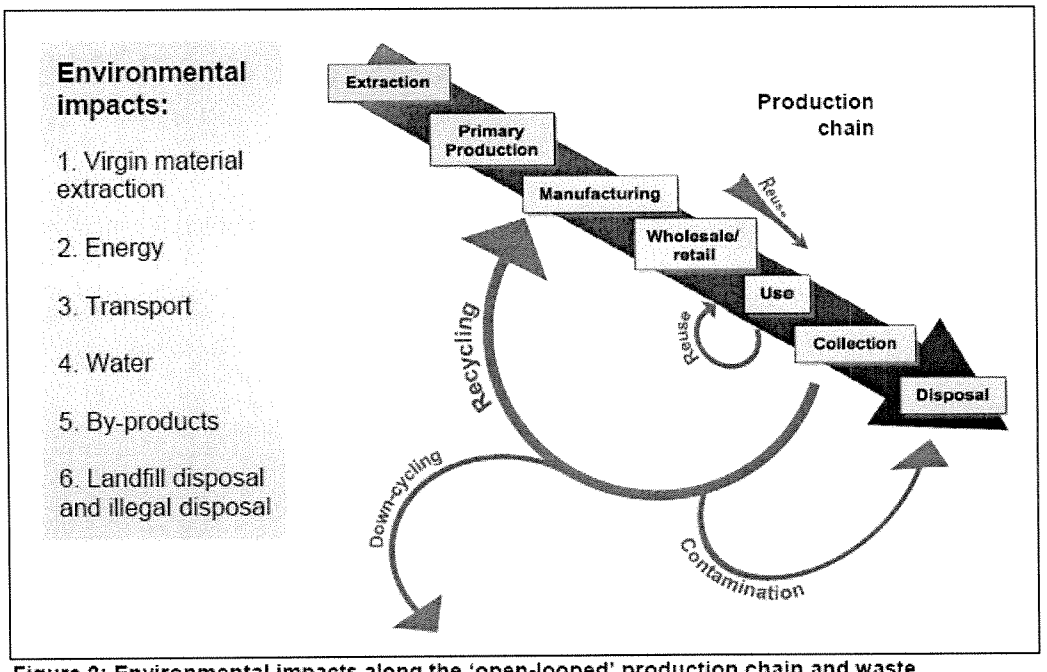


Figure 2: Environmental impacts along the 'open-looped' production chain and waste minimisation options for 'closing the loop'.

Closing the loop wherever possible, ensures that maximum benefit is derived from the extraction of a given quantity of a resource, while also reducing waste and reducing environmental impact. A complicating factor may be that there is a significant additional cost in extracting the last 10% of a resource's value and it is significantly cheaper to dispose of the resource after it has been 90% exploited. This financial benefit may however, be tempered if the environmental costs of foregoing the additional 10% are factored into the equation.

5. Arguments for government intervention

Market failure arguments for government intervention

How large are the external costs of properly constructed and managed landfills and other types of waste disposal in Australia? What types of costs are involved? How do these costs vary according to the type of waste?

What externalities are associated with other waste disposal options, such as incineration and composting?

Do these externalities warrant a government policy response?

How large a problem is illegal dumping and littering? What types of waste cause most of the problems?

What are the main costs of illegal dumping and littering?

What are the most cost effective policy and enforcement mechanisms for limiting illegal dumping and littering?

The Associations do not have a strong view on the relative merits of landfill vs other types of waste disposal and management. A properly located and managed landfill with appropriate leachate controls and gas extraction could be considered to be fairly benign in an environmental sense, however the indirect impact in terms of facilitating disposal of otherwise useful resources is relevant. Modern landfills can be designed to maximise on-site diversion of useful resources and pricing structures can also encourage separation. There is ample evidence that financial signals "at the weighbridge" are highly effective.

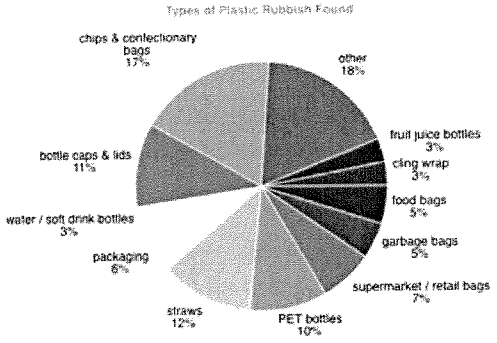
All types of waste management, including landfilling, incineration and composting, carry some level of externalities, including greenhouse gas and toxic emissions, potential water quality issues, odour issues and amenity issues. There is a clear role for Government, through its approval and regulatory roles, to

ensure that these externalities are minimised, and an optimum solution is found. This is not an exact science however, and political / amenity / perception issues inevitably play a large part in the decision making process.

Illegal dumping and littering pose a huge problem for Local Government. The Associations' most recent figures reveal that for a large metropolitan council such as Blacktown City (population 290,000), the cost of collecting and disposing of litter in public places(excluding roadside litter) in 2001/2002 was $1,120,722 and in 2002/ 2003 was $1,172,972 (approximately $4.00 per year for every resident). This represents a massive drain on the council's budget, and a loss of funding which could be used for much more productive uses in terms of the provision of community infrastructure and services.

Anecdotally, packaging represents the major fraction of the litter stream, and this is borne out year after year in the Clean Up Australia Litter report. The two most recent reports (2005 and 2004) have reported that plastics make up between 32% and 37% by volume of all the litter collected (see figure below), and this accords with Local Government's experience. The types of plastic collected highlight the prevalence and mobility of plastic packaging in the litter stream.

Plastic waste (CUA rubbish report 2005)



To what extent do negative externalities associated with resource extraction and materials processing (and other stages of the product life-cycle) result in non optimal levels of waste?

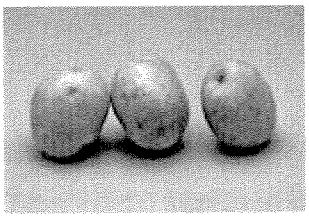
The complexity and breadth of the externalities associated with the production of modern consumables are rarely considered. A dramatic representation of this has been provided by the NSW Powerhouse Museum in its "Ecologic" exhibition, which dramatically highlights the externalities and potential environmental and waste impacts associated with the production of a $2.00 packet of chips.

The industrial cycle-an example close to home

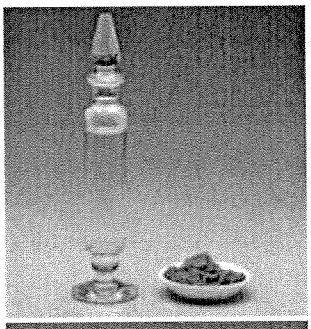
Kettle Chips

It's not unusual for the ingredients of manufactured goods to travel half way across the country or the world. The transport involved in making all processed foods is environmentally expensive.

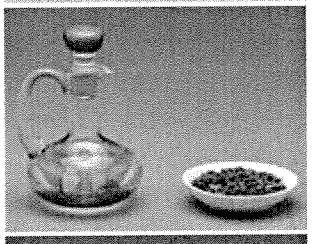
Even a simple product like a packet of potato chips takes a lot of energy as well as materials to make. Kettle chips are made in Shepparton, Victoria, but the raw materials come from all over Australia.



The company uses only Atlantic potatoes that are less than seven days out of the ground. It buys potatoes from different growers all along the east coast of Australia, depending on the season. This ensures that chips look and taste the same all year round. Trucks transport the potatoes to Shepparton.

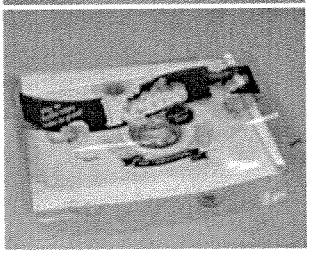


Cheetham Salt in Price, South Australia, supplies the salt. It is extracted from sea water in shallow ponds using the sun's heat. It's then washed with brine, spin-dried and dried again with natural gas heating. It's crushed, sieved and trucked to Shepparton.



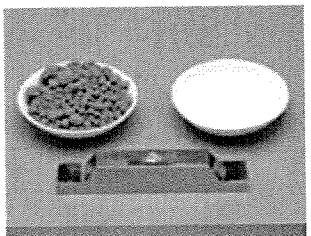
A particular type of sunflower seed provides the oil for frying. High in mono-unsaturated fats, the oil makes the chips last longer. It is extracted in Newcastle, NSW, refined in Sydney, and transported to Shepparton.

The package protects the chips, keeps them fresh and supplies a convenience-sized snack. It must also attract customers and carry essential information about the brand, the ingredients and nutritional content.



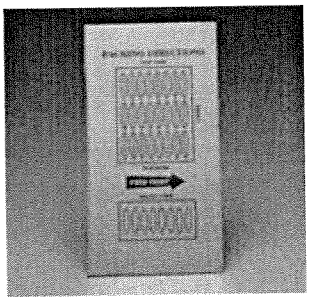
Two layers of polypropylene film sandwich a layer of aluminium and another of ink in between. The aluminium layer is only about four atoms thick but it's enough to stop light, water and oxygen from damaging the chips.

Polypropylene film is made from a gas, which in turn comes from oil. Shorko Australia in Wodonga, Victoria, supplies the film, which is economical, lightweight and doesn't react with food or chemicals. One layer of film is printed in Melbourne, the other is metallised in Sydney. The two films are then fused by the printer Finewrap Australia in Melbourne.



The inks for printing are made in Melbourne. The nitro-cellulose base comes from India or China. The pigments come from Europe and the US. The alcohol is made from sugar by CSR.

Aluminium is applied to a layer of plastic film by melting aluminium wire in a vacuum. The metal vapourises onto the film. Making aluminium requires huge amounts of energy from coal, oil and gas. It comes from bauxite, which is mined, crushed and dissolved in caustic soda. The aluminium oxide or alumina that forms is filtered, washed and processed to make aluminium. Kettle imports Italian aluminium that's probably made with some Australian bauxite.



Electricity for all the processes is generated by burning coal mined in Australia. The fuel for all the trucks is diesel, which is refined from oil in Sydney, NSW; Melbourne and Geelong, Victoria; Port Augusta, South Australia; and Brisbane, Queensland. The cardboard cartons that protect the chips during transportation are made by Amcor Fibre Packaging, Melbourne, from 100% recycled paper and cardboard. Recycled cardboard isn't as strong as virgin material but it doesn't need to be because the chips are light.

(source Power House Museum http://www.phm.gov.au/education/ecologic/cycles.htm)

Clearly, if the environmental costs of each stage of production (and the post consumer disposal or collection from the litter stream, where such items are prevalent) were factored in to the equation, this $2.00 packet of chips would cost considerably more. The fact is that these externalities are largely absorbed by the public sector through litter control, waste education, mine rehabilitation, greenhouse gas abatement / adaptation, road maintenance etc.

It is the Associations' view that industry to some degree enjoys an unfettered right to introduce materials and commodities into the marketplace irrespective of their environmental impact, with an expectation that others along the chain will take responsibility for dealing with those environmental impacts.

Litter is an excellent example, where the beverage industry is clearly of the view that the litterer is the responsible party, and further that councils have a responsibility to ensure that roads and public places are kept clean and that litter is dealt with. Token assistance and recognition of the role of councils is given through industry funded programs such a "tidy towns" and litter grants. The same situation applies with whitegoods and computers, where there is a reliance on the council clean up programs to remove these discarded commodities from view. Industry has clearly shown that it will not voluntarily accept that product design for the environment can be used as a means of avoiding the problems in the first place, or

that the sheer volume of single use materials and lack of viable post consumer uses and markets are causative factors.

It is the Associations' view that State and National Governments have traditionally been unwilling to call the manufacturing and packaging industry to account for the environmental impact of the goods they produce, at any stage of their products' life cycles (production, consumption or post production). Recent moves by the NSW Government to bring about Extended Producer Responsibility (EPR) in problematic waste sectors are welcomed, but in the Associations' view there remains an over-reliance on industry goodwill and the voluntary approach. A more directive approach, on a "level playing field" is called for.

How important are market power issues in waste management? Are there barriers to entry in the markets for collecting and recycling waste and what are they?

What competitive discipline do exports have on the market power of domestic processors?

In the waste collection and contracting arena, it is true to say that there is a limited number of players able to contract for provision of a council's (or group of councils') service. There has also been a move away from the use of council "day labour" (salaried-staff). The scale of infrastructure and investment requirements to tender for a contract means that the waste industry is increasingly characterized by a relatively small number of large corporations, all vying for a greater market share. While this competitive situation remains in place, it has the effect of keeping prices in check. They are further kept in check by the "reasonable cost" provision of the NSW Local Government Act 1993, which states (section 504.3) that *"Income obtained from charges for domestic waste management must be calculated so as to not exceed the reasonable cost to the council of providing those services".*

A more fundamental problem exists in the marketplace for collected recycled materials, which has traditionally displayed an undesirable level of price volatility. In recent years it is acknowledged that the co-mingling of plastics has facilitated the export of mixed plastics, however the greater prevalence of co-mingled collection has brought with it issues of contamination, and the true environmental (and indeed, social) costs and benefits of the export of Australian recyclate remain untested. Again, the fundamental problem is that the "end players" in the product life cycle, councils and recyclers, are lumbered with the responsibility for finding these markets, while the industry's who produce them are not required to take sufficient responsibility for "closing the loop"

Institutional and regulatory barriers

Are institutional or regulatory barriers preventing the uptake of better waste management practices and how?

Are local governments sufficiently aware of best practice approaches to waste management that would suit their circumstances? What institutional constraints are preventing the adoption of best practices?

The Associations' view is that there has been significant progress in the ability of councils to negotiate contracts, and assistance has been provided by way of State Government guidelines. Ultimately, however, the economic 'bottom line" often prevails. The Associations have produced a two-part guidance document for councils "Beyond Recycling" (Part A and Part B) and Flier which are intended to assist councils to take a more "triple bottom line" approach to their decision-making about waste and recycling contracting and involve the community more effectively in this process.

What regulatory and institutional barriers are impeding the development of markets for recovered resources? What is the case for removing these barriers?

The Associations are of the view that the major regulatory impediment is the lack of regulatory responsibility by manufacturers, to control the types of materials which can be put into the marketplace. As an example, some beverage containers contain up to four types of plastic and present a dilemma to the recycling industry. The increased prevalence of the "mixed plastic" stream has to some extent alleviated this as an issue but there may be a net negative environmental impact which has not been fully explored.

What case is there for using waste management policies to improve the sustainability of 'resource use?

The Associations strongly support the principles of Ecologically Sustainable Development (ESD) and draw particular attention to the principle of intergenerational equity. The rate of resource consumption to produce short-lived goods and materials which do not enhance the future (or indeed the present) wellbeing of society or the ecosystem needs to be closely examined. Waste policy can be a powerful driver to bring about a greater consideration of ESD principles. As an example, consideration of the potential impact of waste and litter on biodiversity should be a fundamental consideration of any product design. The impacts of plastic bags on wildlife and sea life, for instance, should be driving the need for initiatives (regulatory, economic and educational) to reduce plastic bag use and ensure that those bags that are in the system are unlikely to enter natural ecosystems.

6. Policy options

How effective has the mix of policy instruments been in achieving efficient levels of waste? What policies have produced the most efficient outcomes?

Successive governments have announced well intentioned targets to reduce waste, and these targets have proven difficult to achieve in some sectors of the waste stream. Generally the Associations feel that a mix of regulatory, education and economic initiatives is the most effective way to achieve waste reduction, however there has been a tendency to invest energy and attention at the "tail end" of the problem, developing alternative waste technologies to create resources instead of waste, improving the efficiency of council collection systems, measuring success in terms of increased levels of recycling etc.

Industry and Governments are yet to fully appreciate that cleaner production and full life cycle responsibility can play a preventative role by reducing waste generation, reducing reliance on the remedial, end of pipe solutions.

Key performance indicators and target setting

How are targets being set? What consideration is given to the social environmental and economic costs of achieving these targets?

How should targets be set to optimise social environmental and economic outcomes?

The Associations feel that there is a definite place for aspirational targets. It is sometimes argued that there may be a high social or economic cost associated with the pursuit of environmental targets. It should be remembered however that social and environmental costs / benefits are not as easily quantified as short term micro-economic impacts, The science of environmental and social accounting is, by comparison, an inexact science, but an essential science nonetheless. The principles of ESD are highly relevant. They encourage the incorporation of environmental accounting, the precautionary principle states that where there is uncertainty, policy makers should err on the side of caution, and they stress the need to think longer term by way of the consideration of intergenerational equity.

Stacked against these strategic, sophisticated and essential principles, the frequent cry from industry sectors that a particular policy initiative will "increase the cost to consumers by x cents" seems somewhat short term and simplistic by comparison.

How should Australia's performance in waste management relative to other countries be measured? What role is there for key performance indicators in making such comparisons and which key performance indicators are the most useful for public policy purposes?

This submission has stressed the need for consistent nation-wide methodologies to measure progress in waste reduction. It is acknowledged that the achievement of international consistency may be somewhat more challenging, however it can also be seen as an opportunity, to learn from the diverse systems which have succeeded or failed, and take the best of what is on offer. When all is said and done, the **amount of waste generated per capita** still provides a useful gauge of a country's progress towards waste reduction, irrespective of factors such as Gross Domestic Product, landfill availability, production / consumption levels (domestic and imported) etc.

Recycling

How well have these policies worked in generating economically efficient levels of recycling? What policies or mix of policies are likely to work best in this regard?

How useful is full life-cycle analysis in determining the environmental and economic costs and benefits of recycling various products?

Are there particular products or locations for which disposal rather than recycling might be a more efficient option?

How has government procurement policy affected recycling levels? How important is the demonstration effect of government actions?

The Associations have for many years stressed that recycling is a means, not an end. The end result being sought is a reduction in waste and a more efficient use of resources. Unfortunately for many commodities, the increased levels of recycling have not translated into any reduction of materials being produced at the front end. The loop has not been closed, instead another open loop has been created. For some sectors such as newsprint, recycling has been highly successful. The key here, however, is that in the case of newsprint there is a strong demand for post consumer product, which has enough inherent value to ensure a consistently high price can be paid for its collection. This demand "pull" is the key to a successful recycling program, and has been lacking or inconsistent for many recycling commodities.

Life cycle analysis is a useful "blowtorch" to apply to recycling, however it should be applied individually to each commodity, because it does vary depending on factors such as weight /volume ratios, the "cost" of producing virgin material vs the "cost" of reprocessing post consumer material, transport requirements etc. It is entirely likely that if such an analysis is conducted for a commodity, then disposal may appear to be a more optimal solution than recycling. Such cases only serve to highlight, however, the need to move up the hierarchy to the avoid/reduce/reuse options, thus rendering the decision whether to dispose of or recycle irrelevant.

Government procurement policy should indeed set an example by purchasing recycled materials. The dilemma for Government and the private sector alike is that this often represents an increased financial commitment. Put simply, recycled mulch, roadbase, bitumen, paper often cannot compete with the cost of producing virgin materials. The Associations have a long standing policy of supporting economic incentives through the taxation system to improve the market edge for recycled goods made from recycled materials. The Associations sought an exemption from GST for recycled materials during the passing of tax reform legislation in 2000 and the Associations maintain this policy in 2006.

Energy recovery from waste

What are the economic, environmental and social benefits and costs of recovering energy from waste?

What is hindering the greater use of recovering energy from waste in Australia?

Are there particular products or locations for which recovering energy from waste would be the most efficient approach to waste management?

The Associations do not support incineration of waste, where incineration is purely used to reduce volume and render materials inert. As stated above, the Associations do not have a clear policy supporting any type of waste technology (landfill, gas extraction, composting, energy recovery) over another, but do support the application of the waste hierarchy to all technologies (eg by maximizing separation prior to processing) and support a "triple bottom line" assessment of all processes to determine the best technology to apply.

Pricing measures

To what extent do local government pricing arrangements for waste collection lead to undesirably high levels of waste disposal?

Where unit pricing has been introduced, has this proved efficient and effective? Has it lead to a reduction in waste disposal and/or an increase in recycling?

Pricing for the provision of Waste services is, as described above, set by legislation which limits it to the reasonable cost of providing the service.

Councils have, at various times, attempted to introduce unit pricing but most of the automated weight based or volume based systems trialed have proven problematic due to security reasons once the bins are placed for collection in a public place. Many councils have compromised, with pricing structures based on bin size or "on call" services for whitegoods or garden waste.

What is the purpose of landfill levies? How should they be set?

What impacts do landfill levies have on the illegal dumping of waste?

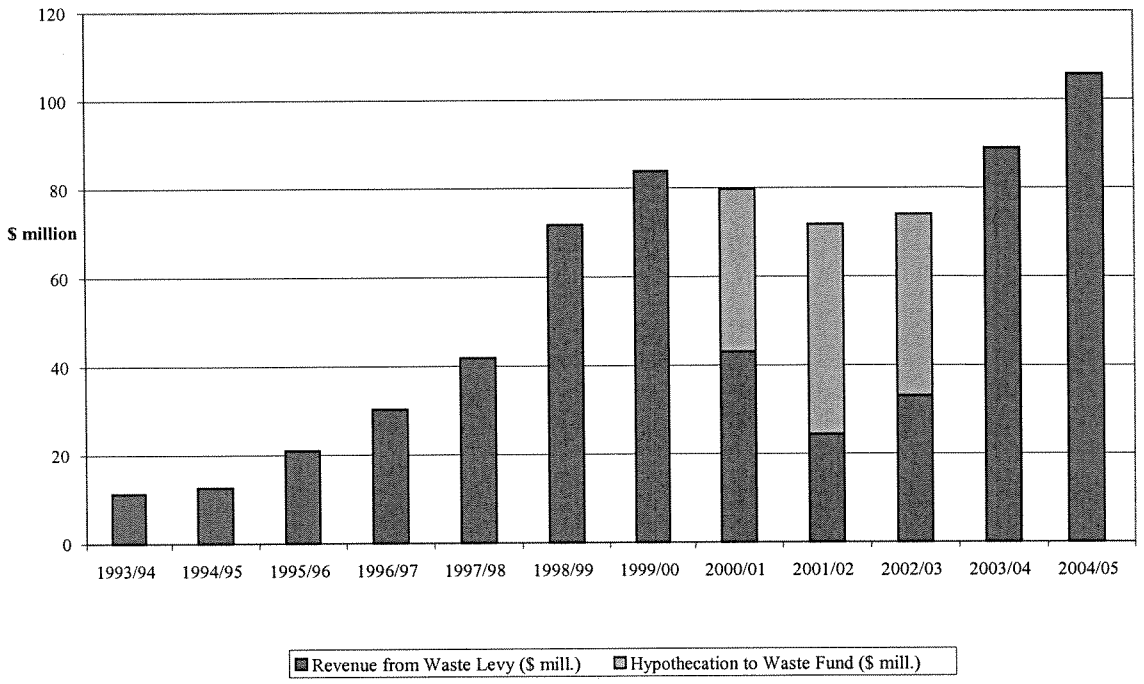
Is it appropriate to hypothecate levies to other waste management activities? Does this provide the correct level of funding for such activities?

The NSW Government has charged a waste levy per tonne of waste disposed, since the early 1990s. This levy began as a nominal charge to fund a recycling rebate scheme for local councils and encourage diversion of recyclables from the waste stream. Recycling rebates to councils ceased in 1995. Over the years, the levy has increased dramatically, and is currently $22.70 per tonne in the Sydney Metropolitan Area (SMA) and $15 per tonne in the Extended Regulatory Area (ERA). Councils historically contribute some 35-40% of the levy collected, the balance being contributed by the private waste industry.

The gross income to Treasury from this levy over the last three years 2002-2005 has been in the order of $100-108 million per year. A relatively small proportion has been returned for waste and environmental programs. Recent regulatory amendments announced as part of the NSW Government City and Country Environment Restoration Program will result in five $6 per tonne annual increases in the new Waste and Environment Levy. This will bring the waste levy to $56.70 per tonne and $52.50 per tonne in the SMA and ERA respectively. The Government estimates that the increases in the levy will raise $773 million over five years, and $397 million of this total will be spent on environmental programs, the balance ($339 million) on other government priorities.

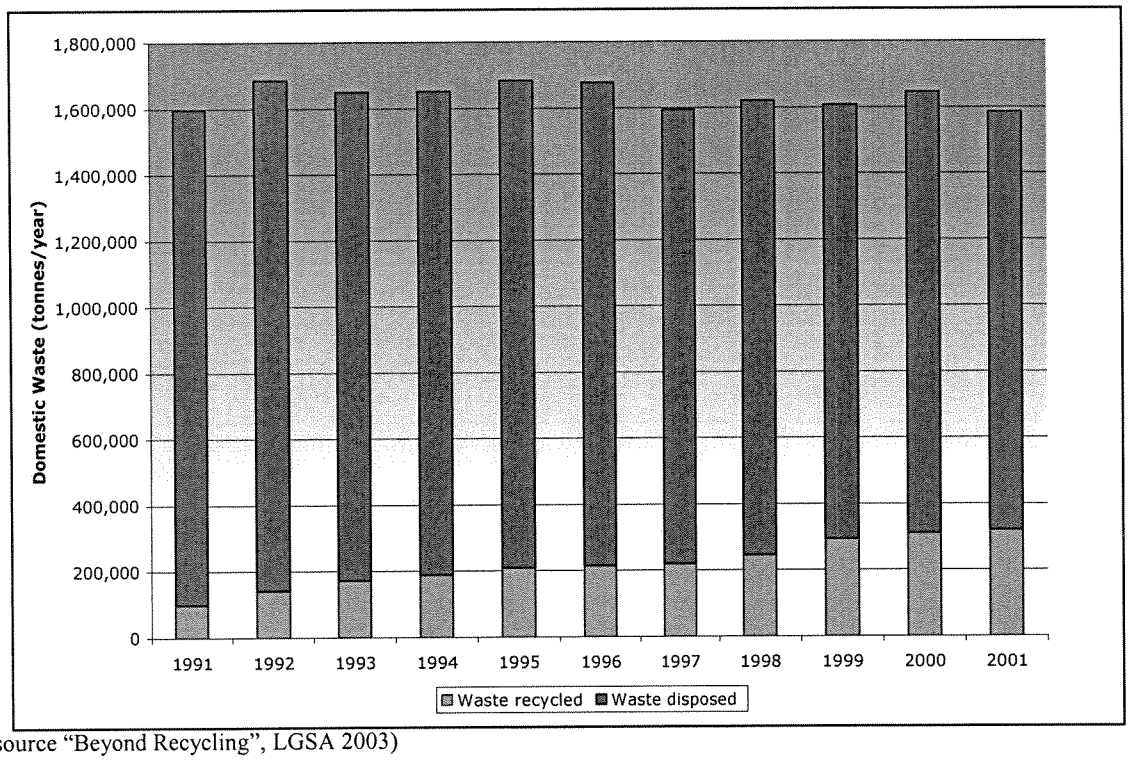
The Associations estimate that councils will contribute 35-40% of this total, ie $270-310 million. Through the newly established council rebate scheme, levy-paying councils will be eligible for reimbursement of a total of $80 million over 5 years. The net contribution of councils to Treasury will therefore be in the order of $190-230 million. While this amount will appear on council rate notices as part of the waste management charge, it is in effect raising a tax for the NSW Government

The Associations' firm policy position is that funds collected through the waste levy should be hypothecated for waste management initiatives. As the tables below demonstrate, hypothecation has not occurred in NSW, the vast majority of funds raised has gone to Treasury.



(source "Beyond Recycling", LGSA 2003)

Has this had an impact on waste reduction in the domestic waste stream? The table below suggests that it has been a fairly ineffective tool for this purpose. It is acknowledged however that in some sectors (such as construction and demolition C&D waste) it has been highly successful. This is probably because for C&D, there is a direct signal to the operator at the weighbridge, whereas for domestic waste, the signal is somewhat diffused through the rate notice system.



(source "Beyond Recycling", LGSA 2003)

Producer responsibility for waste

What are the advantages and disadvantages of extended producer responsibility and product stewardship schemes?

How effective have they been in achieving optimal levels of waste?

Which products are most amenable to these arrangements?

How should importers be treated under these schemes?

Who should bear the responsibility for the disposal of 'orphaned' products (that is those products in circulation before the scheme is introduced)?

As stated previously, the Associations are highly supportive of Extended Producer Responsibility (EPR) schemes which assign responsibility for the life cycle of a product to the manufacturer of that product. The Associations do not support the commonly accepted definition of EPR, which embraces "product stewardship" or "shared responsibility". The Associations have long held that a manufacturer or importer who voluntarily introduces a product into the marketplace for the purpose of making profit should bear the economic responsibility for managing the environmental or social impact of that product. In short, the environmental cost should be factored into he cost of the product.

The well intentioned EPR scheme in NSW has found it difficult to be truly directive towards industry, despite the inclusion of some wide ranging powers in the relevant legislation (the Waste Avoidance and Resource Recovery Act 2001). This is because the definition of EPR in that Act does not assign clear responsibility to industry, but rather, diffuses that responsibility between manufacturers, distributors, retailers, councils, recyclers and State Government

This principle of genuine EPR should apply equally to goods manufactured in Australia and imported goods, to ensure a level playing field.

Many industry sectors (notably the electronics and computer industries) maintain that they should not be burdened with the "orphan" products, however the Associations maintain that these industries are actively engaged in promoting the upgrading and replacement of existing electronic and computer appliances, and they therefore do bear some responsibility for the increasing volumes of unwanted products that are being created.

What are the advantages and disadvantages of the different regulatory options for setting up extended producer responsibility or product stewardship schemes: self regulation, co-regulation and explicit legislation?

What should be the relative roles of industry and government in the development of such arrangements?

How effective has the National Packaging Covenant (in both its initial and subsequent forms) been in promoting optimal levels of packaging wastes?

The Associations maintain that voluntary or co-regulatory systems have not proven effective, and explicit legislation and clear directive regulation, applied fairly across the industry sector, is the most effective way to achieve EPR. The National Packaging Covenant has been a clear failure because it lacked targets and it lacked clearly defined responsibilities and powers for industry and Governments. It was a recipe for confusion by design. The Associations have again declined to support the revised National Packaging Covenant because it lacks sufficient rigour and only includes moderate targets, which can easily be surpassed by other proven, more cost effective systems.

What is the most appropriate way of collecting products covered by an extended producer responsibility or product stewardship scheme?

Ultimately, once responsibility is assigned where it rightly belongs, ie with the manufacturer, this question becomes irrelevant. Faced with the responsibility to ensure a minimum return rate for their products, manufacturers will inevitably develop systems to achieve these targets, either through product

take-back at point of sale, or kerbside systems which reimburse councils for their services. Further, if the responsibility for the impacts of the product is deemed to remain with the producer throughout its life cycle, producers will by necessity develop productive uses for post-consumer goods. This in turn will create the demand "pull" to underpin the whole return system.

What is the role of levies in extended producer responsibility and product stewardship schemes? If producers are required to pay a mandatory levy, what other obligations should be placed upon them?

What is the appropriate mix of producer levies and post consumer charges (including local government rates and tipping fees)?

Local Government should be seen as a service provider to the product life cycle, and its service has a commercial value to the producer. Councils should therefore be fully reimbursed for providing the collection service at kerbside. This would make the current subsidization of kerbside recycling through council rates (estimated to be in the order of $50 per household per year or some $290 million a year nationally) unnecessary. A producer levy which would obviously be passed on to the consumer would correctly assign financial responsibility to the users of the product, thus incorporating the environmental cost into the total cost of the product.

Regulation of landfill and other waste management facilities

To what extent has greater regulation of landfill efficiently ameliorated the external costs of waste generation and disposal? Is further or better targeted regulation necessary? What costs have these regulations imposed on landfill operators?

The Associations agree that in NSW, regulation of landfills has tightened up considerably over the last 10-15 years and this has generally resulted in an acceptable standard of landfill design, operation and post closure management.

What constraints are urban planning requirements placing on the efficient disposal and recycling of waste?

How can or should waste disposal and recycling facilities be treated in an urban planning context?

The Associations do not have any strong views regarding this matter, but support the assessment of landfill and waste management facilities through the planning approval process. In NSW, unless the proposal is deemed critical infrastructure, this incorporates a process for community consultation. The Associations support the opportunity for local residents to make representations and decisions (through their local councils) on developments that may affect their amenity, or social, environmental or economic well being.

Litter

What are the main costs of littering and how substantial are they? What sort of litter is the most costly or problematic to deal with?

What are best practice examples of using enforcement and education to reduce the extent of littering?

The first part of this question has been dealt with above. In NSW there have been excellent programs to educate the community regarding litter, and there have been innovative programs for the enforcement of litter penalties. The Associations maintain, however, that the best way to prevent litter is to redefine materials from being an item of litter to being an item of value. This is why the Associations strongly support container deposit legislation (CDL): because it assigns a value to the bottle or can which prevents it being discarded.

What are the advantages and disadvantages of container deposit legislation in reducing litter and increasing recycling? What part do they play in optimising waste management outcomes?

This is a very large question, and has been the subject of intense debate and its own Inquiries. The debates for and against are well documented. The Associations strongly support CDL, as it is a proven litter abatement measure, and it also enhances the financial viability of kerbside recycling, by taking the

less profitable "net cost" items (steel, plastic, glass) out of the bin /crate, leaving the valuable commodities such as paper

Education programs

Do the benefits of community and business education programs on the creation and disposal of waste justify the costs involved? Which types of programs are more successful in this regard?

The Associations strongly support community and business waste education programs, and lament the fact that they have somewhat fallen by the wayside in terms of funding allocations, in the last 5 years. Waste education in particular has the ability to attack the creation of waste, and the adage "prevention is better than cure" is certainly true for the waste sector.

Are government programs to reduce waste cost effective for the agencies concerned? Do they provide effective signals to the wider community?

Government programs have a significant opportunity to lead by example. The question about whether they are cost effective is a complex one. In pure dollar terms, waste reduction programs cost money. If the social and environmental benefits are factored in however, the equation can become quite different. Further, the flow on effects by way of setting an example to the community, while difficult to quantify, need to be recognized.

Trade in recyclables

What effect is international trade having on the level and disposal of waste in Australia? What effect is international trade having on recycling?

What effects are international agreements (including but not limited to the Basel Convention and the GATT) having on the level and disposal of waste in Australia? What influences are such agreements having on exports and imports of recyclables?

The Associations do not have a strong view on these issues, but suggest that any claims that exported recycled goods and materials are being dealt with in an environmentally positive way need to be tested and proven. The general trend towards the collection of mixed plastics, for example, has been brought about by the opportunity to export mixed plastics to South East Asia and China. The supposed end use for these materials is for remanufacturing into new products. If, however, it emerges that these are being used as fuel or disposed of, then Australia is merely transferring its environmental damage overseas. This is not acceptable.

National coordination of policies

Are there any significant regulatory differences between the states and territories in waste management? What are the costs of these differences?

How could national coordination be further improved?

When is it appropriate to implement uniform national approaches and when is it appropriate for the jurisdictions to pursue their own agendas?

What role should the Australian government play in pursuing uniform national approaches when this is the appropriate course of action to take?

How well is the Environment Protection and Heritage Council functioning in developing waste management policies that are in the national interest? What other models for developing policy should be considered?

There are indeed significant differences between the States in terms of their attitudes and commitment to various aspects of waste policy. While national coordination and consistency is a worthwhile goal, it has in some cases, proven obstructive because of the way in which Ministerial Councils such as EPHC are required to achieve consensus, or majority agreement on policy decisions.

It has therefore fallen largely to the States to pursue innovative solutions to waste management. The Extended Producer Responsibility (EPR) Scheme in NSW is such an example, but its ambitious charter and aspirations have been held back, for some waste sectors, by the fact that national programs are in development and the NSW Minister has already endorsed NSW's involvement in those national initiatives. This slows down the process considerably.