

Reforming the waste levy and the waste industry

October 2009

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Reforming the waste levy and the waste industry

1. Executive summary

In 2001, the WASTE 2020 Taskforce (established in 1999 by former Minister for the Environment, the Hon Cheryl Edwardes) released its comprehensive Report and Recommendations. The vision 'Towards Zero Waste by 2020' (**Zero Waste Vision**) was to guide the approach to waste management in Western Australia (WA) over the next 20 years. Progress towards the Zero Waste Vision was to be realised through five independent goals of sustainability, commitment, prevention, resource recovery and integration. The Landfill Levy (to be renamed the 'Waste Levy') is a key component in reforming the waste industry and achieving Zero Waste.

(a) Why reform is needed:

In order to drive the minimisation of waste to landfill and an increase in resource recovery by using market forces, a waste levy needs to:

- reward 'best practice' waste management which seeks to reduce, reuse or recover;
- provide an incentive for waste managers to invest in more sustainable outcomes;
- be paid by all operators; and
- be made against a strategic plan for improved waste management such that specific objectives towards which levy funds are allocated are clear and transparent.

(b) The current model:

- does not take into account what waste gets used for and the quality and cost of the associated management on a total environmental footprint basis;
- threatens the economics of basic raw material extraction if it becomes uneconomic to fill the resultant void with geo-technically validated inert material and use the land for a higher and better purpose;
- is not aimed at reducing waste at source;
- risks increased illegal dumping of waste;
- does not uniformly include the highest environmental risk waste (hazardous).

(c) The solution

This submission proposes a new framework for the waste levy which would use market forces to drive down the disposal of waste to landfill and increase resource recovery (**New Framework**).

(d) In summary, the New Framework provides for:

- all waste streams to pay some levy (inert, putrescible and hazardous). This would be a waste levy as distinct from a landfill, levy and aimed at the generators of waste;

- a new levy structure to differentiate rates of payable levy according to the type of waste and the environmental risk it poses. There is a wide variety of waste products, some posing high environmental risk, some negligible;
- a new levy that differentiates according to levels (quality) of waste management applied, to provide a market-based incentive for better management and reuse of the resource, and to include recognition of 'public good' operations (for example, filling and rehabilitation former hard rock quarries along the scarp). That is, the better the management (generally equating with increased operator cost but lower environmental risk) the lower the levy;
- the use of external auditors to establish where operators fit within the scale, to establish a total environmental footprint of operations (including carbon emissions) and to audit performance;
- the extension of the waste levy progressively to major regional centres to improve waste management standards; and
- the promotion of greenhouse gas reductions and sustainability in facilities that fall below the threshold for obligations under the proposed Carbon Pollution Reduction Scheme (CPRS).

(e) The benefits

The New Framework would (compared with the current system):

- be a better way of raising revenue from waste – one that rewards rather than punishes initiative and innovation;
- be fairer – all waste generators contribute something – not just a few;
- ensure contributions are proportional to environmental risk;
- improve sustainability outcomes by using market forces to optimise environmental, social and economic benefits;
- be cost effective;
- be managed by the Waste Authority and Treasury;
- increase revenue;
- provide certainty for the private sector to invest capital;
- position the waste industry in WA to be 'carbon ready' for the forthcoming CPRS;
- lift WA into the forefront of waste management in Australia; and
- achieve Zero Inert Waste well before 2020.

2. Background

- (a) The Government's proposed 300% increase in the landfill levy as part of its 2009-2010 Budget Statement (**Proposed Levy Increase**) has been made without sufficient warning or consultation and has caused significant concern amongst many industry and local government organisations.

- (b) The Government has deferred the increases until 1 January 2010. The Chairman of the WA Waste Authority has advised that it is doubtful if Treasury forecasts of an additional \$39m per annum revenue will eventuate in practice.¹
- (c) The landfill levy in its current form is a relatively unsophisticated economic tool for environmental management. A more sophisticated approach to striking the levy needs to be taken, which will take into account the type of waste at the time of disposal and whether the land receiving the material will later be remediated in a way that will benefit the wider community.
- (d) The Proposed Levy Increase continues to focus only on the objective of diversion of waste from landfill. Waste management in WA should and can be based on achieving the best environmental, social and economic outcomes, rather than concentrating only on minimising landfill waste without regard to the type of waste being disposed of, or to the end use of the subject land.
- (e) The way the waste legislation and the landfill levy are currently structured proceeds on the assumption that all land filling of waste is environmentally undesirable. This is simply not the case. For instance, inert waste may be used to fill in excavated sites (ie: quarries and the like) and the land may later be remediated for uses that add value to the community, including recreation, public open space, residential and mixed use development. (Refer Schedule 6 for photographs.)
- (f) The Proposed Levy Increase will make it uneconomical to reuse inert material to fill existing or future voids such that productive, sequential land² uses result. That means valuable limestone and sand assets will quite unnecessarily be quarantined – a most undesirable consequence both environmentally and economically and an issue of State importance.
- (g) The Proposed Levy Increase will distort the waste market. This will almost certainly lead to some adverse environmental consequences, for example, increased illegal dumping (including of asbestos). Economic and behavioural change consequences should be planned and addressed in advance. (Refer Schedule 7 for photographs).
- (h) There are also concerns that under the Waste Avoidance and Resource Recovery Amendment Bill 2009 (**WARR Bill 2009**), only one quarter of the waste levy would be transferred to the Waste Avoidance and Resource Recovery (**WARR**) Account and *'the balance of the levy [would] be used across a broad range of environmental and conservation purposes of the Department'*.³
- (i) Without a properly resourced Waste Authority and a cooperative relationship between Department of Environment Conservation (**DEC**) and the Waste Authority, the Waste Authority will not fulfil its charter from Parliament, which requires *'a clear separation of the regulatory compliance and enforcement functions to be undertaken by DEC, and the policy and program delivery functions to be undertaken by the Waste Authority'*.⁴

¹ As reported in the *'West Australian'* 1 July 2009 p21. The article refers to evidence before an unnamed Upper House Parliamentary Committee.

² Sequential land use is the extraction of basic raw materials, the filling of the void with geotechnically sound, reused inert material, and improving the land to a higher and better land-use.

³ WARR Bill 2009 Explanatory Memorandum.

⁴ Explanatory Notes for the Waste Avoidance and Resource Recovery Bill 2007. Parliament of WA p5.

3. Objects of the waste legislation

- (a) The primary objects of the *Waste Avoidance and Resource Recovery Act 2007* (WA) (**WARR Act**) are to contribute to sustainability; to protect human health and the environment in Western Australia; and to move towards a waste free society by:
 - (i) promoting the most efficient use of resources, including resource recovery and waste avoidance;
 - (ii) reducing environmental harm, including pollution through waste; and
 - (iii) the consideration of resource management options against the following hierarchy:
 - (A) avoidance of unnecessary resource consumption;
 - (B) resource recovery (including reuse, reprocessing, recycling and energy recovery); and
 - (C) disposal.
- (b) The WARR Act applies the principles set out in the *Environmental Protection Act 1986* (WA) (**EP Act**), including the precautionary principle, the principle of intergenerational equity, the principle of the conservation of biological diversity and ecological integrity, principles relating to improved valuation, pricing and incentive mechanisms and the principle of waste minimisation.⁵
- (c) The object of the waste legislation is to facilitate the aim of 'Zero Waste by 2020', which was expounded by the Waste 2020 Taskforce in 2001.
- (d) The *Waste Avoidance and Resource Recovery Levy Act 2007* (WA) (**WARRL Act**) is designed to provide the mechanism for the imposition of waste levies, in a way that gives effect to the objects of the WARR Act and the principles of the EP Act.
- (e) Whilst the Proposed Levy Increase may go some way toward encouraging alternative waste treatment, it is not the most effective way to achieve the objects of the WARR Act and the principles contained in the EP Act (**objects and principles**).
- (f) In order to achieve the objects and principles, and to encourage resource recovery and recycling, waste levies should be increased, provided that a fairer system is used and the levy is differentiated according to waste type and management of facilities. This will assist in achieving outcomes that align with the objects and principles.
- (g) Importantly, it is what the material is used for, and the quality of its management, that will best achieve sustainability outcomes.

4. Zero waste vision and the strategic direction

- (a) In 2001, the Waste 2020 Taskforce released its comprehensive Report and Recommendations. The vision '*Towards Zero Waste by 2020*' (**Zero Waste Vision**) was to guide the approach to waste management in Western Australia over the next 20 years. Progress towards the Zero Waste Vision was to be realised through five independent goals:

⁵ The principle of waste minimisation is that all reasonable and practicable measures should be taken to minimise the generation of waste and its discharge into the environment.

- (i) sustainability – reuse and recycling outcomes that are environmentally, socially and economically sustainable;
 - (ii) commitment – participation of all stakeholders in waste reduction, reuse and recycling practices;
 - (iii) prevention – prevention of waste;
 - (iv) resource recovery – maximise the recovery and recycling of resources from waste; and
 - (v) integration – the establishment of frameworks and structures to coordinate and facilitate waste reduction, reuse, recycling and the recovery state of resources.
- (b) The Zero Waste Vision was affirmed and strengthened by the WA Government's 2004 'Strategic Direction for Waste Management in Western Australia' (**Strategic Direction**), which sets out a broad waste management vision and goal for the next 15 years.
- (c) The (then) Waste Management Board developed a framework to implement the Strategic Direction, which operates by 'looking at the entire waste landscape and then managing simultaneously and at a number of levels, to provide a coherent and strategic approach'.⁶
- (d) The program priorities highlighted in the Strategic Direction are still generally considered relevant.⁷ The program priorities set out in the Strategic Direction aim to encourage and support changes to the design, production, consumption, recovery and disposal of products. They emphasise projects that reduce the generation of waste (prevention) while also encouraging and supporting continued improvement in waste reuse, recycling and reprocessing (recovery) as well as environmentally safe disposal of residual waste (disposal). Long-term sustainability is considered integral to this approach.
- (e) In respect of inert waste, the Strategic Direction stated:
- 'The largest component of waste to the waste stream by weight in Western Australia consists of material and soils generated through construction and demolition activities. The materials generated by this sector are often natural materials (sand, limestone aggregate or products closely related to natural materials, concrete and bricks) and therefore largely inert. As a result, they represent a lower level of environmental threat than the waste streams generated in other sectors.'*
- 'The largely inert nature and natural origin of the wastes produced in this sector mean that they are not the highest priority for action. Also, under strict control and where it can be demonstrated that it is occurring for the purpose of rehabilitating a landform or creating a landform that is of benefit to the community, disposal of inert materials to a Class 1 landfill may be treated as a form of resource recovery.'* (emphasis added)
- (f) The Zero Waste Vision and the Strategic Direction call for waste outcomes that are environmentally, socially and economically sustainable including the reuse or recycling of materials. Reusing inert waste as a resource for higher and better land use or for public benefit, compared with traditional landfill, would facilitate achievement of the objectives of the Zero Waste Vision and the Strategic Direction.

⁶ Strategic Direction, p6.

⁷ See the criteria for the WA Government's Strategic Waste Initiatives Scheme at: <http://www.zerowastewa.com.au/ourwork/supportschemes/swis/>

- (g) According to the Strategic Direction, inert waste which is used to rehabilitate or create landfill that will benefit the community is a form of resource recovery and should either be excluded from levies or the levies struck on this type of landfill should be significantly reduced to take into account its environmental, economic and social benefits.

5. Should there be differential levy rates?

- (a) It is clear that differential levy rates for different types of waste were envisaged in 1997. The second reading speech for the introduction of the Environmental Protection (Landfill) Levy Bill 1997 stated:

'varying rates for the levy to recognise the potential environmental impact of different types of waste'

and:

'Differential levies may be prescribed for different cases or classes, and the basis of levy calculation and the factors involved may be prescribed'.

- (b) The potential for differential levy rates was carried through under the WARRL Act which provides that the *Waste Avoidance and Resource Recovery Levy Regulations 2008 (WA) (WARRL Regulations)* may prescribe different amounts by way of levy that are payable in respect of different cases or classes of case.⁸
- (c) Differential levy rates should apply and should depend on the type of waste (hazardous, putrescibles or inert) and the environmental risk associated with the type of waste, as well as the quality of practice management applied at the facility and the end-use of the site.
- (d) Differential levy rates will provide an incentive for waste operators to adopt best practice management.

6. What's wrong with the system?

- (a) The current application of the levy, the Proposed Levy Increase and the proposed allocation of funds under the WARR Bill 2009 has departed from the original concepts. The Proposed Levy Increase is inflexible; it does not reward best practice management, nor does it promote innovation. It does not provide an incentive for waste industry members to invest in sequential land use by re-using suitable inert material as a resource, rather than simply depositing inert materials at a landfill or tip site.
- (b) The inert waste playing field is not level in practice. Operators who do some sorting and crushing of waste and sell the resultant material for landfill for property development do not pay the levy. Whereas operators of sites where material is delivered, and which consolidate and compact material in situ for an end use of property development, do pay the levy. The scope of the levy should be widened and adjusted accordingly, to cover all receivers of waste and not target receivers of landfill waste only.
- (c) It will become uneconomical to fill voids caused by basic raw material extraction and use the land for a purpose beneficial to the public⁹ if the landfill levies charged in respect of those inert materials are unreasonably high.

⁸ Section 4(2)(b) of the *WARRL Act*.

⁹ Note: limestone is now approaching critical supply south of Perth.

- (d) The highest environmental risk waste (hazardous) is not included uniformly.
- (e) The current system is based on a number of assumptions that are not settled and ought to be subject to further consideration. A discussion of these assumptions and corresponding comments can be found in Schedule 1.
- (f) Alternative putrescible waste technology systems can require a capital investment of up to \$80m. Abrupt rule changes such as the imposition of the Proposed Levy Increase do not foster the positive and innovative decisions that are required of local governments and companies to become more waste efficient in the long term.
- (g) Hazardous waste is a special type of waste, because it cannot be disposed of by common means like other by-products of our everyday lives. Currently, hazardous waste is not uniformly subject to a waste levy. The Government needs funding to improve and regulate waste management in the state, especially in respect of hazardous waste, which has environmental risks associated with it. It seems logical that the levy should extend to the disposal of all hazardous waste.
- (h) The DEC has wide enforcement powers under the EP Act and the Environmental Protection (Controlled Waste) Regulations 2004 (WA) for offences relating to illegal dumping of waste. Illegal dumpers face significant fines and the risk of imprisonment. In these circumstances it is difficult to understand why levies are not applied to all hazardous waste.

7. New Framework

- (a) WA needs a flexible approach to waste levies which rewards innovation and initiative as well as best practice management.
- (b) The three main waste streams, inert, putrescibles and hazardous, carry very different environmental and health risks and require very different management protocols. Therefore they should be treated differently and not amalgamated into a single stream
- (c) It is timely to move forward from the 'one size fits all' approach which is aimed at only a landfill levy.
- (d) The New Framework put forward in this submission broadens out the base and uses market forces to change behaviours in waste management. Based on market forces, it is expected to operate in a more effective and powerful way than would an educative or regulatory approach, which lacks incentive.
- (e) The key objectives for a waste levy should be to:
 - (i) generate funds and hypothecate those funds to:
 - (A) promote better waste management and recycling in Western Australia; and
 - (B) provide for incentives and innovation within a sustainable industries context;
 - (ii) reflect the environmental risk of various wastes through differential rates; and
 - (iii) provide for different end uses of waste (including, but not limited to, landfill) on sustainability principles through differential rates.
- (f) Whilst working towards zero waste to landfill, it must be acknowledged that not all waste is capable of being diverted from landfill in WA.
- (g) Ideally a waste levy ought to meet some essential criteria, as follows:

- (i) all waste streams should pay some levy so that all waste generators understand that there is a cost to disposal;
- (ii) this should be a waste levy, as distinct from a *landfill* levy and aimed at the generators of waste;
- (iii) *different levies* should be struck according to the type of waste, and the environmental risk it poses. There is a wide range of variety of waste products, some posing high environmental risk, some negligible;
- (iv) *different levies* should be struck according to levels of waste management applied, in order to provide a market-based incentive for quality management and reuse of the resources, and to include recognition of 'public good' operations (for example, filling, and rehabilitation of former hard rock quarries along the scarp). The better the management (generally equating with increased operator cost but lower environmental risk) the lower the levy;
- (v) should have regard for sustainability principles and take into account climate change issues;
- (vi) it should use external auditors to establish where operators fit on the scale, to establish a total environmental footprint of operations (including carbon emissions) and to audit performance. Costs would be moderate and could operate in the same manner as the current independent volumetric survey for the levy;¹⁰
- (vii) with sufficient notice (twenty-four months), the waste levy should be extended progressively to major regional centres of over 10,000 people, for example Bunbury, Albany, Kalgoorlie, Geraldton, Karratha, Broome, Busselton and Port Hedland, in order to improve waste management standards.

8. Particulars of New Framework

- (a) The New Framework could collect higher levies than the Proposed Levy Increase. The New Framework would also result in a better environmental outcome for waste management.
- (b) Our study indicates that the New Framework would achieve significant beneficial outcomes including:
 - (i) achieving projected revenue per annum with significantly lower risk of failure if the Proposed Levy Increase is implemented;
 - (ii) effective and fair raising of revenue from the waste industry which focuses on rewarding initiative and innovation;
 - (iii) appropriate matching of levy contributions proportional to environmental risk;
 - (iv) using market forces as the primary driver to motivate improvements in environmental, social and economic outcomes;
 - (v) provision of certainty for the private sector to invest capital;

¹⁰ In the metropolitan region the number of landfill facilities is not great: approximately one Class IV facility, two Class III facilities, four Class II facilities and eight or nine Class I facilities. There are three significant operating alternative waste technology plans and a fourth pilot plant.

- (vi) management by the Waste Authority and Treasury would eliminate any risk of DEC conflict of interest; and
 - (vii) elevation of WA to the forefront of waste management in Australia.
- (c) The New Framework would provide for the application of different rates, determined by each operator's level of waste management and the stream of waste with which the operators are dealing, with minimum practice paying the highest levy and best practice paying the lowest. A proposed rate structure and indicative rates are set out below and in Schedule 2. The indicative criteria to determine each waste operator's management level are particularised in Schedule 3 to this document.

Management category	Inert \$/m ³	Putrescible \$/tonne	Hazardous \$/tonne
Minimum practice: only meets base regulatory requirements	Indicative only \$12	Indicative only \$24	Indicative only \$36
Good Practice: exceeds minimum regulatory requirements. Meets agreed standards and end use outcomes	Indicative only \$6	Indicative only \$12	Indicative only \$18
Best Practice: management consistent with the best reasonable standards in Australia including independent, external auditing against agreed standards. There is an imputed public benefit in sustainability outcomes	Indicative only \$3	Indicative only \$6	Indicative only \$9

- (d) It is estimated that the revenue raised under the New Framework in metropolitan Perth to be \$45,990,000 per annum. This figure is generally based on material produced by Cardno (WA) Pty Ltd (December 2008) in its document entitled '*Assessment of Waste Disposal and Material Recovery Infrastructure for Perth. Towards 2020*'.¹¹ The supporting material for this figure is provided in Schedule 4.
- (e) The New Framework also suggests levies be struck in regional towns with a population of greater than 10,000 people (**Regional Centres**). Based on reasonable assumptions, the revenue raised in Regional Centres could be \$5,494,000 per annum. The details and supporting material for the calculation of this figure can be seen at Schedule 5 to this document.
- (f) An amount of \$52m per annum total is expected if the Proposed Levy Increase is implemented. The New Framework, inclusive of major rural centres, is projected to generate approximately the same revenue when compared to the Proposed Levy Increase but at lower rates and at lower risk.

¹¹ The document '*Assessment of Waste Disposal and Material Recovery Infrastructure for Perth. Towards 2020*', was prepared as a report for the Western Australian Waste Authority.

- (g) Alternatively, confining the levy to materials generated from the Metropolitan area but increasing the indicative rates (see (c) above) by \$2 across the board would generate in excess of \$53m per annum based on Schedule 4.
- (h) Revenue should decline as waste receivers make investments to change management categories and move into lower levy categories (unless rates are increased and/or the levy is extended to Regional Centres).

9. Waste levy auditors

- (a) Audit of the expenditure of collected levy funds:
 - (i) needs to be made against a strategic plan for improved waste management in WA at a level of detail which is meaningful for stakeholders;
 - (ii) needs to be in harmony with the existing policy and legislative framework; and
 - (iii) needs to be transparent and accountable.

To facilitate these objectives, a portion of funds should be used to externally audit performance of funded programmes against legislative and policy objectives and the results should be publicly reported.

- (b) Audit of waste operators

In addition to the Auditor's role under section 85(2) of the WARR Act, the New Framework provides that Auditors are authorised to evaluate the operations of waste facilities within each particular waste stream against established criteria, including environmental risk.

- (c) Functions of an auditor

An appointed auditor would carry out the following functions:

- (i) assign a Management Category to each operation receiving waste by auditing management performance and process against established criteria;
 - (A) Management Category assigned annually for 3-5 years then remains for 2 years;
 - (B) 'right of reply' by waste receivers to auditors but failing resolution of any issue, appeal rights against assigned category on the basis of errors and omissions only to the State Administrative Tribunal;
- (ii) estimate the total environmental footprint for each operation and its employed processes including CO₂ equivalent emissions;
 - (A) audits are annual but the audit process is perpetual as determined by the Waste Authority (that is the Waste Authority collects reports and information on an ongoing basis which is provided to the auditors); and
- (iii) assess the past environmental performance of waste receivers.
- (d) A waste receiver can request an interim audit if significant changes are made to operations. These interim audits would be at the receivers' cost.
- (e) The underlying objectives of this additional audit process are:
 - (i) to encourage and reward innovation and performance in waste management;

- (ii) to encourage the auditors to make recommendations for continuous improvement; and
- (iii) to provide an incentive based system that will naturally lead to an increase in the level of waste management standards that waste operators will adopt.

10. What should the levy be used for?

- (a) In 1997 the State Government intervened in the inert waste market by introducing a levy structure.
- (b) In introducing the levy, the Hon Cheryl Edwardes, then Minister for the Environment, stated:

*'The Government proposes several measures to ensure its (waste) sound management, including identifying the principles on which the levy is based; the concept that generators of waste should contribute to waste reduction programs; establishing a trust fund into which all proceeds of the levy must be placed, with funds allocated to meet clearly stated waste management objectives; varying rates for the levy to recognise the potential environmental impact of different types of waste; vesting responsibility for approving funding programs with the Minister who will take advice on this matter from the Advisory Council on Waste Management which includes representatives of local government, industry and the general community; ensuring that the funds will not be used to fund the ongoing usual activities of the Department of Environmental Protection, with the exception that the administration of the levy will be funded by the levy itself; and clearly specifying the general terms of the types of programs on which funds derived from the levy should be expended.'*¹² (emphasis added)

- (c) The purpose of the levy is to:

*'reduce the environmental and public health impacts of our wastes; conserve energy and resources - including scarce landfill airspace; help to make waste avoidance, reuse and recycling a way of life; and inform the community on waste reduction and sustainable development generally.'*¹³

- (d) The public good benefits at that time were expressed as:

'providing funding for projects to reduce the environmental and public health impacts of our wastes';

'conserve energy and resources – including scarce landfill air space';

'help to make waste avoidance, reuse and recycling a way of life'; and

*'inform the community on waste reduction and sustainable development generally'.*¹⁴

¹²Environmental Protection (Landfill) Levy Bill 1997. Second Reading Speech. Hansard. 22 October 1997 pp.7212-3.

¹³ Environmental Protection Amendment Bill 1997. Second Reading Speech. Hansard. 22 October 1997 p.7211.

¹⁴ Environmental Protection Amendment Bill 1997. Second Reading Speech. Hansard. Legislative Assembly. 22 October 1997.

- (e) At that time, the Court Government reflected on the reasons for the levy and made the following comment:

'generators of waste should contribute to waste reduction programs'.

- (f) In the second reading speech for the Waste Avoidance and Resource Recovery Levy Bill 2007, the then Minister for the Environment, the Hon D A Templeman, noted:

*'[The levy] functions as an economic instrument for influencing waste management practices, including reducing waste to landfill, by increasing the price of landfill disposal. The funds raised by the landfill levy are then used to support waste-related programs that have the effect of reducing waste to landfill.'*¹⁵

- (g) The DEC's use of the funds raised by the waste levy as proposed by the WARR Bill 2009 for purposes that are not waste related, defeats the fundamental purpose of striking the levy as identified in 1997 and strengthened by WAste 2020, the Zero Waste Vision and the Strategic Direction. This will be detrimental to improving waste management in Western Australia.
- (h) Expenditure of collected levy funds needs to be made against a strategic plan for better waste management and recycling in WA at a level of detail which is meaningful for stakeholders and in harmony with the policy framework established by the objects of the existing waste legislation, WAste 2020, the Zero Waste Vision and the Strategic Direction. The funds should be used to achieve specific waste objectives and strategies and the process should be transparent. It should not be used as a general fund for the DEC.
- (i) A portion of the funds levied should be used to audit performance of funded programmes against the objectives of the Strategic Direction and the results of the audit should be reported publicly.

11. The New Framework and climate change

- (a) To contribute to global efforts to curb greenhouse gas emissions, the Federal Government intends to introduce the Carbon Pollution Reduction Scheme (CPRS) from 1 July 2011. The CPRS is a cap-and-trade system which, by placing a limit on Australia's annual greenhouse gas emissions, aims to place a cost on carbon.
- (b) The waste sector is recognised as a significant source of greenhouse gas emissions in Australia. The waste sector contributes approximately 3 percent to Australia's total annual greenhouse gas emissions,¹⁶ primarily as a result of methane emissions from landfill, wastewater and waste incineration.¹⁷
- (c) From 2011, operators of waste facilities that exceed the CPRS emissions thresholds will be required to purchase one permit for each tonne (carbon dioxide equivalent or 'CO₂-e') of greenhouse gases they emit. Permit prices will start at \$10/tonne CO₂-e in 2011, and

¹⁵ Waste Avoidance and Resource Recovery Levy Bill 2007. Second Reading Speech. Hansard. Legislative Assembly. 17 October 2007.

¹⁶ Australian Government, Department of Climate Change, *Fact Sheet: Australia's Greenhouse Gas Emissions* (December 2008).

¹⁷ Australian Government, Department of Climate Change, *National Greenhouse Gas Inventory 2006*, June 2008.

will transition thereafter to a market price (which is expected in the initial years to be around \$20/tonne CO₂-e).

- (d) The complementarity of the New Framework with the CPRS is of critical importance to the State, because all state and territory governments are required pursuant to a COAG process to ensure that legislation, policy and programs which directly or indirectly impact on climate change policy to complement the CPRS. COAG has agreed that, whilst the Federal Government's proposed CPRS is Australia's primary response to climate change, state government approaches to climate change issues also need to change.¹⁸
- (e) By expanding the levy across the waste sector, and differentiating on the basis of greenhouse gas and other sustainability indicators, and ensuring that all revenues are fed into the waste sector, the New Framework would encourage the waste industry to become 'carbon ready', while supporting the proposed CPRS in various ways as follows:
 - (i) It would strengthen the incentive for emissions reductions in the waste sector. As discussed above, Waste Levy Auditors would take into account the greenhouse footprint of each facility when determining whether the facility constitutes 'minimum practice', 'good practice' or 'best practice'. If implemented, the New Framework could streamline greenhouse gas measuring and reporting with the *National Greenhouse and Energy Reporting Act 2007* (Cth) to avoid duplication of effort.
 - (ii) The New Framework would reward waste facilities that invest in new technologies, including resource recovery and landfill gas, by striking lower levies on these facilities. The Proposed Levy Increase would penalise all waste facility operators, reducing the incentive for innovation to reduce greenhouse gas emissions. A scheme which relieves operators from high levies would assist these operators to justify capital expenditure on 'decarbonising' these facilities.
 - (iii) The New Framework would complement the proposed CPRS by ensuring that all revenues raised are hypothecated and used only for waste-related initiatives. By returning funding into the sector, it will assist the sector to manage the cost impacts of the CPRS resulting from the need to purchase permits. It therefore fulfils a key complementarity principle identified by COAG: it is a measure which is targeted at managing the impacts of the proposed CPRS on particular sectors of the economy.¹⁹
 - (iv) The New Framework would complement the CPRS by promoting greenhouse gas reductions and sustainability in facilities which fall below the CPRS threshold. This is also supported by the COAG complementarity principles, which favour measures that address market failures in a sector that will not be covered by the CPRS.

12. The New Framework and sustainability outcomes

- (a) The economic benefits of New Framework include:
 - (i) a more certain revenue base for Government;

¹⁸ Australian Government, Department of Climate Change, *Carbon Pollution Reduction Scheme, Australia's Low Pollution Future, White Paper* (December 2008), p19-1.

¹⁹ COAG, Communiqué (20 November 2008), p11.

- (ii) increased revenue (because all waste streams contribute);
 - (iii) certainty for industry when making capital investments;
 - (iv) increased revenue as the levy progressively broadened to major Regional Centres; and
 - (v) use of market-based incentive to improve waste management.
- (b) The social benefits of New Framework include:
- (i) a fairer system – all receivers of waste contribute something meaning all generators of waste ultimately contribute;
 - (ii) household (putrescible) waste not carrying disproportionate burden;
 - (iii) societal recognition that disposal of waste is a cost;
 - (iv) incentive for sustainable land use (i.e., to use land for higher use than a tip); and
 - (v) avoids DEC conflict of interest.
- (c) The environmental benefits of New Framework include:
- (i) the New Framework would encourage the waste industry to become 'carbon ready';
 - (ii) WA operators would become national leaders in waste management by increasing rates of reuse, recycling and secondary reprocessing by changing market conditions;
 - (iii) It would speed the journey to 'zero waste' faster than regulation or education because of the financial incentive to move up the waste management hierarchy;
 - (iv) levy would be proportional to environmental risk;
 - (v) emphasis on hazardous waste management where the bigger and more difficult problems reside;
 - (vi) much better data collection across all waste streams to aid policy decision making; and
 - (vii) full environmental cost of waste management systems taken into account to replace 'feel good' solutions with rigorous analyses to avoid 'saving resources by wasting resources'.

13. Conclusion

- (a) The New Framework encourages innovation and best practice management in the waste sector and provides for the hypothecation of those funds to improve waste management in WA.
- (b) Waste makes a significant contribution to Australia's national greenhouse gas profile, and as such carbon reduction is a key consideration for all state and local waste management policy decisions. The New Framework would require emissions abatement to be taken into account in the calculation of levies, and therefore better supports and complements efforts at the national level to combat climate change than current landfill levy model and the Proposed Levy Increase.
- (c) The New Framework creates an opportunity for WA waste operators to become leaders in waste management, as it delivers a superior model than any other in Australia.

(d) The New Framework can achieve Zero Inert Waste by 2020.

Schedule 1 – Frequently asked questions

1. Can all waste be diverted from traditional landfill?

- Aspirationally perhaps - but practically at this point in time, no.
- About 30% of household solid waste left over from alternative waste technologies such as SMRC's Canning Vale plant and MRC's Carramar plant goes to landfill when operating properly.
- A portion of C&D waste is not suitable for recycling (reo, PVC pipe offcuts, plaster board offcuts, plastic strapping and other materials), although some can be reused for geotechnically stable fill.
- Inert waste currently includes asbestos, and lightly contaminated soils which cannot be used for shallow fill. Neither of these materials are recyclable.

2. Will Construction and demolition waste diverted from landfill significantly impact on demand for virgin raw materials?

- Not in the metropolitan region.
- If all suitable material was diverted from landfill regardless of cost, it would only substitute for about 5-6% virgin material requirements based on current demand in the metropolitan area (based on CCI's figures).

3. Should all sand and soil be diverted from landfill?

- No. Sand and soil are required for daily cover (putrescible) and to fill voids, create geotechnically sound sites, and reduce fire risk (inert). Note also that in some Eastern States' jurisdictions, daily cover is included in recycling figures.

4. Do raising levy rates automatically divert waste from landfill?

- Not uniformly. Queensland has higher rates of recycling than WA and has no levy. The market situation is more complex than this one-dimensional argument. Similarly it is difficult to meaningfully compare Sydney and Melbourne's situations with Perth's.

5. Are all landfills bad?

- If the total environmental footprint is calculated including greenhouse gas emissions, then an EMRC Red Hill landfill operation with methane capture for energy generation would probably come out ahead of an alternative waste technology waste composting (aerobic digestion) facility.
- Alternative waste technologies for putrescible waste must always have landfill space available for when technology fails or for maintenance down time.

- Not everything humans use then discard is re-usable or recyclable. As a consequence primarily of a small isolated market most materials in WA require either market intervention or subsidy to be recycled.
- An inert material used for landfill on land that is subsequently remediated is not 'bad' and should be referred to as 'resource recovery' rather than disposal. This is inline with the Strategic Direction.

6. Is recycling better no matter what it costs?

- Not always.
- You don't have to mandate profitable recycling – the market will take care of it.
- Unprofitable recycling requires either market intervention through regulation or subsidies, or both, to make it work. There should be transparency for the waste generator, and subsidy provider, as to what it costs and what benefit is being achieved by subsidising recycling. For example with the global economic crisis and the collapse of markets for recycled products, the community was in many cases paying for recycling only to have materials disposed of to landfill.
- Perth's size and isolation are significant factors in impacting profitable recycling.
- Professor Mike Munger, Duke University, USA and keynote speaker at the 2008 WA Waste Management & Recycling Conference has this definition (from 'Think Globally, Act Irrationally: Recycling'):

'There is a simple test for determining whether something is a resource (something valuable) or just garbage (something you want to dispose of at the lowest possible cost, including costs to the environment). If someone will pay you for the item, it's a resource. Or, if you can use the item to make something else people want, and do it at lower price or higher quality than you could without that item, then the item is also a resource. But if you have to pay someone to take the item away, or if other things made with that item cost more or have lower quality, then the item is garbage.'

'Support for recycling is more religious than economic in nature'.

'What (is meant) by 'religious' is that the claims for recycling rest on an assumed, if not always articulated, moral imperative rather than on trade-offs or costs. But underlying this claim, for many people at least, is some murky idea that recycling 'uses up' fewer resources than making things from scratch. Or, in the case of glass, making bottles from sand. As one earnest young staffer at a public works department in the northeast (of the USA) told me, 'Recycling is cheaper, no matter how much it costs!' You can believe, if you want, that there is some mystical quality of products that make them valuable, and that price is the wrong measure of value. But if prices matter, lots of recycling we now do is irrational.'

'So why do we recycle glass? Why is it against the law, in many cities and counties (in the USA), to dispose of glass as garbage? The fact that glass made from cullet is much more expensive than glass made from sand should be a hint that recycling uses more resources and more energy.'

*'Recycle, regardless of cost!' doesn't solve a problem; it creates one. Laws requiring recycling harm me, the environment, and everyone else. **We have to take prices into account, because prices are telling us that we can't save resources by wasting resources.** (Emphasis added).*

Schedule 2 – Rate structure

The following table provides indicative rates only:

Management category	Inert \$/m ³	Putrescible \$/tonne	Hazardous \$/tonne
Minimum practice: only meets base regulatory requirements	Indicative only \$12	Indicative only \$24	Indicative only \$36
Good Practice: exceeds minimum regulatory requirements. Meets agreed standards and end use outcomes	Indicative only \$6	Indicative only \$12	Indicative only \$18
Best Practice: management consistent with the best reasonable standards in Australia including independent, external auditing against agreed standards. There is an imputed public benefit in sustainability outcomes	Indicative only \$3	Indicative only \$6	Indicative only \$9

Schedule 3 – Practice management criteria

1. Determination of management category - conceptual criteria

1.1 Minimum Practice (highest levy rate):

- (a) meets minimum standards to ensure the environment is protected;
- (b) end land use is stabilised and rehabilitated site (no geotechnical certification, no 'higher and better' end land use); and
- (c) typical land use would be a traditional landfill (tip).

1.2 Good Practice (middle levy rate):

- (a) demonstrably exceeds minimum standards;
- (b) end land use has some 'public good' attributes; and
- (c) typical end land use would be active recreation, rehabilitated native vegetation on Crown land, parks, rehabilitation of landscape blights etc.

1.3 Best Practice (lowest levy rate)

- (a) management meets established best practice criteria for Australia based on international experience;
- (b) management consistent with sustainability objectives and includes consideration of the whole environmental footprint such as greenhouse gas emissions; energy use, and life cycle analysis where applicable;
- (c) imputed public benefit;
- (d) typical end land use would be residential, commercial, light industrial, active sporting or recreation etc with public/private benefit; and
- (e) materials reused or recycled (where practicable).

Schedule 4 – Projected revenue - metropolitan

1. Waste Generation Estimates (based on Cardno 2008 *op cit*)

For Metropolitan area 2009-2010:

	Landfill	Recycled	Total
Inert (C&D)	2,600,000 tonnes	700,000 tonnes	3,300,000
Putrescible (MSW, C&I)	1,540,000 tonnes	1,500,000 tonnes	3,040,000
Hazardous*	60,000 tonnes	0 tonnes	60,000
	4,200,000 tonnes	2,200,000 tonnes	6,400,000

The Waste Generation Estimates are based on the following assumptions:

- all waste generated and received is included;
- of the waste going to landfill, assume 1/3 goes into each management category in the absence of data;
- inert bulk density is $1\text{m}^3 = 1.2$ tonnes;
- all recycled waste falls into the Best Practice category.

2. Projected revenue from New Framework

Metropolitan

	Minimum Practice	Good Practice	Best Practice	Total
Inert	722,000m ³ x \$12 \$8,664,000	722,000m ³ x \$6 \$4,332,000	722,000m ³ x \$3 \$2,166,000 plus recycled \$2,100,000	\$17,262,000
Putrescible	513,000t x \$18 \$9,234,000	513,000t x \$12 \$6,156,000	513,000t x \$6 \$3,078,000 plus recycled \$9,000,000	\$27,468,000
Hazardous*	20,000t x \$36 \$720,000	20,000t x \$18 \$360,000	20,000t x \$9 \$180,000	\$1,260,000
Totals per annum	\$18,618,000	\$10,848,000	\$16,524,000	\$45,990,000

Schedule 5 – Projected revenue - regional

Revenue base should be widened to regional population centres progressively.

Regional centres (>10,000 people in towns)

	Minimum practice	Good practice	Best practice	Total
Inert	\$1,035,000	\$517,000	\$510,000	\$2,062,000
Putrescible	\$1,103,000	\$735,000	\$1,443,000	\$3,281,000
Hazardous*	\$86,000	\$43,000	\$22,000	\$151,000
Totals per annum	\$2,224,000	\$1,295,000	\$1,975,000	\$5,494,000

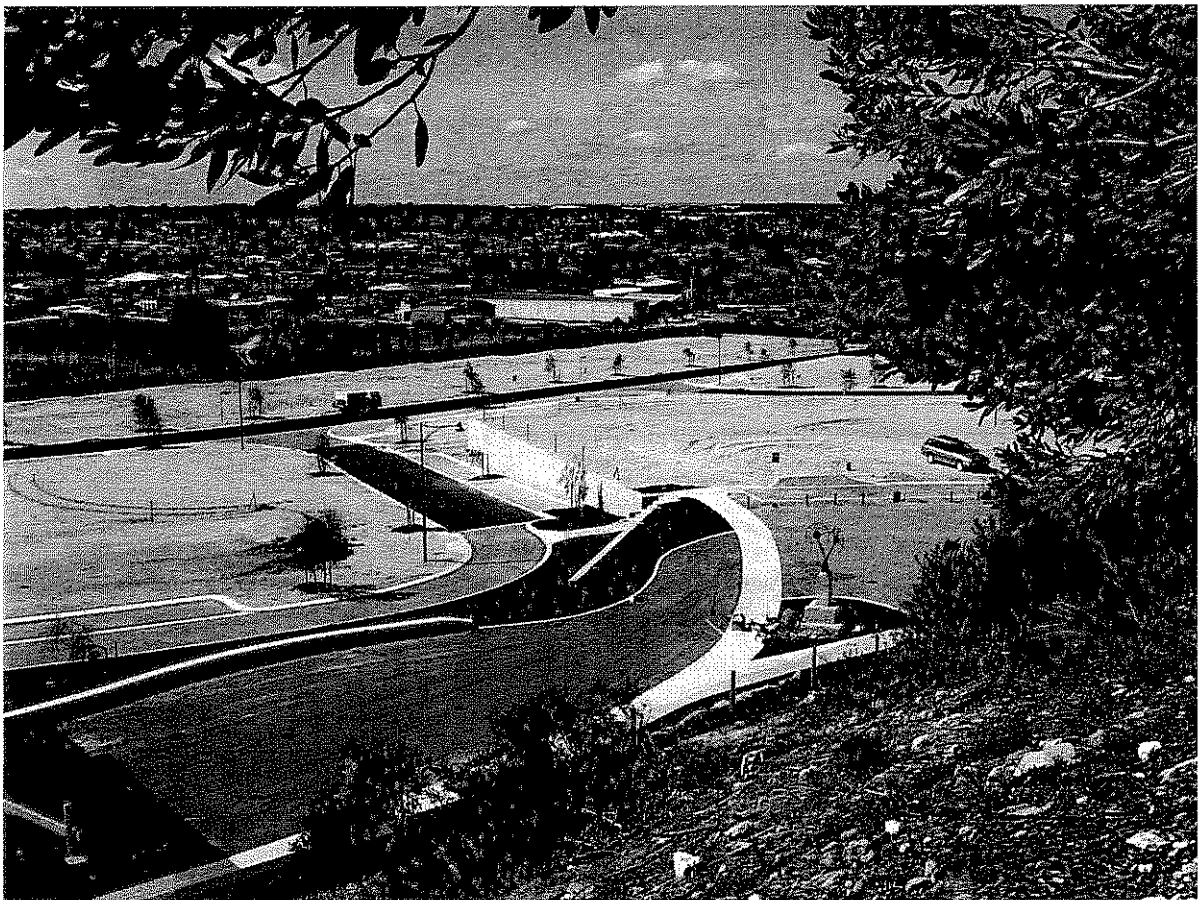
Total population of 9 regional centres with more than 10,000 people is equivalent to 215,000 people. Population of Metropolitan Area assumed to be 1,620,000 people. In the absence of reasonable data, assume waste generation at regional centres per capita is 90% of Metropolitan waste generation. Assume no recycling. Then waste generation calculated to be:

- Metro figure x 215,000 / 1,620,000²⁰ n 0.9

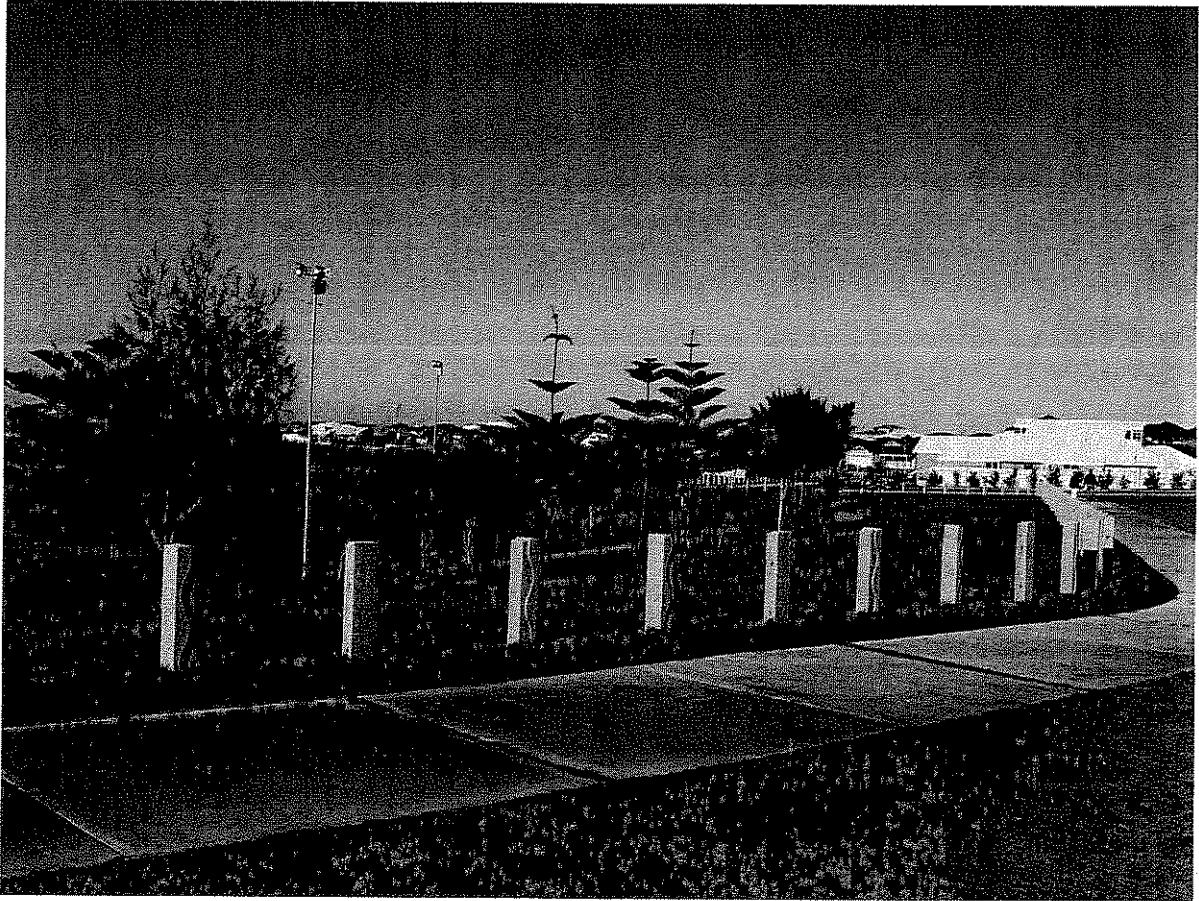
'While every effort has been made to present accurate information no responsibility is attributable to the authors for errors or omissions. Assumptions made in the paper are made in good faith but often in the absence of proper data being available.'

²⁰ Hazardous figure estimated in the absence of appropriate data.

Schedule 6 – Added value



Residential subdivision built on inert fill, Beaconsfield



Playing fields built on inert fill, Beaumaris



Part of 20ha of Open Space for a Special Residential subdivision built on inert fill, Carramar

Schedule 7– Illegal dumping

Examples of illegal dumping including asbestos: Wanneroo



