

1 February 2011

Steve Beaman
Waste Strategy and Program Delivery
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PO Box A290
SYDNEY SOUTH NSW 1232

Dear Steve

The Australian Sustainable Business Group (ASBG) welcomes the opportunity to comment on the Review of the *NSW Waste Avoidance and Resource Recovery Strategy, Discussion Draft: Strategic Directions and Implementation Plan 2011–2015 (the Plan)*.

This submission was prepared with the assistance of ASBG's Policy Reference Group, which you met as a guest speaker in December 2010.

Should you require further information or details in relation to the submission please contact Mr Andrew Doig, National Director, Australian Sustainable Business Group on 02 9453 3348.

Yours sincerely



ANDREW DOIG
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Australian Sustainable Business Group (ASBG)

AUSTRALIAN SUSTAINABLE BUSINESS GROUP'S

Submission on

**NSW Waste Avoidance and Resource Recovery
Strategy, Discussion Draft: Strategic Directions
and Implementation Plan 2011–2015**

February 2011



Sydney, Brisbane

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EXECUTIVE SUMMARY

The Australian Sustainable Business Group (ASBG) welcomes the opportunity to comment on the Review of the *NSW Waste Avoidance and Resource Recovery Strategy, Discussion Draft: Strategic Directions and Implementation Plan 2011–2015 (the Plan)*.

Overall NSW's performance on resource recovery is middle of the range compared to other jurisdictions. This mediocre performance has come at a high price for the people of NSW, via the waste levy as NSW draws the highest level of revenue across Australia. Hence the current approach to managing wastes certainly requires review and tuning.

Accompanying the release of the Plan was the Richmond review, which ASBG supports most of its recommended enhancements. Disappointingly, and despite being commissioned by the Minister, many of these enhancements were omitted from the draft Plan. To be fair, some go beyond the scope of the plan and ASBG anticipates and welcomes their latter inclusion.

ASBG has also provided its own Waste Policy for NSW which is attached to this submission. Many of the discussions within this submission are intended to support ASBG's NSW Waste Policy as well as review and comment on the Plan.

Key points raised in this submission include:

- Need for improved consultation with business — a separate stakeholder.
- Examples are provided where red tape dumping can be reduced by further discussion with businesses.
- Support for some of the actions to assist resource recovery of commercial and industrial wastes.
- The need for more certain planning outcomes for waste infrastructure, e.g. special planning zones for landfills, Energy-from-Waste (EfW) plants and other waste infrastructure.
- The need for new landfill capacity.
- Alternative Waste Facilities (AWT) require the use of EfW facilities to be viable, if not they are not an effective solution to resource recovery.
- Support for a national one-stop-shop on standard waste data, collection, measurement and definitions.
- Issues with the waste levy including:
 - Its poor performance compared to its cost.
 - Little allocation of levy moneys back to support waste management.
 - Its negative impacts on the recycling industry and this sector's need for a support program to counter the impacts of the increasing levy.
 - Too high a levy leads to perverse environmental outcomes, which is occurring now.
 - Regional and boarder levy differences driving wastes and recyclates to long haul distances with greenhouse emissions and higher risks ignored.
 - Interstate cross boarder movement of wastes driving other jurisdictions to increase their levies to match or exceed NSW raising further economic inefficiencies in waste management.
 - Recycling industry adversely affected by the levy costs on their waste streams.
 - Support for the Richmond reviews use of rebates for recycling facilities based on performance.
 - Ensuring the liquid waste levy is capped to prevent sending such wastes interstate for treatment.
- Increased support from levy funds for waste streams in proportion to their levy revenues.

Underpinning the above is the need for improved consultation with business on the management of wastes in NSW.

KEY POINTS AND RECOMMENDATIONS

- 2 CONSULTATION..... 10
- *Good consultation will lead to a better policy outcome for NSW.*
 - *Businesses should be represented on the Richmond reviews Forum.*
 - *Business representation must be recognised as being a different stakeholder to the waste industry.*
3. COMMERCIAL AND INDUSTRIAL WASTE..... 11
- *The Plans focus on source separation and on small businesses is welcome.*
 - *Further improvements to C&I wastes can be achieved by improved consultation.*
 - *Red tape dumping is where planning, environmental regulation makes beneficial reuse unattractive compared to disposal.*
 - *Innovative approaches are recommended rather than imposing more barriers and levy increases.*
- 3.1 Managing Waste Soils 12
- *Waste soils from remediation of land are one of the largest volumes of C&I waste generated*
 - *Planning and environmental red tape promote an economic incentive to dig and dump*
 - *Innovative solutions are required: A soil reuse bank is proposed to sort soils for beneficial reuse is presented as one solution*
 - *Further research and regulatory certainty are required for such projects to commence.*
- 3.2 Industrial Ecology 14
- *Industrial ecology is not well supported.*
 - *Overseas programs have proved very effective in reducing wastes and improving the efficiencies of resource use.*
 - *NSW Government should consider the introduction of similar schemes.*
4. SECURITY OF WASTE INFRASTRUCTURE..... **Error! Bookmark not defined.**
- *The Plan has support for the development of resource recovery infrastructure which is supported.*
 - *The Plan lacks support for new landfill, EfW or other essential but less popular waste infrastructure.*
 - *Support for a DECCW and Dept of Planning assistance for waste infrastructure should be included.*
 - *AWTs should be supported by Energy-from-Waste infrastructure or they become a very expensive and inefficient means of waste management.*
 - *Nationally standardized measurement and reporting of waste data to be supported.*
- 4.1 Landfills..... **Error! Bookmark not defined.**
- *Landfills are a necessary and essential part of the waste management infrastructure.*
 - *The approved capacity of landfills servicing the greater Sydney area has an estimated 6 to 7 years capacity left, with a maximum unapproved potential of another 6 years.*
 - *There appears little time left to develop alternative waste solutions, hence planning for new landfill capacity/sites is required.*
 - *Provision of excess landfill capacity is a (health) insurance against failure of AWTs and other resource recovery options.*
 - *Excess landfill capacity can always be capped if made available and will be used over time.*
 - *ASBG considers SEPP Infrastructure s123 (1)(a) flawed and recommends it be omitted.*

4.2	Waste to Energy	Error! Bookmark not defined.
	<ul style="list-style-type: none"> • <i>Energy-from-waste (EfW) methods are used extensively in Europe, China and North America.</i> • <i>China is importing a number of high energy waste streams for energy recovery (e.g. tyres) from Australia as the economics justifies this.</i> • <i>AWTs and other recycling systems future require EfW infrastructure to operate effectively.</i> • <i>Linked with the siting of landfills EfW plants should also be assisted in their siting.</i> 	
4.3	AWTs	Error! Bookmark not defined.
	<ul style="list-style-type: none"> • <i>AWTs are strongly supported by the Government as the main type of resource recovery infrastructure to reduce waste to landfill.</i> • <i>Performance of AWTs has been poor with many falling below 55% recovery.</i> • <i>Without a means to manage their waste streams such as EfWs, they become expensive sufferers of waste material with poor performance outputs.</i> • <i>If they continue to fail economically and in performance, their adoption must be questioned.</i> • <i>AWTs should not be given special dispensation on management of floc compared to other waste management processes.</i> • <i>New landfills should not require its wastes to be first processed by an AWT before disposal unless economics, without subsidies and penalties supports this.</i> 	
4.4	Measurement	20
	<ul style="list-style-type: none"> • <i>Waste data is inconsistently collected across Australia and internally within jurisdictions.</i> • <i>Costs associated with inconsistent and repetitive and duplicative reporting has been estimated at \$5.7m per annum.</i> • <i>ASBG recommends a national one-stop-shop on standard waste definitions, measurement, collection, compilation and reporting, which provides a national waste data base.</i> 	
4.5	C&I Waste Education	20
	<ul style="list-style-type: none"> • <i>ASBG has a long history in delivering waste educational courses focusing on classification and exemption processes and hazardous waste management.</i> • <i>ASBG looks forward to assisting the NSW Government in supplying educational and technical assistance to improve waste management.</i> 	
5.	WASTE LEVY DERIVED ISSUES	22
	<ul style="list-style-type: none"> • <i>The waste levy has proven a moderately effective, but blunt instrument to drive resource recovery, which comes at a very high cost to the people of NSW compared with other states.</i> • <i>ASBG supports the Richmond report that an economic assessment of the levy is required.</i> • <i>Issues of the impact of the levy and some solutions to these problems are discussed.</i> 	
5.1	History of the Waste Levy	22
	<ul style="list-style-type: none"> • <i>The history of the levy is one based on funding a Government agency to assist Local Government and the waste industry manages NSW's wastes effectively.</i> • <i>It moved from an assistance program to one of regulation in the 1990s.</i> • <i>Later it moved to a program of raising revenue for other environmental programs and other internal revenue, with little allocated to waste management.</i> 	
5.2	Overview and Purpose	23
	<ul style="list-style-type: none"> • <i>The main official purpose of the levy is to drive resource efficiency, though this is achieved in a blunt and inefficient manner.</i> 	

- NSW's budget for the levy is in part driven by the allocation of grant moneys available.
- In 1996 the levy was justified on external costs with 50% representing methane and greenhouse emissions. When the CPRS comes into effect landfill will be in effect paying a double greenhouse tax.

5.3 Future Levy Prices and Revenues **Error! Bookmark not defined.**

- The waste levy is legislated to increase considerably until 2015-16.
- NSW's 2010–11 budget has already spent most of its projected income from the levy until 2014.
- ASBG estimates the NSW budget over estimates the fall in revenue from the levy from 2014 onwards, and predicts that a \$120m p.a. surplus will be available at this time.
- NSW will continue to have the highest priced waste management program in Australia detracting from business profitability and future investments.
- The levy has a detrimental impact on many waste recycling facilities which requires rectification to avoid perverse environmental outcomes and economic harm to the industry.

5.4 How well has it Performed? **Error! Bookmark not defined.**

- NSW's performances on resource recovery are of middle range.
- Despite NSW having the most expensive levy program, other jurisdictions perform better even when no levy is present.
- Other incentive and specialist waste agencies provide some of the best result at a much lower cost to the tax (levy) payer.
- NSW needs to consider supporting the waste sector by similar actions and not rely so heavily on the blunt instrument of the levy.

5.5 Levy has an Upper Limit **Error! Bookmark not defined.**

- All recycling processes have their uses determined by market prices and their processes be recognised as to their function and role in waste management infrastructure.
- The waste levy can skew the economics to favour recycling to a limit.
- The waste levy if set too high can result in environmental harm, but driving recycling beyond its environmental benefits. (Zero waste to landfill polices are idealistic and run counter to the second law of thermodynamics.)
- Recycling has its limits where it is better for the environment to landfill certain highly contaminated waste streams.
- Innovative recycling systems are not well supported in NSW, but should be.

5.6 Impact on Recycling 30

- Recycling is poorly supported by NSW Government Policies and programs.
- The waste levy is a blunt tool and results in perverse environmental outcomes (economic transporting) which is exacerbating as the levy increases.
- The levy's outcome of diverting more waste away from landfill does little to assist NSW recycling facilities who must compete on price for input and output.
- Given the levy distorts recycling markets, an economic study on recycling is required to assess appropriate support provisions to counter the effects of the levy.
- ASBG recommends that a NSW recycling facility support scheme be implemented to counter the negative economic impacts of the increasing waste levy.

5.7 Liquid Waste Levy issues 34

- The Liquid Waste Levy (LWL) is fundamentally different to the waste levy in that it applies to a treatment process and not a disposal or emissions activity.

- *The LWL should remain capped at its 2011–12 rate to avoid the environmentally perverse outcomes of transporting of liquid wastes interstate.*
- *The \$2m p.a. grant program promised with the LWL should be introduced.*

5.8 Interstate Boarder Regional Boundary Issues 35

- *Differences between levy rates within NSW regions will be exploited to minimise costs even against levy operational rules.*
- *Avoidance of such exploitation requires substantial policing.*
- *Waste disposal and recycling are in part being directed outside their regional of generation via the increasing introduction of levies.*
- *Differences between State levies rate will also be exploited to minimise costs*
- *States are increasing levies to counter other states levies and diversion of wastes across boarders.*
- *Boarder control of waste transport is complexed by the Constitution’s guarantee of free trade between states.*
- *Coordination of waste levies should be arranged between state jurisdictions to minimise perverse market distortions and avoid a potential constitutional challenge on levies as excise taxes.*

6. SUPPORT FOR BUSINESS IN WASTE MANAGEMENT

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- *Financial support for C&I and C&D wastes have been tiny over many years.*
- *NSW is falling behind on other states in funding innovative waste solutions.*
- *A portion of the levy should be allocated to waste management activities.*
- *Allocation of funding should be in proportion to the waste types contribution to levy revenue including: C&I, C&D, municipal, coal washery and liquid wastes.*
- *Hazardous (liquid) wastes to attract at least the prior promised \$2m per annum fund to reduce such wastes.*

1 INTRODUCTION

The Australian Sustainable Business Group (ASBG) welcomes the opportunity to comment on the Review of the *NSW Waste Avoidance and Resource Recovery Strategy, Discussion Draft: Strategic Directions and Implementation Plan 2011–2015 (the Plan)*.

ASBG is a leading environment and energy business representative body that specialises in providing the latest information, including changes to environmental legislation, regulations and policy that may impact industry, business and other organisations. We operate in NSW and Queensland and have over 150 members comprising of Australia's largest manufacturing companies. ASBG provides a view on the Plan from a broad business perspective, largely representing generators of wastes and users of waste management infrastructure.

To clarify ASBG's position on waste our 2011 Waste Policy for NSW is attached.

ASBG has reviewed both the Plan and the supporting document *Review of Waste Strategy and Policy in NSW 2010* Chaired by David Richmond, to offer recommendations and improvements to the current draft Plan. ASBG is in general support for most of the Richmond Review's recommendations. This submission provides further clarification on issues with NSW's management of wastes.

In overview the Plan only goes part way in addressing the fine tuning of waste management in NSW, but there are many issues which are omitted. These include specific Richmond Review 'Enhancements' and other issues raised by ASBG in this submission and summarised in ASBG's Waste Strategy. If implemented, such recommendations will result in substantial improvements in the economics of waste management, enhanced resource efficiency and resulting lowering of waste volumes to landfill.

ASBG also considers the Plan and the Richmond review are focused on solid wastes. Other waste types such as liquid wastes, including grease trap wastes were left out of the undefined scope of the Plan and as such are not considered.

Areas in which ASBG considers requires addition or expansion include:

- Consultation with business and industry
- Commercial and Industrial Waste
- Security of future waste infrastructure
- Management of the waste levy
- Support for businesses in waste management

In brief the Plan has two focus areas on popular waste issues covering littering and problem wastes, which as part of the total mass of the wastes recycled, collected and disposed of are of tiny proportions. Many of the large volume waste issues are inadequately addressed, some of which require urgent attention.

2 CONSULTATION

The points of this section are:

- *Good consultation will lead to a better policy outcome for NSW.*
- *Businesses should be represented on the Richmond reviews Forum.*
- *Business representation must be recognised as being a different stakeholder to the waste industry.*

The Plan appears to have taken a selective set of the Richmond Review recommendations based on DECCW's positions. Nevertheless, the set of members engaged to be part of the Richmond Review and those who developed the Plan did not include a representative from business, and four out of the six members were public servants from government agencies or corporations. Nevertheless, ASBG agrees with many of the outcomes of the Richmond Review, but considers business representation would have enhanced its report.

ASBG is concerned that no consultation or representation of businesses were involved in the development of the Plan. The Plan appears to be DECCW's own eclectic selection of issues which is appears based on its own business as usual with a few refinements. No mention occurs in the Plan of changes to the waste levy, how is to be implemented nor how and how much grant monies to waste management will be allocated. This omission supports the current Government's position that there is nothing wrong with the waste levy. Unfortunately, there are plenty of issues with it and it does require further investigation and fine tuning, but this is discussed later in this submission.

The deadline of 2 February for public comments on the Plan is the only opportunity for public consultation on this very important topic of waste.

Overall the management of wastes in NSW could do much better with a formal and ongoing input from businesses.

ASBG's position is supported by the *Richmond Review's Enhancement 19 Waste and Sustainability Industry Forum*. Clarification is required in relation to industry stakeholder representation. There is a distinct difference between a business perspective — largely representing waste generators— and a waste industry perspective. As a consequence, both areas should be represented on any such forum.

3. COMMERCIAL AND INDUSTRIAL WASTE

The points of this section are:

- *The Plans focus on source separation and on small businesses is welcome.*
- *Further improvements to C&I wastes can be achieved by improved consultation.*
- *Red tape dumping is where planning, environmental regulation makes beneficial reuse unattractive compared to disposal.*
- *Innovative approaches are recommended rather than imposing more barriers and levy increases.*

The Plan focuses on small scale source separation of commercial and industrial wastes (C&I). This is supported and has merit. Omissions in the Plan include economic and market analysis of C&I wastes and existing regulatory barriers, which increase waste disposal volumes. Environmental agencies across Australia appear to lack knowledge of the market place and how businesses operate and require assistance from the business sector. There are numerous cases where the NSW regulatory regime encourages waste generation and disposal. There are many cases where it is cheaper, easier and more certain to remove and dispose of waste, including paying the levy, than to seek government approvals to be more resource efficient.

Red tape from the planning approval, environment protection licence approval and operation, council delays, product liability issues, safety issues and over lack of legal certainty means that, while expensive landfill disposal is at least reliable.

Overall a lack of consultation with business has prevented NSW from removing red tape barriers which increase waste to landfill. Innovative regulatory and waste management approaches can achieve far greater resource recovery outcomes than achieved by blunt instruments like the waste levy alone. ASBG fears a bureaucratic approach, where loopholes are closed and beneficial waste management practices are forced through an even more complex red tape regulatory maze. A far better outcome is to cut the red tape and provide and permit innovative pathways which make it easier to beneficially reuse waste rather than to dump it.

Example: large excavations in the building industry – Red Tape Dumping.

Construction of large buildings commonly requires large amounts of excavated materials to be dealt with. If the excavation is over 30,000 tonnes this will trigger the need for an Environmental Protection Licence under Schedule 1 Excavation Activities, which states:

19 Extractive activities

(1) This clause applies to the following activities: "land-based extractive activity", meaning the extraction, processing or storage of extractive materials, either for sale or re-use, by means of excavation, blasting, tunnelling, quarrying or other such land-based methods.

A problem with this clause is that it does not cover disposal off-site. Hence some property developers and construction companies do consider landfilling of the excavated materials as a potential economic option. On a project worth hundreds of millions of dollars, the approximate 8 week delay and the cost of gaining and running an Environmental Protection Licence is considered higher than the disposal costs, especially in the lower or no waste levy areas. Even at \$150/t disposal costs, \$4.5 m for 30,000 t (\$565,000 per week) can make it worthwhile. Add to this the \$100,000 per annum¹ to manage the EPL and its costs of increased liability, the dig and dump option can be economically viable.

¹ Quoted to ASBG by a construction company to outsource EPL management to a consultancy. A common approach for many building companies.

In addition, there are also the costs of complying with the Waste Exemption/s and finding a site to take the excavated materials to. Note in most infrastructure projects soil reuse would be required under the contract, but this not so for many building development projects.

Correcting this issue will require careful consideration as the schedule 1 clause is made for mining and quarrying. Any change considered for this section would need to consider the effects in the mining industry.

There are many other examples of where regulatory cost in terms of direct, time, liability and business certainty work against the more efficient waste management practices available. Other red tape impeding effective resource use includes:

- Planning laws and regulations — Planning regulation in which recycling and waste minimisation issues are ruled out due to time cost considerations. Though making resource recovery process a slower process, generates alternative options to be considered (this does not mean that such projects should be forced through even more red tape to ensure resource re-use is considered. A more cost and time efficient means is required).
- Environmental legislation and regulation — similar to planning laws, a more efficient lower red tape approach is required.
- Product liability — for example, refillable bottles has been made too legally risky due to product liability laws (Think of glass in beverage containers)
- Health and Safety — security seals and additional packaging to maintain safe storage and handling

Improved consultation with the business sector will provide increased identification of such red tape to landfill issues. Once identified appropriate conciliatory means to correcting such issues can be considered for action.

ASBG supports the Richmond Review in the above issues, which include its Enhancements :

- 17 – Innovation and investment
- 20 – Waste Infrastructure Strategy

3.1 Managing Waste Soils

The points of this section are:

- *Waste soils from remediation of land are one of the largest volumes of C&I waste generated*
- *Planning and environmental red tape promote an economic incentive to dig and dump*
- *Innovative solutions are required: A soil reuse bank is proposed to sort soils for beneficial reuse is presented as one solution*
- *Further research and regulatory certainty are required for such projects to commence.*

Included in DECCW's Disposal Based Survey of the Commercial and Industrial Waste Streams in Sydney is table 1 showing the breakdown of C&I waste streams overall.

Table 1 2 – Breakdown of C&I waste stream overall (garbage bag contents distributed)

Consolidated material composition categories	2007–08 Total	
	Tonnes	(%)
Hazardous/special (mainly contaminated soil)*	309,579	13.9%
Food	303,855	13.6%
Plastic	293,925	13.2%
Wood	288,366	13.0%
Paper	177,501	8.0%
Construction/demolition material	170,834	7.7%
Other	146,351	6.6%
Residues	135,858	6.1%
Cardboard	126,367	5.7%
Textile	87,746	3.9%
Vegetation	75,752	3.4%
Glass	40,074	1.8%
Metal	33,220	1.5%
Rubber	21,774	1.0%
Electrical/electronic equipment	12,653	0.6%
Total	2,223,856	100%

ASBG estimates that approximately 280,000 tonnes of mildly² contaminated soils are sent to landfill from contaminated site remediation projects. This issue was not addressed in the Plan nor in the Richmond Review document.

Planning and environmental legislation work in tandem to promote a strong economic incentive to dig and dump for contaminated land remediation. ASBG wishes to avoid increasing the red tape approach of *‘just make it more expensive to dump and that will force the remediation industry to treat on site’*. A far better approach is to support/provide another service which by-passes the site by site planning and environmental red tape required for on-site treatment. Landfills are attractive because they do this. An approved soil reuse bank can do this as well.

One method is to encourage the formation of a soil reuse bank, where various soils, VENM to contaminated soils can be taken for classification and re-used where appropriate. Blending with asphalt³ or portland cement and used in appropriate areas of the built environment is a common practice overseas. It is envisaged that soil reuse bank facilities can be sited on existing landfill sites, which have the infrastructure to manage such soils and are already restricted by the Waste Guidelines on what they can accept. Soils which can be reused can have its waste levy rebated and this can be shared⁴ between the soil reuse bank and the acceptance site.

To develop the soil reuse bank idea the Government needs to outline its own regulatory requirements for such a facility to be an economic viable development. Far more than mere planning requirements are needed. A number of other criteria and standards are required including:

- Environmental criteria — for the blended products produced from the soil reuse bank is required, which may include asphalt, concrete (from Portland cement) and other uses. The Waste Exemption framework is the legal basis for such criteria, but many will require research.
- Quality criteria — the consumer needs to be reassured the new product made in part from waste meets its performance requirements. Many examples of poor performance of blended waste materials has undermined the future of good resource recovery projects.

² Soils that meet the landfill acceptance criteria under the NSW Waste Classification Guidelines.

³ See AEBN NSW’s [Blending of Various Waste Resources into Asphalt](#)

⁴ There are numerous examples where the levy rebate is shared between reuse partners, especially using the exemption processes.

- Planning and siting criteria — Landfills follow the landfill Guidelines, but little guidance for alternative soil recycling exists.

Funding for such research should be easily justified as contaminated soils provide over \$20m in levy payment each year. A 10% funding program of around \$2m p.a. would deliver substantial results in the reuse of soils.

Again ASBG supports the Richmond reviews Enhancement 14 – Exemptions expert panel or peer review, comprising of an independent panel similar in nature to that of the Load based Licensing Technical Review Panel.

3.2 Industrial Ecology

The points of this section are:

- *Industrial ecology is not well supported.*
- *Overseas programs have proved very effective in reducing wastes and improving the efficiencies of resource use.*
- *NSW Government should consider the introduction of similar schemes.*

The Plan covers C&I wastes in a number of ways, but these tend to focus on small businesses. Much work has already been undertaken by companies to pursue industrial ecology strategies. Apart from some support from the Sustainable Advantage program, internal issues within DECCW have resulted in lengthy and complex processes to obtain approval for innovative reuse of wastes. The regulatory conditions and cautious approach from DECCW add to the delays and uncertainty in pursuing effective waste exchange programs being implemented.

What is required are programs and forums which cut through the red tape and encourage and permit businesses to identify innovative means to reuse wastes and improve efficiency.

An example of which is the [National Industrial Symbiosis Program](#) is funded by the United Kingdom Government is program which:

- Engages traditionally separate industries in network to foster innovative strategies for more sustainable resource use
 - not just material flows: also energy, water, logistics, assets, experts, knowledge transfer
- Business opportunities identified for mutually profitable transactions for:
 - innovative sourcing of required inputs and
 - value added destinations for non-product outputs
 - exposure to best practice/knowledge transfer

4. SECURITY OF WASTE INFRASTRUCTURE

The points of this section are:

- *The Plan has support for the development of resource recovery infrastructure which is supported.*
- *The Plan lacks support for new landfill, EfW or other essential but less popular waste infrastructure.*
- *Support for a DECCW and Dept of Planning assistance for waste infrastructure should be included.*
- *AWTs should be supported by Energy-from-Waste infrastructure or they become a very expensive and inefficient means of waste management.*
- *Nationally standardized measurement and reporting of waste data to be supported.*

ASBG commends the Plan's approach to facilitating investment in waste infrastructure and supports the drive to support more recycling facilities. Nevertheless, ASBG is concerned that the Plan misses the most important issue in this focus area. No proper analysis has been made on landfill capacities and future requirement.

NSW's waste infrastructure has been largely left to market forces, with the NSW Government using regulatory mechanisms to manage waste within the state. There is concern that without government intervention, especially at the planning level, a shortage of waste management infrastructure could result.

Centre to the difficulties in provision of the proper and cost effective management of waste is difficulties in siting new facilities. Unfashionable, but necessary developments such as landfills, recycling facilities and especially hazardous waste and waste to energy facilities attracts considerable local and at times ideologically opposition. A result of such planning conflict is reflected in the location of the Woodlawn landfill which is now Sydney's main depository for municipal waste, even though it is located east of Lake George some 230 kilometers from Sydney.

Double standards appear to apply to the generation of waste – which should be minimised through efficiency and other measures—compared to the management of wastes after generation including:

- Where long transport distances are a consequence of planning and siting issues
- Promotion of separation processes at the end of pipe rather than at source. Also the promotion of intermediate processes such as AWTs and MRFs to which shifts separation from source, especially domestic and C&I downstream resulting in increased contamination levels.
- Alternative management practices such as energy-from-waste and others have ideologically opposition, which tends to make Government shy away from such necessary development
- Imposition of the levy with proportional tiny support funding is a punitive and inefficient approach to waste management.
- Other regulatory mechanisms, such as the planning system and environmental red tape encourage, via economic analysis, the generation of large quantities of waste. (e.g. contaminated soil generation, product liability and safety requirements, environment protection licence requirements.)

ASBG has considered various areas for waste infrastructure needs including landfills, Alternative Waste Technologies (AWTs), Waste to Energy and Measurement.

ASBG under this section supports the Richmond Review's:

Enhancement 17 – Innovations and investment

Enhancement 20 – Waste Infrastructure Strategy especially to:

Encourage development of waste management and recycling infrastructure through development of a whole-of-government Waste Infrastructure Strategy (led by DECCW in consultation with DoP) and by providing waste infrastructure and services procurement guidance and support to councils.

Enhancement 21 – Land-use planning

Enhancement 22 – New entrants to the infrastructure market

4.1 Landfills

The points of this section are:

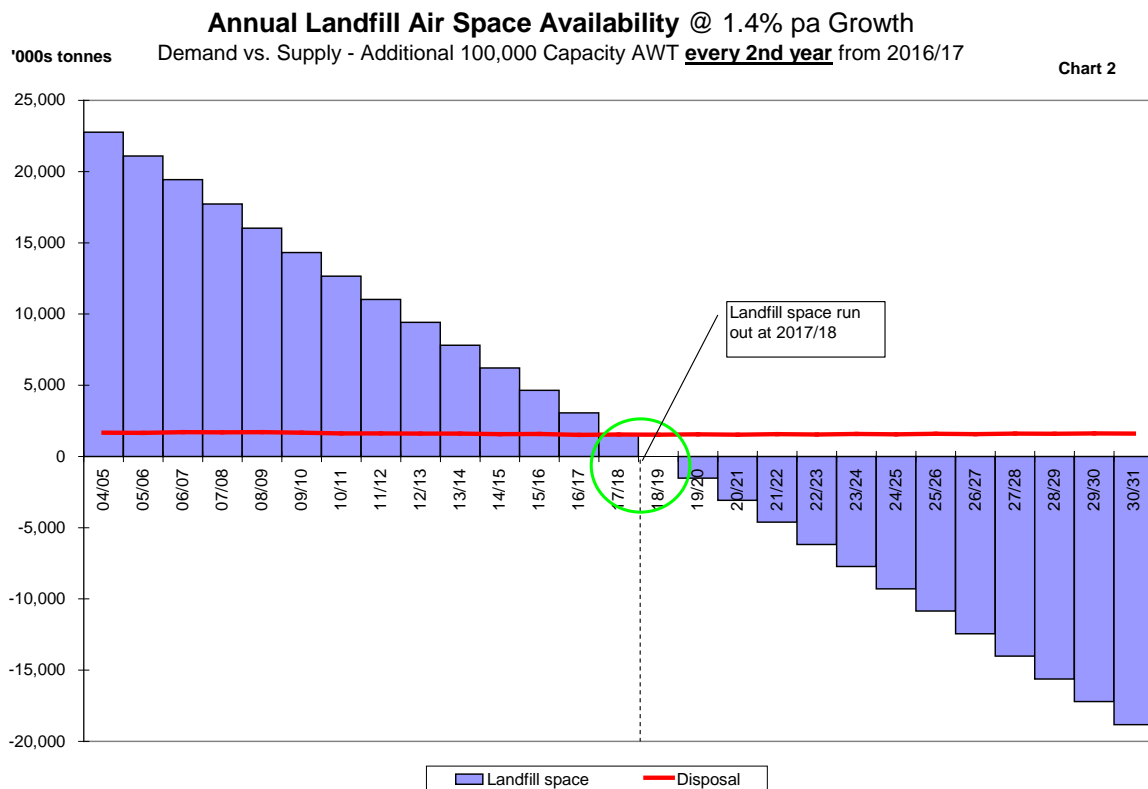
- *Landfills are a necessary and essential part of the waste management infrastructure.*
- *The approved capacity of landfills servicing the greater Sydney area has an estimated 6 to 7 years capacity left, with a maximum unapproved potential of another 6 years.*
- *There appears little time left to develop alternative waste solutions, hence planning for new landfill capacity/sites is required.*
- *Provision of excess landfill capacity is a (health) insurance against failure of AWTs and other resource recovery options.*
- *Excess landfill capacity can always be capped if made available and will be used over time.*
- *ASBG considers SEPP Infrastructure s123 (1)(a) flawed and recommends it be omitted.*

Landfills are a necessary and essential part of waste management infrastructure and they have no viable replacement. ASBG agrees that currently too much waste is going to landfill and diversion rates can be increased. Whatever post waste stream management (e.g. recycling or AWT technologies) are provided these will also generate a waste stream and require the need for landfilling of such residues.

Analysis of landfill capacities for Sydney's municipal wastes is expected to run out by 2017-18, based on current approved acceptance levels. This outcome is reached even if one AWT, with a capacity of 100,000 tpa, is installed every 2 years. Graph 1 shows the current Annual Landfill Air Space Availability plus the impact of new AWTs.

Note that if Woodlawn receives planning permission to accept larger quantities of waste above their current approved rate it can add another 5 to 6 years to capacity. While this takes some time pressure on the need for a new landfill, it also means that it will be the only landfill in operation for its last 4 years.

Chart 1 – Sydney Landfill Capacity Over Time⁵



Given that a new landfill will require at least 5 years if not 10 to site and gain planning approval there is little time available. If the use of AWTs fail, as they continue to do, there will be less time to secure new landfill capacity to meet Sydney regions needs. As a consequence, there is an urgent need to site new landfill sites especially around the greater Sydney region.

Even if the landfill space is not required, having spare landfill capacity is an insurance against inadequate waste management capacity. The old adage is that supply is essential, then we can argue price. Supply of landfill space can then controlled either or both by price and quotas can be then negotiated and set. So Sydney can still run a restricted waste to landfill policy, but at least have emergency capacity to deal with failure of various other waste policies.

Use of special planning zones is urgently required to permit new landfill development and improve better resource recovery, preferably close to the main points of waste generation. There is no doubt this will be a challenging exercise, but landfills are a necessary, but unfashionable development. Better planning can also encourage the development of zones and improved resource recovery by new facilities and a network of waste exchange for complementary industries.

In addition, there is an immediate legal issue. The recent change to Clause 123 (1)(a) of the Infrastructure SEPP places yet more responsibility on recovery at the landfill disposal end. Quote:

- (a) *whether there is a suitable level of recovery of waste, such as by using alternative waste treatment or the composting of food and garden waste, so that the amount of waste is minimised before it is placed in the landfill.*

ASBG considers this as a flawed Government promotion of AWTs despite its poor performance. It also imposes end of pipe treatment on waste going to new landfills. No economic or environmental assessment or justification appears to support this approach. Upstream programs would achieve far

⁵ Graph provided by Warwick Giblin at ASBG’s NSW’s Waste Laws: Seminar – 3 December 2010.

better results in provision of value for waste services provided to the people of NSW than regulating inefficient and poorly performing pre-separation systems on landfill directed wastes.

4.2 Waste to Energy

The points of this section are:

- *Energy-from-waste (EfW) methods are used extensively in Europe, China and North America.*
- *China is importing a number of high energy waste streams for energy recovery (e.g. tyres) from Australia as the economics justifies this.*
- *AWTs and other recycling systems future require EfW infrastructure to operate effectively.*
- *Linked with the siting of landfills EfW plants should also be assisted in their siting.*

Many developed countries widely use energy-from-waste (EfW) methods to deal with certain waste streams, which are currently landfilled in NSW. During the 2001-2007 period, the EfW capacity increased by about four million metric tons per annum. Japan and [China](#) built several plants that were based on direct smelting or on fluid bed combustion of solid waste. In [China](#) there are about 50 EfW plants. Japan is the largest user in thermal treatment of MSW in the world with 40 million tons.⁶

A major difference between AWTs in NSW and in Europe is the supplies of waste to energy plants are abundant in Europe. However, there is an ideological opposition to incineration in Australia. This position is not justified on environmental or efficiency grounds, considering the very strict conditions imposed on modern waste to energy systems in Europe.

Waste to energy facilities need to be included to the list of waste infrastructure to be considered to cater for future waste management infrastructure.

There are many high energy waste streams produced from recycling facilities which could benefit from a NSW EfW facility.

Many waste types are being shipped to Victoria to use the cement kilns. In addition China and other countries are importing high energy wastes from Australia for use in their processes. Tyres are a recent new market where China can easily accept all of Australia's waste tyre production. Export of waste materials is somewhat controlled under the Federal Hazardous Wastes (Imports Exports) Act, but this covers the Basel convention wastes considering the end use of the wastes in other countries. It does not consider the environmental and local market and regulatory issues driving the export of wastes. It also does not consider the greenhouse emission differences between local and exported waste management.

Overall, waste-to-energy facilities do require being part of the mix of waste facilities to ensure NSW runs an efficient waste management program.

ASBG supports the Richmond review *Enhancement 15 Energy from waste*. The Plan does take up the establishment of a draft public policy on EfW. Will a draft public policy be enough to drive the siting and operation of an effective EfW plant? ASBG considers more is required.

⁶ Extracted from [Wikipedia](#)

4.3 AWTs

The points of this section are:

- *AWTs are strongly supported by the Government as the main type of resource recovery infrastructure to reduce waste to landfill.*
- *Performance of AWTs has been poor with many falling below 55% recovery.*
- *Without a means to manage their waste streams such as EfWs, they become expensive sufferers of waste material with poor performance outputs.*
- *If they continue to fail economically and in performance, their adoption must be questioned.*
- *AWTs should not be given special dispensation on management of floc compared to other waste management processes.*
- *New landfills should not require its wastes to be first processed by an AWT before disposal unless economics, without subsidies and penalties supports this.*

Alternative Waste Technologies (AWTs) are supported by the NSW Government as the savior of waste management, especially diversion of waste from landfills. (see p13 on the Infrastructure SEPP). In practice all the AWTs have performed poorly. The problem is not necessarily the technology, but the nature of waste and the politics which serve AWTs. AWTs are estimated to require gate fees of \$180/t to \$230/t to be economically viable. Even with the waste levy set as high as \$135/t⁷ many AWTs may still not be viable.

The reasons for this are in part the levy and the nature of waste. AWTs rarely achieve their design resource recovery levels of around 70%. Most operate around 50% to 60% recovery, with the bulk of this being moisture reduction rather than resource recovery. Waste is a very heterogeneous material, constantly varying. Designing any process with a highly variable input will result in poor performance. This is indeed what happens. AWTs drop quickly to a 50% diversion rate or worse.

Poor recovery results in 50% of input having to go as waste to landfill, resulting in the inputs paying 50% of the levy. There is a diminishing level of return where the higher the levy the more recoverable are removed from the waste stream before it goes to the AWT. Hence less valuable recoverable materials are available for the AWT. So as better upstream resource recovery programs develop the quality and quantities of recoverable in the remaining waste stream will diminish.

As discussed in Europe the use of waste to energy facilities greatly assists the material flows of the AWTs. Without waste to energy, the use of AWTs is limited, inefficient and can have questionable environmental outcomes.

With almost all AWTs having difficulties, what is the point to pursuing this policy position? Without the addition of a EfW to support AWTs, enormous amounts of floc will be generated and will largely have to be landfilled.

The question is why should the NSW public pay for a service which is already inefficient and expensive? ASBG in section 5.4 makes the point that some wastes are better off environmentally going to landfill. Forcing wastes to go through an AWT first, as being required under the Infrastructure SEPP, is flawed. Imagine trying to put Brisbane's flood damaged wastes through an AWT first, before being landfilled. It would be very costly with little to show for the effort.

4.4 Measurement

The points of this section are:

⁷ Waste levy is predicted to hit this level in 2015 by ASBG.

- *Waste data is inconsistently collected across Australia and internally within jurisdictions.*
- *Costs associated with inconsistent and repetitive and duplicative reporting has been estimated at \$5.7m per annum.*
- *ASBG recommends a national one-stop-shop on standard waste definitions, measurement, collection, compilation and reporting, which provides a national waste data base.*

No consistent national waste measurement or collection system is in effect across Australia. This contrasts to the [US EPA's](#) long established waste data collection system and reports. Each jurisdiction, has if at all, established its own waste data measurement systems, varying in types, definitions and analytical approach. Both the 2006 [Productivity Commission's report on waste](#) and the 2008 [Senate Inquiry into the Management of Australia's Waste](#) Streams report raised concerns and made recommendations about the need to improve information about waste and resource recovery. Attempts in the past to standardize waste measurement methods failed due to lack of agreement between jurisdictions. At least the National Waste Policy program has included tackling this issue. For example the Plan refers to recovery rates, but there appears no formal means in which these are measured.

Standardisation of waste environmental reporting has been cited by the Waste Management Association of Australia (WMAA). Current costs of the participation in the current fragmented and duplicative arrangements run at almost \$9 million per year. A more coordinated national approach may be able to reduce the cost to \$5.7 million per year to these stakeholders, or a saving of 35 per cent.

What is required is an agreed set of national standards covering:

- Definitions of wastes and waste types
- Measurement methods and methodologies for various waste streams
- Standard data collection and compilation methods
- A one-stop-shop on waste data environmental reporting across all jurisdictions.
- A national database on waste data developed with appropriate access

Again this is similarly supported by the Richmond review. The Plan omits any direct reference to effective waste data at the national level. It does focus on collection of data for waste infrastructure management.

4.5 C&I Waste Education

The points of this section are:

- *ASBG has a long history in delivering waste educational courses focusing on classification and exemption processes and hazardous waste management.*
- *ASBG looks forward to assisting the NSW Government in supplying educational and technical assistance to improve waste management.*

ASBG has been a long term educator in the management of waste. It works closely with DECCW's waste policy section, largely concentrating on training and topical issue discussion on waste classification and resource recovery.

ASBG looks forward to continued support from the NSW Government in the continuation of training, education and discussion on NSW waste management issues.

5. WASTE LEVY DERIVED ISSUES

The points of this section are:

- *The waste levy has proven a moderately effective, but blunt instrument to drive resource recovery, which comes at a very high cost to the people of NSW compared with other states.*
- *ASBG supports the Richmond report that an economic assessment of the levy is required.*
- *Issues of the impact of the levy and some solutions to these problems are discussed.*

In NSW waste management is a complex and highly regulated affair. Use of the waste levy to drive increased waste diversions away from landfill to reuse and recycling has been, in part, effective. But the levy has been a blunt tool and a number of perverse environmental and economic outcomes are being generated. It also generated a poor value for money waste service for the people of NSW.

ASBG agrees with the Richmond Review's statement:

There needs to be an analysis involving an economic assessment of the levy, and the likely market responses along the current levy trajectory, to show us where the levy settings need to be. There is also a need for a retrospective analysis of the actual market responses to past levy settings to show where the market failures are – places where analysis indicates that the levy should have been sufficient but the market has not responded. A specific analysis needs to be done for each waste stream, and, potentially, each significant waste type.

Lack of market response to the levy is considered due to a lack of specific waste management initiatives that have been used in other states, which have achieved similar and even better resource recovery outcomes even when no levy exists. This issue is further explored in s5.4 the Levy's performance.

Very much lacking in the Plan and the NSW Government prior actions was any economic assessments of the impacts of the levy. Essentially, ASBG considers the waste levy requires to be tuned to deliver better outcomes for waste management in NSW. However, the Plan fails to include any of these points.

Rebates for recycling is also promoted in the Richmond Review, although differential levy rates were opposed by DECCW. However, DECCW's arguments were not supported by the Richmond Review. Likewise there is no inclusion of any variations to the levy in the Plan.

This section reviews some of the issues the waste levy is creating and provides ASBG's perspective on these and appropriate corrective measures.

5.1 History of the Waste Levy

The points of this section are:

- *The history of the levy is one based on funding a Government agency to assist Local Government and the waste industry manages NSW's wastes effectively.*
- *It moved from an assistance program to one of regulation in the 1990s.*
- *Later it moved to a program of raising revenue for other environmental programs and other internal revenue, with little allocated to waste management.*

The commencement of the waste levy was set up to fund what was then called the Metropolitan Waste and Disposal Authority, now through various name changes and legislative responsibility changes it is called WSN Environmental Services, which is being sold.

Chronological events regarding the levy include:

- 1980's: In the early 1980's the levy applied only to Sydney Wastes, and was set at 51 cents per tonne to fund the Metropolitan Waste Disposal Authority in the 1970s.
- 1992: After the formation of the Environment Protection Authority in 1992, the regulatory functions that covered the levy was passed to the EPA.
- 1996: the EPA published RIS on the Waste Minimisation and Management Regulation 1996 – this proposed the levy be set at a maximum of \$27.50/t over time based on 50% greenhouse emissions from methane and transport and amenity costs.
- 200:1 the levy was again reviewed under the Review of the *Waste Minimisation and Management Act 1995*, with the proposal being to increase the:
- Sydney Metropolitan Area (SMA) from \$17/t in 2001 to \$25/t by 2010 then capped with CPI increases included.
- Extended Regulated Area (ERA) (Hunter and Illawarra) to go from \$8/t to \$25/t by 2013 then capped with CPI increases included.
- 2005: The RIS On the Protection of the Environment Operations (Waste) Regulation 2005 proposed to continue to maintain increases in the levy at \$1/t in the Sydney Region and \$1.50/t in the ERA.
- 2006: Using a pre-election promise the Government, with no further consultation increased the levy rate of the Sydney area from \$1/t pa to \$6/t pa and the ERA to increase to \$7/t.
- The Liquid Waste levy was introduced in October 2007 commencing at the SMA rate, but applies to any waste generated across NSW.
- 2009: The SMA to increase by \$10/t plus CPI until 2016, ERA to commence at \$10.50/t plus CPI until 2011, where it will increase to \$11.50/t plus CPI up to mid mid 2013. It is not legally clear that the levy continues after this date. (Note there is an error in the Richmond Review as it assumes \$10/t + CPI for the ERA.)
- 2009: The waste and environment levy was extended to include local government areas along the coast north of Port Stephens to the Queensland border and the Blue Mountains and Wollondilly local government areas. This extended area is known as the 'Regional Regulated Area'. The RRA commenced at \$10/t and increase by \$10/t plus CPI.
- 2009: from 1 September 2009 a \$15/t for coal washery wastes applies.

5.2 Overview and Purpose

The points of this section are:

- *The main official purpose of the levy is to drive resource efficiency, though this is achieved in a blunt and inefficient manner.*
- *NSW's budget for the levy is in part driven by the allocation of grant moneys available.*
- *In 1996 the levy was justified on external costs with 50% representing methane and greenhouse emissions. When the CPRS comes into effect landfill will be in effect paying a double greenhouse tax.*

The purpose of the waste levy according to DECCW⁸:

The waste and environment levy is designed to encourage resource recovery and recycling of waste. It is generally added to the disposal charges set by landfills. It provides businesses, councils and individuals with an incentive to reduce the amount of waste they generate and encourages them to seek legitimate alternatives to landfill disposal (consistent with the 'Objects of the Act' in Section 3 of the POEO Act).

The POEO Act s3 Objects of the Act state:

(a)(iii) the reduction in the use of materials and the re-use, recovery or recycling of materials

⁸ [Waste and Environment Levy an Operational Guide](#)

This objective in itself imposes a limit to recovery or recycling of materials. To recycle materials back to their original form or close to it requires a separation process. Such processes require energy and some means of separation, such as washing or heating etc. At some point where the input stream contains too high a level of other materials (contaminants) the net environmental cost of recovery becomes less than the environmental costs of energy in and other natural resources. The end point being is that landfilling must be a part of the waste management infrastructure.

According to DECCW the waste and environmental levy is there to provide an incentive to reduce and divert waste away from landfill. Importantly, the levy's priority is to raise revenue, but to reduce waste generation and avoid landfill. However, in practice it comprises a significant proportion to NSW's State budget and is estimated to reach 2%. Waste in NSW funds many environmental projects, which tend to be based on which tend to be based on non-waste issues with the biological side of environmental issues (flora, fauna and riparian zones) featuring.

Expenditure of levy moneys is budgeted for up to 2013-14, with virtually all the environmental programs dealing with non-waste issues. Given the forward expenditure programs there is concern the revenue from the levy is a necessary part of budget income and Treasury will expect such income levels despite the level of resource recovery achieved in NSW. This also imposes a conflict with other programs to improve resource recovery. If lower cost approaches are used (see s5.4) this will lead to lower amounts of wastes requiring paying for the levy, threatening expected income to Treasury. Though it is noted that the 2010–10 budget did consider levy revenue would be affected by lower volumes of waste paying for it as its rate increases.

5.2.1 Basis For the Levy

In the Environment Protection Authorities Regulatory Impact Statement: Proposed Waste Minimisation and Management Regulation 1996, it established the breakdown of the external costs for Sydney and Regional landfills. Sydney landfill external costs were estimated to be in the range of \$13.10 to \$33.20 per tonne and comprised of :

- Greenhouse gas emissions cost, based on methane emissions from landfill and estimating an external environmental (greenhouse) cost of between \$7.80 to \$14.60 per tonne of waste in the landfill.
- Local Amenity Costs based on a landfills lowering of property values in its vicinity and costed at between \$0 to \$3.70 per tonne of waste.
- Transport Corridor Costs from environmental harm, noise and air pollution and congestion and accident costs caused by transporting wastes at between \$2.30 to \$2.90 per tonne.

Given this calculations were used to justify increasing the levy. However, there is an issue with the levy also applying to methane emissions as these are to be covered under the Carbon Pollution Reduction Scheme (CPRS). As a result of the introduction of the CPRS to landfills there may be an argument that these are being double taxed for methane emissions under the levy and the CPRS.

5.3 **Future Levy Prices and Revenues**

The points of this section are:

- *The waste levy is legislated to increase considerably until 2015-16.*
- *NSW's 2010–11 budget has already spent most of its projected income from the levy until 2014.*

- ASBG estimates the NSW budget over estimates the fall in revenue from the levy from 2014 onwards, and predicts that a \$120m p.a. surplus will be available at this time.
- NSW will continue to have the highest priced waste management program in Australia detracting from business profitability and future investments.
- The levy has a detrimental impact on many waste recycling facilities which requires rectification to avoid perverse environmental outcomes and economic harm to the industry.

Currently the levy comprises of 3 areas and 2 waste stream types, which are described in table 2. Note that from 1 July 2013 the ERA rate will equal the SMA rate.

Table 2 NSW Waste and Environmental Levy Current and Future Predicted Rates
(Future rates are based on an average 3% CPI rate)

Year	Sydney Metro SMA	Hunter/ Illawarra ERA	Extension to Qld boarder RRA	Liquid Waste Levy TLW	Coal Washery Levy
2009-10	\$58.40	\$51.50	\$10.00	\$55.00	15.00
2010-11	\$70.30	\$65.30	\$20.40	\$63.00	15.30
2011-12	\$82.71	\$79.10	\$31.31	\$71.71	15.76
2012-13	\$95.49	\$93.30	\$42.55	\$73.87	16.23
2013-14	\$108.65	\$108.65	\$54.13	\$76.08	16.72
2014-15	\$122.21	\$122.21	\$66.05	\$78.36	17.22
2015-16	\$136.18	\$136.18	\$78.33	\$80.71	17.74

+ ERA assumed to increase at \$10/t + CPI from 2104-15 on wards

ASBG has estimated the future revenues from the levy, based on a number of assumptions and compared these to the budgeted figure used in NSW's last budget papers in May 2010.

These assumptions include:

- The rate of wastes attracting the landfill levy remain static over this period. This reflects the expected inelastic effect of price on waste disposal tonnages to be in proportion to the increase in population numbers over this time period.
- Estimations on the quantities of solid, liquid and coal washery wastes were made using DECCW reported amounts adjusted to 2009 figures.

Table 3 Estimated Revenue from Waste Levy – Assumes Constant Waste Stream Mass (\$millions)

Year	Total Revenue \$m	Budget \$m	% diff	Difference \$m
2009	\$245	\$245	0	0
2010	\$321	\$305	5	\$16.9
2011	\$393 _{est}	\$385	2	\$7.5
2012	\$464 _{est}	\$447	4	\$16.9
2013	\$537 _{est}	\$472	14	\$65.5
2014	\$613 _{est}	\$489	25	\$124.2

The NSW's Budget estimates the levy will result in a 25% diversion away from landfills and other levy attracting deposits. ASBG considers these rates of diversion optimistic. This is based on OECD compilation of the elasticity of demand reported ranges⁹ from -0.12 to -0.36, with most measurements under -0.2. Basically put a -0.2 elasticity means a doubling of price will generate a 20% fall in demand.

Calculation of Levy Diversions by 2014-15

ASBG used the OECD elasticity of demand at its larger rate of -0.2 and calculated the decrease in waste to landfill by 2014-15.

Assumptions:

- NSW has a waste disposal to price elasticity range of -0.12 to -0.2 based on the OEDC data. For this exercise the more conservative -0.2 is used
- Increase in landfill prices: Currently at \$200.15 per tonne plus \$52/t levy increase plus CPI @ 3% p.a. = 288.80/t . Percentage increase = 42% by 2014-15.
- If price increases 42% demand should drop by $0.42 \times -0.2 = -8.4\%$ over the 4 years.
- According to NSW Planning¹⁰ an expected increase in Sydney population rate is about 1.26% p.a. Therefore from 2010-11 to 2014-15 the population increase is 5.13%. The volume of waste is assumed proportional to population.
- The levy price impact is -8.4% but is countered by a 5.13% population increase, resulting in a 3.27% decrease in waste volumes.

If projected onto the 2014-15 budgeted income for the levy this would result in a \$120 million excess.

Two outcomes can arise if the expected fall in waste volumes are not realised including:

- Provision to lower the levy rate
- Additional funds being available for other waste management activities.

The Plan states it will be '*Making it easier*' for both households and businesses to manage their wastes. Making it easier to most will mean making it cheaper. ASBG doubts if this will be the outcome considering the levy's increases are locked in place along with a suite of non-waste related expenditure programs. So it is expected that the second option will be more realistic, despite this meaning that waste management for all in NSW will become more expensive, at least the additional

⁹ [The Political Economy of Environmentally Related Taxes](#) By OECD, p 55 extracted from Table 38

¹⁰ [New South Wales State and Regional Population Projections](#), 2006-2036; 2008 release p xii

income from the levy can be largely directed to waste management issues, from generation to disposal and all in between.

ASBG's position is that business should be provided the same level of waste management funding as provided to Local Government in NSW from the waste levy's revenues.

5.4 How well has it Performed?

The points of this section are:

- *NSW's performances on resource recovery are of middle range.*
- *Despite NSW having the most expensive levy program, other jurisdictions perform better even when no levy is present.*
- *Other incentive and specialist waste agencies provide some of the best result at a much lower cost to the tax (levy) payer.*
- *NSW needs to consider supporting the waste sector by similar actions and not rely so heavily on the blunt instrument of the levy.*

While the levy is designed to deliver a diversion of waste its performance is poor compared to other jurisdictions which have much lower levy rates, for example in 2006–07¹¹:

- South Australia has the highest municipal diversion rate of 54%; NSW achieved 38% (SA had no waste levy at the time)
- Victoria had Australia's highest Commercial and Industrial waste diversion rate at (69%) where NSW has the lowest at 44%; Victoria had a levy rate of \$15/t and NSW had a levy rate of \$30.80/t.
- Construction and demolition waste in NSW was 67%, and South Australia achieved 79% with no levy.

Reasons for this given are that other jurisdictions which use special waste agencies appear to have achieved better waste diversion performance outcomes.

Other reasons the levy has not performed well considering its revenue, is its detrimental impact on the local recycling industry, in particular as paper, metal, glass and cardboard. The levy drives up these recycling industry costs by its impact on their wastes and increasing the level of contamination in their feed stock.

These reasons appear to also be supported by the Richmond Review document which provides a number of improvements which DECCW can undertake including:

- *Enhancement 4 DECCW's waste management capability*
- *Enhancement 12 Funding better waste outcomes*
- *Enhancement 16 Waste Infrastructure and Sustainability Fund*
- *Enhancement 18 Coordination of DECCW's waste responsibilities*

ASBG also supports the thrust of these enhancements from the Richmond Review report, though they appear not to have been incorporated into the Plan document. The conclusion is clear that the levy alone is not effective as it could be and other Government lead initiatives are required.

5.5 Levy has an Upper Limit

The points of this section are:

¹¹ NSW Parliamentary Briefing Paper: [Waste: Comparative Data and Management Frameworks 2010](#)

- All recycling processes have their uses determined by market prices and their processes be recognised as to their function and role in waste management infrastructure.
- The waste levy can skew the economics to favour recycling to a limit.
- The waste levy if set too high can result in environmental harm, but driving recycling beyond its environmental benefits. (Zero waste to landfill polices are idealistic and run counter to the second law of thermodynamics.)
- Recycling has its limits where it is better for the environment to landfill certain highly contaminated waste streams.
- Innovative recycling systems are not well supported in NSW, but should be.

There is an upper limit to the levy both economically and environmentally. If the levy is set too high it can require the treatment of waste streams to absorb more energy and other raw materials, than it is trying to avoid resulting in a negative environmental outcome. Little research has been done in this area, and it would vary considerably from materials to locational issues. ASBG also recognises most recycling is limited by economic issues rather than environmental ones. However, the point is that there is a limit to a levy amount and we have little idea where this lies.

While the levy has an environmental limit, it should also consider the economic limits and where it should sit in terms of cost impacts.

5.5.1 Recycling For Purification

To view the limits to the levy first consider recycling for purification. Purification recycling processes means the product from the recycle is close to its original form. For example, metal and plastic recycling. Here the process, put simply is one of separation. Recyclate goes in with a purified product resulting plus a reject waste stream. Energy and resources are required as these processes must follow the second law of thermodynamics and must decrease the [entropy](#) of the final product. In turn the process must increase by a greater amount, the entropy of other resources used, largely showing up in energy consumption, but also in contamination of water or other ‘washing’ substances.

Diagram 1 Cost vs Contamination Levels for Purification Recycling

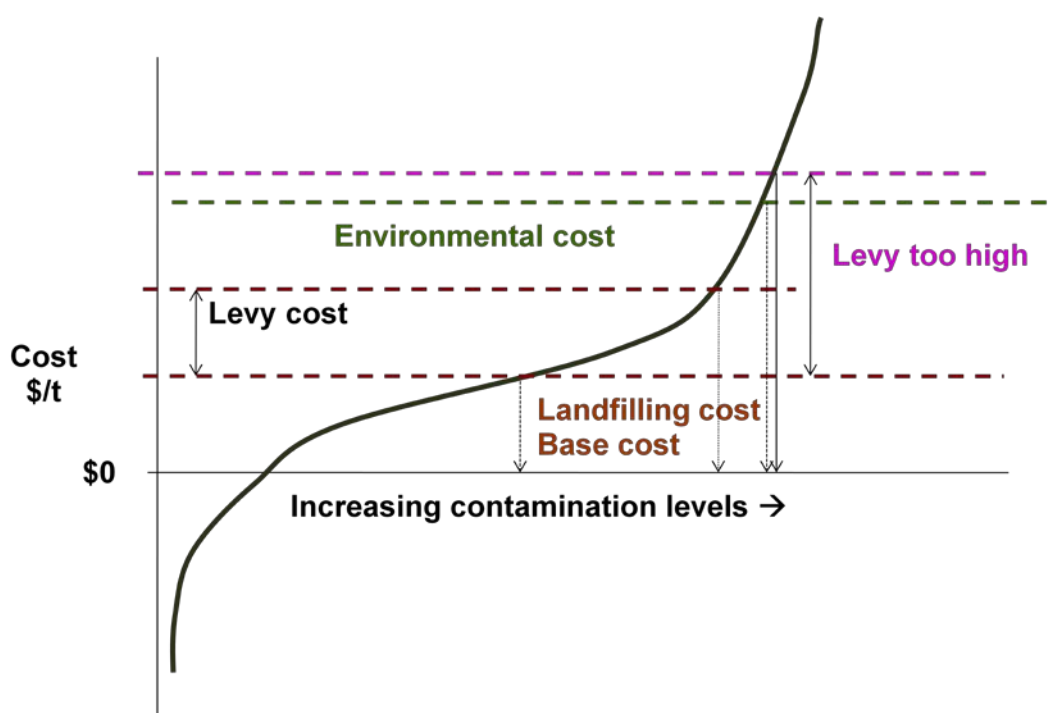


Diagram 1 shows a typical recycling cost curve for a material vs its level of contamination. At the left hand side of the diagram, the material has low contamination levels and has negative costs (positive value). Conversely, at the right side of the diagram the material for extraction has a high level of contamination and has a high cost (negative value). At a certain point of contamination level, determined by many issues, its value becomes negative. As a consequence, the owner has to pay to have it managed. Recycling, for purification purposes generally will follow an exponential cost growth curve.

Recycling to recovery this material will be a more attractive option if its price is under the landfill gate fees. Use of a waste levy can artificially raise the price of landfilling. As the purification process deals with higher contamination levels the volume of waste per unit input also increases. This shows up as waste disposal costs which rapidly increases the unit costs of the recycling process. This cost escalation is accelerated as the levy rate increases. However, diminishing economic returns steeply rise as contamination levels and cost exponentially rise despite levy rises. Raising the levy too high, results in driving recycling facilities to accept only marginally higher contamination input levels. Noting that the exponentially increasing costs are also driven by the recycling facilities levy payments on its disposal costs.

Recycling for purification requires its own natural resources, in terms of water, electricity, plant and equipment and other environmental emissions. There will be a point where the environmental costs of these resources will exceed the environmental benefits of treating above a level of contamination in the recyclate. As a consequence recyclate at this level of contamination are better off being landfilled than being treated.

This sets a maximum level to the waste levy for such recycling processes.

ASBG is concerned that AWT are regulated requirement, under the Infrastructure SEPP, prior to landfilling in new landfills. Mandating AWT above the point of exceeding their environmental benefits they provide will have an overall negative perverse environmental outcome.

5.5.2 Recycling using Blending or Energy Extraction

This section covers recycling using blending which generates a new product, which is not the original material/s or energy recovery. Whiles some separation is commonly used, the level of contamination in the extracted product is higher than for a purification process. The resulting product material can then be used as another product or blended to make a new product.

For example, plastic PET bottles can be recycled for purification or for blending. Purification recycling example is the triplicate PET bottles are made from three layers, with the internal layer made from recycled PET and the outside layers from virgin PET, required by food laws.

Recycling for blending PET does not require the substantial washing and separation processes of the purification process. An example is where the PET and other mixed plastics are blended with bitumen¹² prior to its use in the manufacture of asphalt. Dirt, micro-organism growths on old beverages, glass from comingled collections and other contaminations are generally not a problem, unless at high levels for recycling the PET into asphalt. It is normal practice to blend plastic with bitumen to improve its wearing, strength and adherence properties. Blending simply treated plastics with asphalt is commonly practiced in many other countries.

Blending lightly treated recyclates with other products like, asphalt, portland cement concrete, compost even paper to cardboard, requires much less energy for separation/ purification and goes with the flow of entropy. As purification is not the main purpose of the process there is less need to decrease the entropy for natural resources required for such blending processes.

¹² See [Roads from Plastic Waste](#)

Waste to energy is even further down the path of entropy as the wastes are combusted or oxidized substantially increasing their entropy. Converting wastes to flue gases increases the entropy of the end products of the process, meaning it flows with the second law of thermodynamics and does not require increasing other natural materials entropy to decrease entropy in the final product, energy.

Diagram 2 Cost vs Contamination Levels for Blending and Waste to Energy

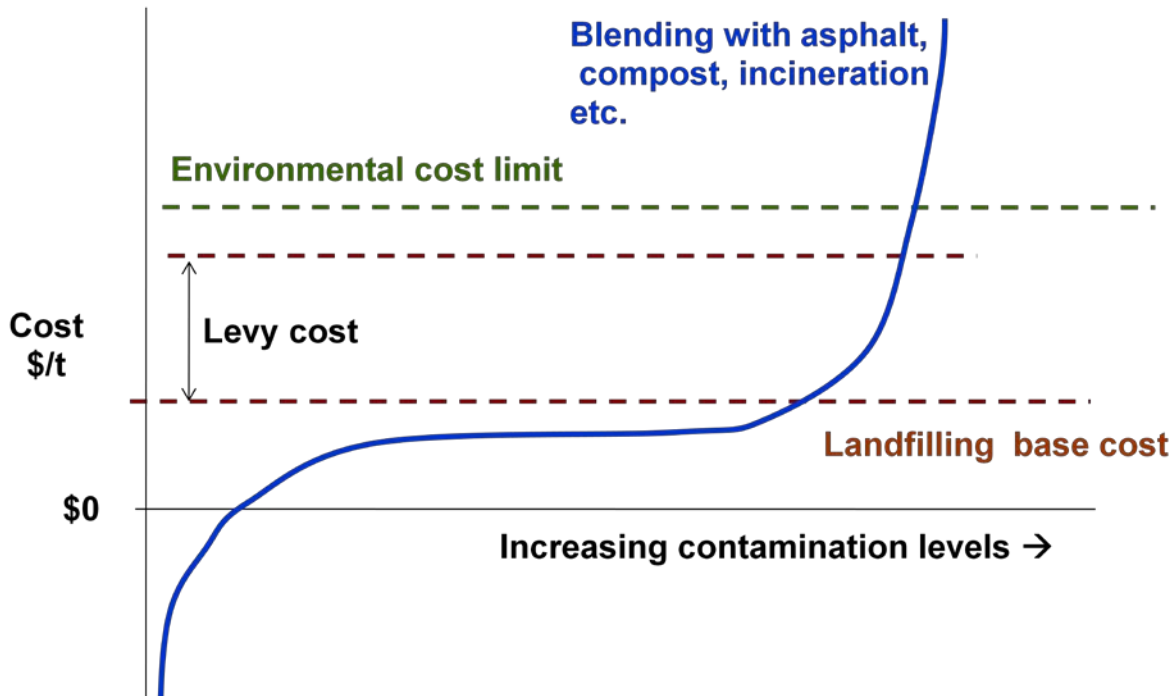


Diagram 2 is similar to diagram 1, but with the flatter exponential curve for resource recovery costs vs contamination. The point of this graph is the level of contamination which can be economically and environmentally is higher than for purification recycling processes.

Nevertheless, there still exists an upper level, where environmental costs outweigh the benefits, due to the increasing need to remove more contaminants prior to blending or the increasing waste levels generated from the processes. For combustion or oxidation processes contaminants also comprise of non-combustible or energy consuming substances, e.g. water.

5.6 Impact on Recycling

The main points to this section are:

- *Recycling is poorly supported by NSW Government Policies and programs.*
- *The waste levy is a blunt tool and results in perverse environmental outcomes (economic transporting) which is exacerbating as the levy increases.*
- *The levy's outcome of diverting more waste away from landfill does little to assist NSW recycling facilities who must compete on price for input and output.*
- *Given the levy distorts recycling markets, an economic study on recycling is required to assess appropriate support provisions to counter the effects of the levy.*
- *ASBG recommends that a NSW recycling facility support scheme be implemented to counter the negative economic impacts of the increasing waste levy.*

Does the levy help recycling?

Recycling facilities are offered no assistance or special treatment from the NSW Government other than the impact of the levy on disposal. Based on improved resource recovery performances waste levy appears to be assisting recycling. But this is not the case for NSW recycling facilities who must sell their products on national and international markets while also pay higher waste disposal fees as a result of the levy.

The purpose of the levy is to encourage resource recovery, driving wastes to recycling and beneficial reuse options. However, this approach in practice brings about its own problems. Recycling economics are driven by economies of scale. The larger the quantities the smaller the unit profit needs to be for viable facilities. So in which ways does the levy assist recycling if at all? A high levy should increase the volumes of materials seeking a more cost effective means other than landfilling. Cost pressure to send increased volumes to alternative markets certainly has occurred. While new markets have been established especially for C&D wastes, the levy is having a detrimental impact on much of the traditional recycling processes, such as metals, paper, glass and cardboard.

Case Study

The Victorian EPA commissioned the report Impact of Landfill Levy on the Steel Recycling Sector in Victoria¹³. It concludes that for every \$15/t increase in the levy rate places an addition \$783,000 p.a. on the steel recycling industry in Victoria. Options supported to counter the impact of the landfill levy included, provision of a partial levy exemption, better funding and grants to support the steel recycling industry and use of Product Stewardship programs.

The waste levy has the following impacts on recycling:

- Recycling facilities operating with a levy on their wastes do so at a higher cost margins.
- Recycling facilities cannot pass on these increased disposal costs to the product markets.
- Increases of a recycling facilities gate fees is very limited subject to competition from interstate and international markets for the recycle, driven by transport costs.
- Uniform increasing of gate fees across the NSW facilities by the industry (or lowering acceptance price) is illegal as it would require cooperation of other competitors—a violation of the Trade Practices Act.
- While quantities of recycle¹⁴. materials are higher volume they of generally lower quality requiring more processing and generating a proportionally higher level of waste from the recycling process, further increasing marginal costs.
- Many NSW recycling facilities are running at capacity, with excess recycle input being exported.

Overall the levy is not good news for recycling facilities. While it drives economic pressures to divert from landfill, the recycling facilities themselves are subjected to levy costs on its waste streams. Additionally, the levy costs compete with transport costs to areas where lower or no levy applies. This itself establishes perverse environmental outcomes. Further the levy is also pushing poorer quality recycles onto the markets, driving up costs for treatment.

Unfortunately, the NSW levy alone is not designed to consider the impact of national and international markets for recycles. International recycling facilities enjoy no similar levy and are generally much larger in scale. This enables them to undercut local recycling facilities by lower

¹³ Impact of Landfill Levy on the Steel Recycling Sector in Victoria 2007, Prepared by Marsden Jacob and Warnken ISE for Vic EPA.

¹⁴ Recycle meaning the waste materials to be recycled.

cost waste disposal generated from the recycling process. Having a much larger market closer at hand for the recycled products also benefits these recyclers. In addition, other services such as EfW are available in other markets. As discussed WFE facilities are very difficult to establish in NSW. As a consequence, recyclates are increasingly being attracted to interstate and overseas markets as these facilities can offer higher acceptance prices.

International prices and shipping for certain recyclate materials may be the more profitable outcome, driving the export of the collected materials overseas. As a consequence, such NSW recycling facilities are facing economic collapse under an increasing levy. If this occurs they will be very difficult to re-establish given the large economies of scale and similar levels of investment required. Exacerbating this would be an investment market noting the Government's failure to support it, or indeed undermine.

Some Australian industries rely on recycled material feedstock, e.g. scrap metal, paper etc. If product of this recyclate are not generated in locally, — i.e. the recyclate is shipped interstate or overseas— then more local natural resources will be sourced, with perverse environmental (greenhouse) outcomes.

The levy contrasts to DECCW's other resource minimisation programs such as energy and greenhouse programs and the water savings programs. Under these schemes business has a suite of grant programs and assistance packages to help reduce energy and water use. Levies from electricity retailers and water suppliers are virtually entirely allocated back minimising these utility uses. Waste for some reason is treated differently, only using the blunt levy. ASBG considers that additional systems and programs are required to be implemented to supplement the levy alone approach.

Overall an economic assessment of all levies, markets and impacts of transport costs and other marginal costs affecting the recycling industry in NSW is required.

Non-Levy Issues

AWTs: Impact of the levy on AWTs has already been discussed, but to varying degrees similar impacts also affect commonly recycled materials. Firstly it must be recognised that AWTs generally generate a recyclate stream, which is then on sold to recycling facilities at market rates. While this approach has merit, it does not make sense to support the AWT without also supporting NSW's recycling facilities which compete, and process these resources. Minimising transport would be one argument to encourage the proper support of the full recycling processing cycle.

The Plan's strategy 1.1 is to use a three bin system using a comingled system for glass, paper and cardboard. This will increase the contamination levels received at recycling plants, increasing their waste disposal output and payments to the levy. The comingling appears to support and lower costs to Local Government rather than pursue the policy position of increasing resource recovery. Such a policy position removes support from the recycling industry. If set too high the levy will result in the export of such wastes to areas of lower levies, especially interstate. Transport costs can be as low as \$60/t if there is a return load of other materials.

Member of ASBG report that recycling of paper, and already discussed AWTs are being increasingly affected by the increasing levy payments on their waste streams. Examples include:

- Paper recycling: During the last financial year, the weight of rejects from our plant was 16% of our waste paper usage.
- Metal recycling: The increasing cost of landfilling floc due to the levy will reach a point soon where it is more cost effective to bale and containerise the recyclate and ship the materials to China rather than recycle it in NSW.

ASBG recommends there should be an analysis of the economics and market forces. This should cover the economics on transporting recyclates considerable distances, e.g. interstate or overseas as a result of the waste levy.

Support is Required for Recycling in NSW

Impact of the levy is having an increasingly negative economic outcome on NSW recycling industry. Assessment and support of this industry sector is vital for the environmental objectives of the POEO Act to be met.

ASBG supports the Richmond report's position (p43):

There needs to be an analysis involving an economic assessment of the levy, and the likely market responses along the current levy trajectory, to show us where the levy settings need to be. There is also a need for a retrospective analysis of the actual market responses to past levy settings to show where the market failures are – places where analysis indicates that the levy should have been sufficient but the market has not responded.

and

Additional recycling rebates could be used to increase recycling at different points of the waste stream. For example, metal recyclers could receive a rebate for metal coming out of recycling and there could also be a rebate for country cars recycled in Sydney (this would also need a tracking and docketing system).

ASBG recommends that some support system for the recycling industry is required to counter the impact of the increasing levy. Though it is noted in Appendix H DECCW opposes what it calls differential levys, which is rejected by the Richmond review.

Example Recycling Support Schemes

- 1) Payments per the mass, quality and type on the end product from recycling facilities. This is suggested by the Richmond review and used by the Product Stewardship for Oil Program under the Product Stewardship (Oil) 2000 Act 2000. Such an approach has the advantage of being consistent with any National product stewardship programs being developed under the National Waste Policy. A NSW program based on this outcome should be on top of any National program as its purpose is to counter the impact of the NSW levy.
- 2) Levy rebates for waste sent to landfill from recycling facilities.
There are many ways in which this approach can be used including:
 - Levy rebate is equal to the level of resource recovery of waste otherwise sent to landfill. For example a 75% recovery/diversion of waste = 75% rebate on the levy.
 - Levy rebate based on the efficiency of recovery of the recyclable materials from the recycle streams. Extraction efficiency = *mass of recovered material / mass of recoverable material in the recycle stream*. A rebate would be a multiplier on the extraction efficiency achieved depending on the substance being recycled and agreed average extraction efficiency. Variations around this average could also provide incentives/disincentives to the industry.

Enforcement and payment of the rebate under the above will be based on robust measurement process and third party auditing. Large recyclers and waste facilities already have this information, but this may also have to be subject to third party audits. Care would be required to ensure there are no loopholes. For example, the mass % in a recycle stream would need

to exceed a reasonable levy. The Rebate rate may have to be set on a site by site on a recycled material basis to take into consideration local issues It will also need to apply to specific recycling facilities which would be for example:

- Licensed by DECCW as a resource recovery activity or similar.
- The last stage producing a product from recyclate which is used as a raw material for Australian manufacturing facilities and not to a further resource recovery process.

Recycling industry sector forums with DECCW for assessing the rebate rates of such an efficiency rebate system should be established to progress this approach.

5.7 Liquid Waste Levy issues

The main points of this section are:

- *The Liquid Waste Levy (LWL) is fundamentally different to the waste levy in that it applies to a treatment process and not a disposal or emissions activity.*
- *The LWL should remain capped at its 2011–12 rate to avoid the environmentally perverse outcomes of transporting of liquid wastes interstate.*
- *The \$2m p.a. grant program promised with the LWL should be introduced.*

The Liquid Waste Levy (LWL) stands out as a different use of the waste levy. The waste levy can be argued is a tax on wastes in contact with our environment and hence covers its environmental harm in part. NSW also has other similar environmental taxes on commons; Load Based Licensing is a tax¹⁵ charged by the NSW Government on the emissions of pollutants to the air sheds of NSW and its waterways. As the Government is responsible for the commons for the public of NSW it has a good basis to place taxes where such commons as air, land and waters of NSW are environmentally impacted.

In contrast the LWL has the waste levy applied on the acceptance of wastes prior to treatment. As there is no placing of wastes directly into land there is no environmental harm to be taxed. Emissions from the treatment plants to water, air or landfilled waste are covered under either the LBL scheme, environment protection licenses or the waste levy. Hence, the LWL is not an environmental tax, but a tax on a service. This puts it in the same tax regime as gambling or as another excise. Overall ASBG considers the LWL a flawed concept, in taxing a waste treatment service.

Treatment facilities paying the LWL are also paid a rebate for the solid waste sent to landfill from the treatment process. To do otherwise would be to double tax the liquids entering the facility.

Currently the LWL is at \$63.80/t at the gate. The levy is set to rise by \$6/y per year + CPI on 30 June 2011 where upon in proceeding years it rises with CPI only. This is shown in Table 3 – Projected Increases in Liquid Waste Levy to 2016.

Table 3 Projected increases in Liquid Waste Levy to 2016

Fin. Year	LWL amount \$/t
2009	\$55.20
2010	\$63.80
2011	\$71.71
2012	\$73.87

¹⁵ ASBG considers these levies and pollution fees as a form of tax as no direct service or goods are returned from the tax on the waste or emission. These types of taxes are referred to as environmental taxes in this submission.

2013	\$76.08
2014	\$78.36
2015	\$80.71
2016	\$83.14

ASBG welcomes DECCW's acceptance that the LWL has to be at least capped. If the levy amount was to increase to beyond around \$100/t it would match the transport costs to Victoria and threaten the viability of liquid waste facilities in NSW. Nevertheless, even at around \$70+/t there is a potential for transport costs to Victoria be below this if the tanker can return to NSW with a back load.

When the LWL was to be introduced it was to be accompanied by a \$2m per year grant program to assist generators reduce such wastes. This was part of the Government's election's promise which did not materialise with the introduction of the levy. All business got in the end was a punitive measure.

5.8 Interstate Boarder Regional Boundary Issues

The main points of this section are:

- *Differences between levy rates within NSW regions will be exploited to minimise costs even against levy operational rules.*
- *Avoidance of such exploitation requires substantial policing.*
- *Waste disposal and recycling are in part being directed outside their regional of generation via the increasing introduction of levies.*
- *Differences between State levies rate will also be exploited to minimise costs*
- *States are increasing levies to counter other states levies and diversion of wastes across boarders.*
- *Boarder control of waste transport is complexed by the Constitution's guarantee of free trade between states.*
- *Coordination of waste levies should be arranged between state jurisdictions to minimise perverse market distortions and avoid a potential constitutional challenge on levies as excise taxes.*

Disparity between regions and state jurisdictions levy rates can create perverse environmental outcomes if not carefully managed. In addition, if the basis for any levy exceeds the environmental costs there is a danger that the levy could be considered an excise and legally challenged under the Australian constitution.

Differences in levy rates within NSW regions are controlled by the requirement that the higher levy applies on its source or where it is received¹⁶. For certain waste deliveries this can be well policed, but there is doubt this requirement can be effectively applies across all waste transports to landfills in non-levied areas. As a consequence, where profitable enough, wastes will be transported to disposal facilities where no or a lower levy applies.

Waste disposal is seen in the market place as a uniform service. Even more uniform than petrol types and brands. As such even small differential in prices between two or more disposal services can result in large shifts of customers to the cheaper supplier.

For example, in 1999 Brisbane had two waste transfer stations operating at similar prices. When one lowered it price by \$2/t (about 5% drop) an 80% shift of customers resulted.

¹⁶ See Waste and Environmental Levy Operational Guidance Notes.

The waste industry is like most businesses sensitive to prices and variations will quickly be exploited. This also affects the recycling industry where recycle is transported interstate for recycling as the waste disposal costs have no or little levy.

The end result is that unless heavily policed opportunities and criminal action will flourish.

Diagram 3 shows the regional divisions of NSW's levy. Note the RRA area commenced last financial year at \$10/t and will reach \$31.50 est. by 1 July 2011.

Diagram 3 NSW's Waste Levy Regions



Most of NSW has no waste levy. Even if a levy was adopted across the state there is the ACT jurisdiction. Currently the ACT Government has no landfill levy, but employs a zero waste to landfill target and vigorously enforces the management of wastes. Nevertheless, the price differences due to the levy will either require ACT to impose considerable policing or implement a levy

NSW's waste levy is causing knock on effects into interstate policy as boarder issues continue to multiply. The most recent example of this is Queensland's proposed levy, specifically made to prevent the cross boarder wastes from NSW going to Queensland landfills.

Queensland has directly indicated that it was NSW's actions to impose a levy at its boarder that lead it to introduce its own levy. The reasons behind Queensland's levy are clear; quote: *"Furthermore, other mainland states not only have a waste levy but are actually increasing theirs, exposing Queensland as an even cheaper place for interstate companies to dump their waste."*

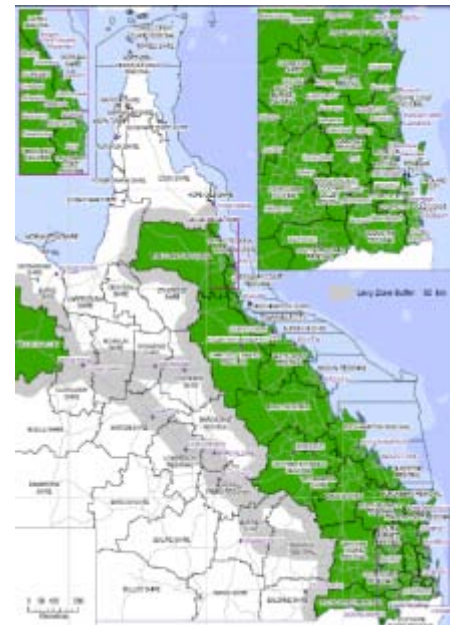


Diagram 4 - Queensland's Levy's application area

Queensland's waste levy according to the [Proposed Industry Waste Levy Consultation Draft](#) will apply to only commercial and industrial wastes including:

- \$35/t for general waste - using the area shown in Diagram 4
- \$50/t for hazardous waste – i.e. meeting Victoria's Cat C solid waste classifications

- \$150/t for high hazardous waste – i.e. meeting Victoria’s Cat C solid waste classifications

The choice of \$35/t is well thought through as it will make for only a few dollars difference between NSW and Queensland boarder towns when the levy commences on 1 July 2011.

A reverse impact is being felt by NSW where there is now a \$15/t levy on the Victorian side of the boarder, but not in NSW. Albury’s landfill is feeling the increased volumes of wastes crossing the border.

Victoria recent levy for solid wastes to landfill across the state is the reason. It is also following NSW’s lead of suing the levy as a means to raise government revenue. However, there was a at the time a considerable media¹⁷¹⁸ lead backlash against the announcement of a \$50/t levy to be introduced. As a result gradual annual increases in levy rates apply. Table 4 shows the current and next year’s levy rates, though these extend to 2014-15.

Table 4 Victorian Waste Levy Rates 2010 to 2012 FY¹⁹

Year	Rural \$/t		Metro and provincial \$/t		Prescribed Cat B \$/t	Prescribed Cat C \$/t
	Municipal	Industrial	Municipal	Industrial		
2010–11	15	25	30	30	250	70
2011–12	20	35	40	40	250	70

A problem state jurisdictions have with waste crossing state boarders is that there are limited options for stopping it other than to match or exceed the levy driving the transported diversions. While state governments can require to some degree that wastes should be managed in each region they are generated in, the free trade between jurisdictions as established under the Australian Constitution counters this significantly. Environmental factors can be argued to counter the free trade argument.

This is used to some degree of success when using the Movement of Controlled Wastes between States and Territories NEPM. Control under the NEPM can be far better managed than for other wastes as the waste generator must first obtain permission from the environmental agencies governing both the generation and treatment/disposal of that controlled waste. Many applications are refused, largely due to the ability of the jurisdiction of the origin of the waste to have a facility in which it can be treated. Economic arguments are generally not accepted. Nevertheless, some 156,779 tonnes²⁰ of controlled wastes were moved between jurisdictions.

Use of the NEPM is limited and other waste types including recyclates cannot be policed to the same level. Local Governments have some control in the issuing of contracts, but is paying a levy when they can turn a blind eye to it serving their rate payers best interests?

ASBG fear is that a one-up-man ship of levy increases between jurisdictions will occur. If the levies become too high as a result, constitutional challenge of the levies becomes more likely. A similar situation exists with mining royalties where there could be a constitution challenge²¹ if

¹⁷ [Victorian landfill levy anger](#)

¹⁸ [Greener waste plan levy rubbished](#)

¹⁹ See [Landfill Levies Page](#) Vic EPA

²⁰ [NEPC Report 2008–09 Movement of Controlled Waste Between State and Territories NEPM](#) p 56

²¹ See: State Government Mining Royalties: Required Taxes or Duties of Excise? Murdoch Uni- Electronic Journal of Law

pursued, but it appears that is not in the interests of the mining companies and certainly not the state governments.

If such a High Court challenge is successful the result will that levies are considered at least in part to be an excise and the revenue raising powers devolve to the Commonwealth Government. How this may play out is speculation, but an Australia wide single levy/tax may result with State Premiers arguing for their share back, like the tobacco and fuel taxes have previously done.

6. SUPPORT FOR BUSINESS IN WASTE MANAGEMENT

The main points of this section are:

- *Financial support for C&I and C&D wastes have been tiny over many years.*
- *NSW is falling behind on other states in funding innovative waste solutions.*
- *A portion of the levy should be allocated to waste management activities.*
- *Allocation of funding should be in proportion to the waste types contribution to levy revenue including: C&I, C&D, municipal, coal washery and liquid wastes.*
- *Hazardous (liquid) wastes to attract at least the prior promised \$2m per annum fund to reduce such wastes.*

Support for Commercial and Industrial (C&I) and Construction and Demolition (C&D) waste by the NSW Government has been tiny over many years, despite these areas paying well over 60% of the waste levy. A punitive levy only approach has achieved modest performance in resource recovery, even when compared to jurisdictions which have no levy, but use alternative means including considerable support for these waste sectors (see s5.4).

Revenue from NSW's levy is largely used to fund Local Government, water, parks, biodiversity and other non-waste environmental activities. Waste management overall has received only a small portion of the levy revenue, usually less than 5%, though this has increased to about 10% recently, with Local Government receiving the vast bulk of this. The Richmond review is also in agreement that this requires changing and supports a shift of more funding.

Understandably, the Richmond Review supports an economic review of the expenditure of levy money and the establishment of the Waste Infrastructure and Sustainability Fund (WISF). A grant program primarily aimed at supporting waste management. ASBG assumes the economic assessment of the levy should also be used to set the percentage allocation of the levy income to the WISF.

If NSW does not start to include support to the C&I and C&D areas NSW will fall further behind in waste management outcomes and generate increased perverse environmental outcomes. As the NSW is the most expensive across Australia, in terms of revenue raised, NSW will have the most expensive waste management systems, operating at much lower efficiencies per tax dollar collected and spent on it. NSW businesses are already suffering from the highest waste utility costs in Australia which undermines business investment and NSW's future economic growth.

Victoria can claim to be already far in front of NSW with its [HazWastefund](#)²². In addition the Victorian Government pledged \$54 million over 5 years back to waste management from its recent increase in its waste levy. This is on top of the funding from the prescribed waste levies to Sustainability Victoria.

As a consequence, Victoria has many claims of innovative and effective programs dealing with hazardous wastes. NSW lacks these programs.

Queensland's \$35/t proposed levy on C&I will be almost fully hypothecated into two funds:

- The Waste Avoidance and Resource Efficiency Fund, \$159 million over 4 years allocated to *'targeted programs to assist business, industry and local governments.'*
- Sustainability Future Fund, \$120m over 4 years, which is only for Local Government.

When these funds commence next financial year Queensland will have perhaps the most generous waste grant program in Australia.

²² The HazWastefund is financed by the prescribed waste levies on Cat B and Cat C wastes.

In NSW the only allocation of grant moneys back to waste management directly has been to Local Government, which was not even performance based until the last 3 years.

ASBG also notes the position put forward by Local Government and Shires Association in Appendix H Part 2. Put simply the argument put forward is that more funding is required to assist the Municipal waste sector improve its poor performance, where upon a schedule of grant payments is provided.

ASBG considers that just because a waste sector performs far better does not mean it cannot achieve even larger improvements. On this basis C&I wastes and C&D waste streams should at least be provided a similar funding arrangements to that suggest as to supporting municipal waste streams.

AUSTRALIAN SUSTAINABLE BUSINESS GROUP'S WASTE POLICY FOR NSW

OVERVIEW

The Australian Sustainable Business Group (ASBG) believes that waste should be managed in a holistic manner, based on strong science and economics. Efficiency is the cornerstone to minimising wastes from the processes from which they are formed. ASBG strongly encourages efficient management of raw materials and energy, with the aim of maximising the conversion of raw materials and energy into final products. Overall, waste policy should maximise net community benefit where externalities of waste management are considered in a holistic manner.

Resource recovery is and should remain a major component of NSW waste policy, but this should be secondary to net community benefit. Resource recovery has its place, but is limited both environmental and economically and should not be dogmatically pursued, especially just to divert waste from landfill, without the consideration of these impacts. ASBG, nevertheless, considers there are many opportunities for improving current rates of resource recovery to benefit economic and environmental outcomes of waste management in NSW.

Where waste materials are generated there are number of options for its management. Options for resource recovery should be driven by economics and can include the following approaches:

- Purify the recycled materials back to their original form
- Purify the recycled materials to a new form, but at a lower purity (down cycle)
- Blend the recycled materials, generally after some separation, with other materials (E.g. soils, concrete, asphalt compost, etc.)
- Extract energy from the waste materials²³.

Higher: additional resources, energy, raw materials requirements, potentially more wastes.
Lower: contamination levels of feed, entropy of product.

↑

Opposite of above

Where the level of contaminants and difficulty of (further) separation exceed an economic or an environmental limit, the waste should be free to consider other forms of beneficial reuse or disposal where these options are not economically or environmentally justified.

NSW's waste levy rates are the highest for general solid waste²⁴ in Australia and probably globally. After many years the levy has become entrenched within the budget and NSW environmental expenditure programs. ASBG has taken the realistic position that revenues from the levy will continue at the 2010–11 NSW budget forecast levels. On this basis this policy is a short to medium term in outlook, with larger changes being introduced over the longer term. Overall waste management policy from a business's end user's perspective needs to:

- Provide suitable infrastructure, including beneficial re-use, to cater for all wastes (not just disposed of) being generated.
- Pricing and levy and subsidies be used only where there are clear environmental benefits – resource recovery as a means to itself can result in consuming more resources and energy.
- Market forces should be used to develop new innovative methods to improve resource recovery.
- Other efficiency mechanisms and product stewardship initiative be also supported in assisting in waste avoidance, rather than the current skewed reliance on the punitive levy process.
- Provision of grants and funding to the NSW waste management sector and its generators is out of step with other states imposing levies and requires to be brought into line.

²³ See WMAA's [Sustainability Guide Energy from Waste \(EfW\) Projects and Proposals](#)

²⁴ Victoria has the highest levy rate of \$250/t for Category B solid waste, and \$80/t for Cat C wastes which are specialised small volume waste types largely represented by contaminated soils. Most of this levy is hypothecated to waste management funding programs.

- Efficiency of managing wastes in NSW to be optimised terms of costs to businesses and the environmental outcomes achieved — the waste levy has poor efficiency and outcomes compared to other jurisdictions.

Waste is an inevitable outcome of any process. As no process or system is 100% efficient, there will be wastes generated. Hence Zero Waste policies are idealistic not realistic and will lead to inefficient use of funds to manage wastes.

Given the large revenue stream generated from NSW's waste by the levy of around \$320 m, and NSW's mediocre performance on waste diversion in comparison to other states, the efficiency of the levy to reduce waste has to be questioned²⁵.

ASBG ISSUES WITH CURRENT WASTE POLICY

ASBG considers there is much which can be done to improve and secure the efficiency and certainty of waste management practices in NSW. Waste management costs are high and are legislated to increase to promote further increases in resource recovery and recycling. Currently, the NSW Government's waste policy position is based on arbitrary targets, lacking a scientific and economic basis.

Governments must recognise:

- That waste generation will continue – zero waste policies are scientifically, technologically fantasy — some waste will always require landfilling.
- More can be done to improve the efficient use of resources resulting in less waste largely from encouraging internal efficiency within businesses.
- That recycling back to original materials has environmental limits.
- Innovative thinking and action is required to deliver the objectives of a more efficient society. Though many innovative methods conflict with strongly held beliefs.

Targeting just waste is not the answer, the whole cycle of materials to manufactured goods to recycling and waste disposal requires to be considered. Many mechanisms available upstream are under commonwealth or national jurisdiction. NSW must work with these national mechanisms, incorporating them into its waste policy strategies as they develop.

Efficient use of resources will result in the generation of less wastes is a common approach. Energy and greenhouse emissions programs have far greater upstream focus and stands out as an alternative means in which to manage a waste stream – energy. When it comes to solid wastes the end of pipe focus is where most policy attention is placed.²⁶

Use of waste avoidance minimisation strategies, led by other states' waste focused agencies, have produced better waste reduction and diversion outcomes than NSW's heavy use of the waste levy. A new approach using a mix of punitive and supportive measures are required to lift NSW's waste performance levels.

NSW can make substantial inroads into efficient management of waste streams. ASBG looks forward to assisting the NSW Government in moving ahead to a more efficient waste regulation and management framework.

²⁵ NSW Parliamentary Briefing Paper: [Waste: Comparative Data and Management Frameworks 2010](#) comparison of NSW's waste diversions to other states is mediocre even with a very high levy rate.

²⁶ For example, the recent change to Clause 123 of the Infrastructure SEPP places yet more responsibility on recovery at the landfill disposal end. The attention should be right up the line at where the waste is generated.

POLICY ACTION POSITIONS

1. Funding and Support for Business

1.1 Stimulate business to adopt more efficient processes

Lack of funding and government support has left NSW (*see 2.3*) far behind other states in waste avoidance actions. Targeting waste from an efficiency perspective, like energy is, will deliver better outcomes in terms of efficient use of resources and lowering costs to business and the people of NSW.

1.2 Consultation with business waste generators to better determine waste management options

Consultation with business generators of waste has been poor. Most consultation has been with the waste industry, but not with non-residential waste generators. Many examples of missed opportunities to remove regulatory and other barriers, which undermine resource recovery and other good waste management options. (*see 1.5*) A formal ongoing consultation program with business in the development of waste management policy is required.

1.3 Development of a one-stop-shop for national waste measurement, compiling and reporting.

Australia has disjointed and disparate systems for waste measurement and reporting. This undermines the collection and review of good data and the making of good decision making and regulation of wastes across Australia. Having a one-stop-shop to waste data reporting based on agreed national waste definitions and measurement standards should be a key priority. NSW should champion the development of this system.

1.4 Increase resources for the development and assessment of waste exemptions for beneficial use of wastes.

Waste exemptions have been an effective means for the regulatory to assess innovative means in which to beneficially use wastes. However, their pace of development for generic waste streams has been slow. This appears due to internal conflicts of interest within DECCW and the need for additional resources to process applications. Clearer policy is required to cut through internal conflicts of which issues have the higher environmental priority.

1.5 Review the regulatory structure to remove loop holes and other obstacles promoting waste to landfill.

There are many examples including the planning and environment protection licence systems which promotes waste to landfill. For example, construction of a major building can by-pass the requirements for an Environment Protection Licence Extractive Industry if it sends its excavated materials to landfill, but if it re-uses these wastes then it requires to be licensed.

2. Provision of Effective Waste Infrastructure

2.1 Ensure there is adequate landfill capacity, putrescible and non-putrescible, for NSW's future needs.

Landfills are an essential part of waste infrastructure. They should be assessed by scientific environmental performance and not as an unfashionable development. Importantly the amount of waste going to landfills can be controlled and limited e.g. by quotas, to cater for lumpy transitions to new waste management practices. Having excess landfill capacity, and the ability to control its input levels, will provide certainty to businesses that NSW and Sydney region will have a means to deal with waste if other resource recovery strategies fail to deliver.²⁷

2.2 Assist in the siting of new waste infrastructure to meet NSW and Sydney's needs

Planning process for new waste infrastructure is lengthy and commonly results in considerable opposition. Planning approvals for essential waste infrastructure will requires State Government intervention to ensure suitable facilities are provided. This may extend to waste-to-energy facilities if waste diversion from landfills is to be pursued, otherwise landfilling will be required to play a major and ongoing role in waste management infrastructure in NSW. Beneficial reuse of waste also suffers from strong opposition at the planning approval level. Allocation of special planning zone areas for eco-parks and integrated waste facilities is required.

²⁷ Alternative Waste Technologies (AWTs) have a track record of failure, such as the SWERF at Whyte Gully near Wollongong. Many AWTs initially operate at 70% recovery, but this quickly falls to around 50%, with much of this due to moisture losses. Hence 50% of input becomes waste to landfill and subject to the levy.

2.3 Assess the future needs of waste infrastructure

Use an independent assessment of the future needs of NSW's, especially Sydney's waste infrastructure requirements. This would need to consider all options including transport distances, greenhouse emissions, waste to energy, soil reuse banks and other innovative resource recovery options based on a scientific and economic foundation.

3. Tune the Waste Levy

Review the structure of the waste levy to remove perverse outcomes such as undermining recycling, minimise transport of waste and drive resource recovery by increased grant funding.

3.1 Resource recovery processes be considered for levy rebates based on recovery efficiency.

As recycling is largely a separation process, recycling systems generate a waste stream to landfill. This attracts the waste levy. As NSW's levy is by far the highest in Australia, if not globally, this has generated market distortions for certain wastes. The levy is close to making certain recycling in NSW uneconomic. It can be cheaper to ship unsorted materials interstate or even overseas. Support for the recycling industry is required or sectors may collapse. One approach is to provide an increasing rebate, based on separation efficiency. This would assist in maintaining improving resource recovery and not just diversion from landfill. It should also prevent perverse environmental outcomes such as shipping wastes long distances to other markets. Such a mechanism should also take into consideration national product stewardship programs, though these are at least 3 years away.

3.2 Waste management processes be considered for levy rebates based on environmental integrity and other environmental factors.

There are grounds to provide incentives for quality waste management processes, even landfills, due to a number of factors, such as the location of the facility – closer to market means less greenhouse gas emissions. Integrity of the facility in terms of environmental protection and long term liability also needs to be recognised to drive new developments forward to achieve higher standards. Use of rebates on the levy based on these and other criteria should be considered. Such rebates do not need to be large, as a small change can result in considerable investment and operational changes.

3.3 Provide for a reasonable reallocation back to the waste management sector to stimulate the waste sector.

Allocation of waste levy funding back to the waste sector has been very low in NSW for many years. Outside of local government waste programs, NSW has offered very little to business. This is completely out of step with Victoria and Queensland who provide well over \$10 million pa (Queensland will supply near \$40 m in 2011-12). ASBG considers \$30 million p.a. in grant funding being made available from the levy to businesses should be made available.

3.4 Reassess the impact of the levy on boarder areas

The NSW waste levy in its forms is causing perverse environmental outcomes by promoting the shipping of wastes to areas with lower or no levy applying. This is particularly acute across State boundaries including:

- Victoria which has levies applying and southern NSW which has no levy – Albury's landfill is the state's second largest feed by Victorian wastes.
- Recyclates and other waste streams are being set long haul distances to avoid levy payments with perverse environmental outcomes and increased risks of spills.

In the longer term the recommended option is to re-evaluate the waste levy across NSW and the impacts of boarder states levy policies.