Environmental Defender's Office
Western Australia (Inc)

Waste management in Western Australia:
current law and practice and recommendations for reform

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1. Executive Summary

Western Australia has a number of waste management policies aimed at reducing the impact of waste on the environment, which include a vision of completely eliminating landfill waste.

Despite these policies, WA's total waste to landfill continues to increase and waste reduction targets fail to be met. For example, a target set in 1991 for a 50 per cent reduction in per capita waste to landfill by 2000 was not met when per capita waste to landfill increased by 25 per cent over that period.

The failure to meet waste reduction targets is not surprising, given that the focus of current waste management law is to manage the collection and disposal of waste, rather than put in place regulatory and economic drivers to reduce and recycle waste.

This report outlines the current law, policy and practice on waste management (Part 3) and then suggests options for law reform to put in place drivers to reduce and recycle waste and otherwise improve waste management (Part 5). The report recommends the following reforms:

Waste Avoidance and Recovery Bill

The Waste Avoidance and Recovery Bill (WARR Bill) is set to be introduced into Parliament in 2007. Western Australia is in need of waste law reform and the Bill is largely supported, although amendments are required to ensure that effective drivers for waste reduction, waste recycling and improved waste management can be introduced. The Bill is framework legislation. Subsidiary regulations and plans will need to be introduced to provide these drivers.

Extended Producer Responsibility

Extended Producer Responsibility (EPR) schemes make producers physically and/or financially responsible for the environmental impacts of their products throughout their life cycles.

Western Australia should adopt mandatory EPR schemes with legislative backing for a range of problematic wastes. Voluntary schemes are not sufficient. The Canadian model provides a useful precedent – mandatory minimum benchmarks set by government, with flexibility for industry to design and implement the most cost effective way of achieving that benchmark.

The provisions in the draft WARR Bill that would enable the creation of EPR schemes are supported, although they should be strengthened to allow strong penalties to be imposed on brand owners who do not comply with their EPR requirements.

Once the WARR Bill is enacted, regulations should be introduced as soon as possible to create mandatory EPR schemes. It is recommended that a container deposit scheme and mandatory EPR schemes for targeted electronic products should be enacted as a priority.

Product design and content standards

The WARR Bill should be amended to ensure that the Government can set minimum design and content standards for products. Such standards have been introduced in the United States (e.g. requiring recycled content in newsprint) and the European Union (e.g. to reduce the use of certain hazardous substances in electronic equipment).

Waste processing standards

Mandatory standards for waste processing should be developed and brought into force under the WARR Bill. This could include requirements for local governments to offer specified product recycling services and requirements for landfill operators to destroy methane gases so as to reduce their contribution to greenhouse gas emissions.

Ban on disposal of organic waste to landfill

A phased ban on organic waste to landfill should be considered, but in light of the problems identified a report commissioned by the Waste Management Board in 2006, it is likely that more investigation is needed before a ban could be implemented. The initial priority should be investment of funding to assist councils to establish appropriate infrastructure to recover organic waste. To ensure that any organic waste diverted from landfill to land application as compost are safe for use, WA should also implement mandatory minimum standards for all recycled organics applied to land, according to the use for which they are fit.

Treatment of hazardous waste

The recommendations of the Core Consultative Committee on Waste to establish specialised waste treatment facilities and precincts should be implemented with legislative backing.

Market based instruments

Following the passage of the WARR Bill, the Waste Authority should review current and proposed landfill levies to assess whether they provide a sufficient incentive to reduce the levels of waste going to landfill. The Government should also investigate the establishment of credit or trading scheme which encourage diversion of organic waste or other recyclable products away from landfill and if they are found to be viable, implement such a scheme under the WARR Bill.

2. Background

The Environmental Defender's Office

The Environmental Defenders' Office (WA) Inc ("EDO") is a not-for-profit community legal centre providing legal advice, legal education and law reform services on public interest legal environmental issues. The EDO has been operating since 1995. It offers legal assistance to individuals, groups and organisations concerned with public interest environmental legal matters where the individual, group or organisation is unable to afford private legal assistance. The EDO also participates in and promotes environmental law reform.

PPT funding

The EDO was provided with funding from the Law Society's Public Purposes Trust for the 2006/07 year to research the topic "Waste Management Law in Western Australia" and provide community legal education and opportunities to contribute to law reform to communities around WA.

The aim of this report is to provide a guide to the main areas of waste management policy and legislation in WA and to suggest law reform changes. Current State and Federal law, policy and practice is discussed in Part 3 and law reform suggestions are in Part 5. A brief summary of the major WA and Commonwealth waste laws has also been developed and is at Attachment B.

3. Current waste management law and practice

3.1 Introduction

In WA, waste is defined as[1]:

- any substance that is discarded, emitted or deposited in the environment in such volume, constituency or manner as to cause an alteration in the environment;
- any discarded, rejected, unwanted, surplus or abandoned substance;
- any otherwise discarded, rejected, unwanted, surplus or abandoned substance intended for sale or for recycling, reprocessing, recovery, or purification by a separate operation from that which produced the substance;
- any substance described in regulations under the *Environmental Protection Act 1986* as waste.

This part of the report outlines current law and practice relating to waste management, including the collection, disposal and recycling of waste. The limited existing laws relevant to waste avoidance are also described. Hazardous and nuclear waste laws are dealt with in separate sections, as specific legislation governs their movement and disposal. Laws relating to contaminated sites and illegal dumping, pollution and littering are also briefly described.

3.2 Waste collection, recycling and disposal

3.2.1 Waste collection by local government

Local governments have the primary role in managing municipal (mainly household) waste. This includes collection of waste and recyclables through kerbside collection, management of landfills, and in some cases operation of recycling facilities.

The Health Act 1911 is the primary Act dealing with all matters relating to public health, which at present includes many aspects of municipal waste management. The local government waste management powers in the Act will be replaced by the Waste Avoidance and Resource Recovery Bill, if it comes into force.

The focus of the waste provisions of the Health Act is on sanitary considerations and putrescible waste such as sewerage, rather than on waste minimisation or reuse. This is primarily due to the age of the Act and the focus placed on waste at the time the Act was drafted. The Act also creates the framework under which local government operates its waste removal and disposal function.

The Act gives local government powers to formulate a scheme for the construction and

[1] Department of Environment WA, *Landfill Waste Classifications and Waste Definitions 1996 (as amended),* 1 July 2005

maintenance of all sewers, drains, and appliances necessary for carrying away or disposing of or treating any noxious or waste matter within its district. It is an offence to discharge any waste into sewers which "causes a nuisance or is injurious to health, or interferes with the disposal of sewage". It is also an offence to defile or pollute any water supply.

The Act also gives local government powers to undertake or contract out works for:

- The removal of house and trade refuse and other rubbish from premises.
- The collection and disposal of sewage.
- The providing of receptacles for the temporary deposit of refuse and rubbish collected.
- The providing of suitable places, buildings, and appliances for the disposal of refuse, rubbish and sewage.
- The construction and installation of plants for the disposal of refuse, rubbish and sewage.

In the metropolitan area, some waste services are provided by regional councils, which are statutory bodies set up by local councils to perform some of their functions. For example the Southern Metropolitan Regional Council provides waste management services for seven local governments in the southern metropolitan area.[2] The power to establish a regional council comes from the *Local Government Act 1995*.

Under the draft WARR Bill, waste management services, including waste collection, will continue to reside with local councils, unless they chose to contract them out. However the CEO of the Department of Environment and Conservation (DEC) will have power to direct councils to provide certain waste management services if they are not doing so. In addition, the new statutory Waste Authority will have power to make binding codes of practice for waste management, and will set the waste management priorities for the State through the Waste Strategy. The WARR Bill is discussed further in Part 5.1 below.

3.2.2 Waste recycling

Municipal waste

Each council can determine which products it will recycle and how it will recycle them. Most local government recycling services in the metropolitan area are provided by regional councils as this is more economically efficient. Food and garden organics are the largest component of municipal waste that is recovered by weight (49.8%), followed by paper (26.8%), metals (12.5%), glass (4.5%) and plastics (1.2%).[3]

All local councils in the metropolitan area provide some level of kerbside recycling

[2] See <www.smrc.com.au>
[3] Cardno BSD, *Review of Total Recycling Activity in Western Australia 2005/06* (June 2007), <http://www.zerowastewa.com.au/documents/rec_activity_review_0506.pdf> p6.

service for various products such as bottles, cans, paper and plastic and organic waste. In addition councils may provide a drop off point for products that can be recycled but are not collected as part of the kerbside service, such as mobile phones. Most metropolitan councils provide full kerbside recycling services. The City of Perth provides limited kerbside recycling for glass and paper households, but does not provide any other household kerbside service (although a full trial is being held in East Perth)[4]. All major regional centres either provide kerbside recycling or are in the process of bringing it in (e.g. Geraldton and Kalgoorlie). Some of the smaller non-metropolitan councils provide a kerbside service or some form of drop off facility for recycling, but this may be more limited and the items that can be recycled varies from council to council depending on factors such as markets and transport capabilities[5].

Local Governments and regional councils adopt different recycling systems. For example, the City of Stirling has a single bin system so that all wastes including recyclables are put into a single bin. Wastes are then separated at a material recovery facility into plastics, glass, steel, aluminium and organic waste. The City of Stirling states that on average 68% of the waste that goes to their recovery facility is recycled.[6] Anything left over goes to landfill. The City of Nedlands provides three bins – for waste (to go to landfill), recyclables and organic waste.

A recent report has stated that the main barriers to an increase in the rates of recycling are low landfill gates fees which do not encourage users to recycle rather than dispose to landfill; the distances and costs associated with transporting waste from regional areas; and the lack of local market for recycled materials especially after the recent closure of the ACI glass processing facility and the AMCOR paper recycling facility in WA.[7]

If the WARR Bill comes into force the State Government will have more control over which recycling services are provided by councils, and the standards that they must comply with.

Organic waste

Organic wastes represent more than a third of all waste that is disposed to landfill[8]. Organic wastes consist of all solid food and food processing wastes, paper wastes, green waste, wood waste, timber processing wastes, biosolids, manures, and sludges. Due to

[4] See the City of Perth website at <http://www.perth.wa.gov.au/web/Living/Residents-and-Ratepayers-Information/Waste-Management/>
[5] Pers comm., WA Local Government Association Waste Management Officer.
[6] Pers comm., Viet Nysen, City of Stirling waste management officer 4 July 2007. However note that the Atlas material recovery facility that takes waste from the City of Stirling is not currently unable to cope with the volume of waste collected in Stirling and so approximately 8000–10000 tonnes of the 82000 tonnes of waste collected in Stirling goes straight to landfill without being sorted, until a new facility is completed in 12 to 18 months time.
[7] Cardno BSD above n 3
[8] Jackson M, *Management of garden and food organics produced by municipal and commercial & industrial sectors in Australia and overseas*, July 2005

the volume of organic waste and its qualities there are a number of potential problems associated with its management and disposal including public health problems, potential for disease, odours and pests as well as environmental issues such as greenhouse gases, and leachate from landfill.[9] Most stakeholders agree that it is preferable that organics do not end up in landfill.

Box 1 **Case study: City of Stirling organic waste recycling**[10]

The City of Stirling uses a single bin system for all household waste including recyclables. Stirling has an education program to prevent households from putting contaminants in their bin, however some hazardous items such as batteries do end up in the bin. The waste goes to the Atlas material recovery facility in Mirrabooka where it is sorted into recyclables, general waste and organic waste. The majority of contaminants are filtered out of the organic component at this stage. The organics are taken to the Atlas farm at Calingari where they are composted and screened to remove any remaining physical contaminants over 2mm in size. No waste to energy processes are used in the composting process. Atlas conducts independent testing of the compost for chemical contaminants. According to Viet Nysen, the City of Stirling's waste management officer, the compost usually meets class 1 of the Western Australian Guidelines which means it is very low in contaminants (class 3 has the highest concentration of contaminants). On occasion the compost meets class 2 instead of class 1, mainly due to the presence of copper and zinc. The City of Stirling believes these are dissolved minerals from water pipes. Class 1 and class 2 compost is suitable for certain uses on agricultural land. The Atlas farm is 20,000 acres in size and produces grain crops and livestock. All compost from the City of Stirling is used on the farm.

Most councils collect some organic waste through specific kerbside or drop off collections and mulch it for garden use. Some councils separate organic waste from other mixed waste and divert it into organic products such as compost. For example the Southern Metropolitan Regional Council has a two bin system and separates organics from general household waste. However the recovery of organic waste from mixed waste streams for use in compost is not without controversy.

The community has raised concerns about potential contamination problems when processing compost from mixed waste sources. Where organic wastes are obtained from a waste stream that includes other wastes, there is always the potential for the resulting compost to be contaminated. Households can put contaminants such as batteries and chemicals or glass and plastics in the bin with organic materials, which can and do slip through the initial sorting process. If contaminants are not filtered out or destroyed when processing the compost, they can harm soils, water quality, plants, animal health

[9] Jackson M, above n 8

[10] Information supplied by pers comm., Viet Nysen, City of Stirling's waste management officer, 4 July 2007

and human health.[11]

Thorough screening and regular testing can detect most contaminants, provided that waste operators know what to test for. The South Metropolitan Regional Council and the City of Stirling adhere to the voluntary *Australian Standard 4454 (2003) for composts, soil conditioners and mulches*; and the *Western Australian Guidelines for Direct Land Application of Biosolids and Biosolids Products*. Organic products that adhere with this policy have strict controls on their use – they are tested for contaminates, are labelled with warnings about potential problems and can only be applied in a restricted way. They are not available for general purchase to use in households for example.

In light of growing community concerns about recycled organic products and their application to land in WA and an increased awareness of the need to divert organics from landfill, the Waste Management Board examined this issue in 2005.[12] In 2006 a draft organics strategy was released for public comment. The WMB supported the composting of organics, provided criteria were met such as enclosed composting of food organics, and treatment of garden organics for weed seeds and diseases.[13] The WMB continues to investigate the use of municipal organics. The Waste Management Association of Australia is currently conducting a study of organic products from municipal solid waste to develop a consistent picture of what contaminants may be found in municipal solid waste derived organics and to develop an appropriate testing regime that can be used in the future.[14] At the time of writing this paper, the WA Local Government Association had released a Draft Policy Statement on Standards for Recycled Organics Applied to Land, advocating the adoption of mandatory minimum standards for testing, labelling and use. [15]

Suggested law reform options for the use of organic waste are set out in Part 5 below.

Commercial and industrial waste

Close to 850,000 tonnes of commercial and industrial waste was recovered through recycling in 2005/06. As outlined in the Cardno BSD report *Review of Total Recycling Activity in Western Australia 2005/6,* the largest sources of recycled material in this sector are:

- Organics – representing 49% of material recovered in this sector, most reprocessed organic material is used to produce mulches or composts; and
- Steel – representing 31% of material recovered in this sector, most steel is exported to China or Korea for reprocessing.

[11] Jackson M, above n 8
[12] Waste Management Board *Organics Strategy –Draft for Public Comment,* June 2006
[13] Waste Management Board June 2006 above n 12
14 Pers comm., WA Local Government Association waste management officer June 2007
15 WA Local Government Association *Draft Policy Statement on Standards for Recycled Organics Applied to Land*, July 2007

Materials in the commercial and industrial sector are recycled in accordance with private commercial arrangements, but the relative competitiveness of recycling is affected by the rate of the State government's landfill levy.

Construction and demolition waste

Close to half a million tonnes of construction and demolition waste was recovered through recycling in WA in 2005/06.[16] As outlined in the Cardno BSD report cited above, the largest sources of recycled material in this sector are as follows:

- Sand – representing 46% of material recovered in this sector, sand that is recycled is cleaned and screened to produce uniform sized fractions of sand grains that can be used again in construction activity;
- Bricks and rubble – representing 29% of material recovered in this sector, bricks and rubble that are recycled are crushed and screened to produce an aggregate that can be used in products such as road base or drainage aggregate;
- Concrete – representing 18% of material recovered in this sector, concrete that is recycled is crushed and screened to produce an aggregate, which can be used in similar products to recycled bricks and rubble.

Again, materials in the commercial and industrial sector are recycled in accordance with private commercial arrangements, but the landfill levy affects the relative competitiveness of recycling. At present only about 20 per cent of construction and demolition waste is recycled, with the balance going to landfill.[17]

3.2.3 Waste Disposal

Waste disposal for some waste products is regulated through licensing of landfills and the controlled waste regulations.

Waste is generally disposed of at landfills which are most commonly operated by local or metropolitan regional councils. Landfills are required to be licensed under Part V of the Environmental Protection Act. Landfills are given a category according to what type of materials they can accept. The categories range from Class I to Class V. Class I is suitable for inert landfill which is generally non-hazardous and stable. Class V landfills take intractable waste, which is waste that is a problem to manage due to its toxicity or chemical or physical characteristics, for example radioactive waste or significantly contaminated soils.[18] Solid waste must be categorised before disposal to ensure it is disposed of in the appropriate landfill type. A full description of landfill and waste types is in the Department of Environment's *Landfill Waste Classifications and Waste Definitions*

[16] Cardno BSD, above n 3
[17] ACIL Tasman, *Landfill ban: Investigation into the environmental, social and economic impacts of a potential ban on disposal of household recyclable packaging, recyclable building products and organic waste to landfill,* October 2006 <http://www.zerowastewa.com.au/documents/landfill_ban_report.pdf> p69.
[18] Landfill Waste Classifications above n 1

1996 (as amended).
General requirements for landfills that accept more than 20 tonnes but less than 5000 tonnes of waste per year are in the *Environmental Protection (Rural Landfill) Regulations 2002*. For example the regulations include circumstances under which green waste can be burned and requirements to cover waste with inert material.

The *Environmental Protection (Controlled Waste) Regulations 2004* place the obligation on the driver and carrier of the waste, and the operator of the landfill to ensure that controlled waste is disposed of at the correct site. The controlled waste regulations also contain specific requirements for the disposal of asbestos.

Regulation of nuclear waste and hazardous waste is discussed further below.

3.3 Waste avoidance

3.3.1 Landfill levy

Under the *Environmental Protection (Landfill) Levy Act 1998* and the *Environmental Protection Regulations 1987*, a landfill levy is payable for waste received at licensed landfills in the Perth metropolitan region, or collected within the metropolitan area and received at licensed landfills outside the metropolitan area.[19] The levy was introduced in WA in 1998 at a rate of $3 per tonne for biodegradable waste and $1 per cubic metre for inert waste. The levy remained at that rate until 2006, when it was increased to $6 and $3 respectively. This provides a financial incentive to reduce the level of waste going to landfill, albeit a modest one compared to landfill levies in other states. The revenue from the landfill levy must be deposited into a Waste Management and Recycling Account and may be applied by the responsible Minister:

- to fund programmes relating to the management, reduction, reuse, recycling, monitoring or measurement of waste that are approved by the Minister; and
- in payment of the costs of administering the Account (including the costs of collecting levies and penalties and support and evaluation services).[20]

3.3.2 Extended producer responsibility for packaging waste

There are two associated initiatives that aim to reduce the volume and impact of packaging waste: the Used Packaging Materials National Environmental Protection Measure (and the associated regulations *Environmental Protection (NEPM–UPM) Regulations 2007*) and the National Packaging Covenant. They are based on product stewardship and extended producer responsibility principles. Extended producer responsibility is discussed further in Part 5 below.

[19] *Environmental Protection Regulations 1987*, reg 22.
[20] *Environmental Protection Act* 1986, s110H.

Used Packaging Materials National Environmental Protection Measure and associated regulations

National Environment Protection Measures (NEPMs) are broad framework-setting statutory instruments outlining agreed national objectives for protecting or managing particular aspects of the environment. The NEPMs themselves do not impose legal obligations and so each State and Territory must implement legislation to give them legal backing[21]. In WA, powers to implement NEPMs come from the Environmental Protection Act, but the detail of each NEPM is in regulations made under the Act.

The Used Packaging Materials NEPM uses the concept of product stewardship in an attempt to reduce waste. The aim of the UPM NEPM is to reduce the amount of packaging waste and encourage the use of recycled materials in creating packaging. The intent of the NEPM is to provide a 'safety net' of regulation and ensure that signatories to the National Packaging Covenant are not placed at a commercial disadvantage by fulfilling their commitments under the Covenant.

WA has not enforced the NEPM for the past 3 years as previous regulations to implement the NEPM expired in 2004 and have only recently be re-introduced.

The *Environmental Protection (NEPM–UPM) Regulations 2007* (WA) require businesses producing a significant amount of packaging waste to self-regulate to a specified standard to ensure their packaging materials are recycled or reused appropriately. Brand owners who are signatories to the National Packaging Covenant, or manage their packaging in a way that meets the environmental outcomes of the NPC, or do not produce much packaging, or have under $5 million in annual sales are not required to comply with the regulations.

Brand owners bound by the regulations are required to develop an action plan which sets out how they intend to ensure that their packaging is recovered and reused, recycled or used for energy recovery. Brand owners must meet minimum targets for recovery. The current targets are listed in Table 1. These will increase in 2010.

A failure to comply with any of the requirements of the regulations, including a failure to comply with an action plan, results in a fine of $5,000 for natural persons and $25,000 for corporate bodies.[22]

[21] Apart from in South Australia where NEPM's are automatically incorporated into State law once confirmed.

[22] See reg 5 *Environmental Protection (NEPM–UPM) Regulations 2007* and *Sentencing Act 1995* s40(5). The penalties across Australia for corresponding regulations are inconsistent across Australia and range from $250,000 (ACT) to $4,000 (Tasmania).

Table 1 **Mandated recovery targets for packaging in Western Australia**

Consumer packaging	Recovery rate
Aluminium	69%
Glass	47%
Paper and cardboard	72%
Plastics: high-density polyethylene (HDPE)	47%
Plastics: polyethylene terephthalate (PET)	47%
Plastics other than high-density polyethylene (HDPE) and polyethylene terephthalate (PET)	27%
Steel	54%

Source: Regulation 8, *Environmental Protection (NEPM UPM) Regulations 2007*

National Packaging Covenant

The NEPM operates in combination with the National Packaging Covenant. As noted above, signatories to the Covenant are exempt from compliance with the NEPM UPM regulations. The Covenant was established in 1999 and revised in 2005. It is a voluntary agreement between key players in the packaging supply chain and governments at Federal, State and local level. There were 416 signatories as at June 2006, and 3% of those came from WA.[23] It encourages better packaging design, increased recycling, increased use of recycled materials and fewer materials to landfill.[24] It currently has three main targets – a recycling rate of 65% of packaging products that are subject to the agreement, no increase of waste to landfill over 2003 levels and a recycling rate of 25% for materials that are currently not recycled.[25] Signatories set up an action plan and then report to the secretariat each year on their progress in complying with their plan.

Data from the 2005/06 annual report shows that the recycling rate for packaging caught under the Covenant has increased to 56% (from 48% in 2003). However, waste to landfill has increased by 2% from 2003 to 2005. The authors state that even with this increase there has been an "annual net benefit equal to 6.5 million m^3 of landfill space saved" compared to what would have occurred without the Covenant.[26]

[23] National Packaging Covenant Council, *The National Packaging Covenant Annual Report 2005-2006*
[24] National Packaging Covenant Council, *National Packaging Covenant Information Kit* on the NPC website <http://www.packagingcovenant.org.au>
[25] National Packaging Covenant Council, *National Packaging Covenant Information Kit* above n 24
[26] National Packaging Covenant Council, *Annual Report*, above n 23

Critics of the Covenant say that this voluntary approach is ineffective as its targets are too low; it doesn't effectively address the packaging problem all the way through its lifecycle – most importantly design and end recovery; and compliance is weak because the Covenant is voluntary and is not properly monitored and enforced.[27] For example, one assessment has stated that "currently signatories are not taking their responsibilities under product stewardship seriously, predominantly due to a lack of defined material targets under the Covenant and because enforcement by both the NPCC and state and territory agencies has only recently begun. Whilst the NPCC addressed some of these issues in the 2005 Covenant, there are still major flaws that need to be overcome."[28] It is argued that a mandatory EPR scheme with legislative backing would have better environmental outcomes.

However the packaging industry generally opposes mandatory EPR schemes and strongly pushes for a self-regulatory or at most, co-regulatory (largely voluntary) schemes for dealing with waste. This has been seen most recently in WA over the debate about the introduction of container deposit legislation, which the beverage industry strongly opposes.

3.4 Hazardous Waste

3.4.1 Introduction

Hazardous waste is defined as a "component of the waste stream which by its characteristics poses a threat or risk to public health, safety or the environment (includes substances which are toxic, infectious, mutagenic, carcinogenic, teratogenic, explosive, flammable, corrosive, oxidising and radioactive)"[29] The WA Government states that such wastes are generally unsuitable for landfill disposal and should only be accepted within landfills after appropriate treatment and/or in accordance with specific licence conditions or with specific written approval from the government.[30] Hazardous wastes include explosives; flammable liquids; substances liable to spontaneous combustion; substances which on contact with water emit flammable gases; toxic substances; corrosive substances, biomedical and related wastes, pharmaceuticals and poisons.[31]

Hazardous waste is dealt with under numerous state and federal Acts, regulations and codes of conduct, depending on the type of waste and the stage it is at in its lifecycle. In particular, the transport of hazardous waste is regulated by a plethora of international, commonwealth and state legislation. The main aspects of these are outlined below.

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[27] See for example *An Independent Local Government Evaluation of the National Packaging Covenant*, Meinhardt Infrastructure & Environment Pty Ltd, February 2004. Sommer, N; *It's Not My Bag Baby – Responsibility for Packaging and the National Packaging Covenant*. The Australasian Journal of Natural Resources Law and Policy [Vol 10, No2, 2006]

[28] Sommer, N; above n 27

[29] Department of Environment WA, *Landfill Waste Classifications,* above n 1

[30] Department of Environment WA, *Landfill Waste Classifications,* above n 1

[31] Department of Environment WA, *Landfill Waste Classifications,* above n 1

3.4.2 Hazardous Waste Transport - International

Internationally, Australia has signed the *Basel Convention on the Control of Trans-boundary Movements of Hazardous Waste and their Disposal 1989*[32]. The main aims of the Basel Convention are to encourage environmentally sound management of hazardous waste, to regulate international trade in hazardous waste and to reduce the generation of hazardous wastes.

Obligations in this convention are enacted through the *Hazardous Waste (Regulations of Exports and Imports) Act 1989 (Cth)*. The Act prohibits exporting or importing hazardous waste without a permit. The Federal Minister for the Environment can only grant a permit to export hazardous waste where it can be shown that the wastes will be managed in an environmentally sound manner in the country of import. This in turn means that hazardous waste must generally be treated and disposed of in its country of origin, restricting the opportunity to protect the local environment by exporting the problem. The definition of hazardous waste in the Act includes household waste. Regulations made under the Act allow the Minister to grant special import permits authorising the import of hazardous waste from East Timor, provided environmentally sound management is used.

From March 2005 to March 2006 ten permits were granted to export hazardous waste and ten permits were pending.[33]

Export permits granted from March 2005 to March 2006:
- UK
- France (2)
- Germany
- Netherlands
- Belgium
- Sweden
- NZ (2)
- Thailand (a non-OECD country)

Export permits pending as at March 2006:
- Canada
- France (3)

[32] Australia has also signed the *Convention to Ban the Importation into Forum Island Countries of Hazardous and Radioactive Wastes and to Control the Transboundary Movement and Management of Hazardous Wastes within the South Pacific Region* (Waigani Convention) which applies specifically to Pacific Island countries and is implemented through regulations under the Cth Hazardous Waste Act.

[33] Department of Environment and Water Resources, *Hazardous Waste Act: Permit report for twelve months ending 6 March 2006*. Viewed at: <http://www.environment.gov.au/settlements/publications/chemicals/hazardous-waste/pubs/permits060306.pdf>

- Germany
- Netherlands (2)
- Sweden (2)
- Thailand (a non-OECD country)

Box 2 **Case Study: Orica chemical stockpile**

Orica Australia Pty Limited has applied to export 22,000 tonnes of highly toxic hexachlorobenzene (HCB) waste from a stockpile in Sydney to four toxic waste processing facilities in Germany.[34] The stockpile in Orica's chemical site at Botany is the by-product of the manufacture of chlorinated solvents[35] and is one of the largest highly toxic chemical stockpile in the world.[36] Items in the stockpile include liquids, tars, solids, soils, wood, clothing, and large structures such as concrete and steel tanks.[37] There is currently approximately 16,000 tonnes of HCB waste, including packaging stored in secure licensed storages, however this will increase to 22,000 tonnes because all the waste will need to be repackaged prior to disposal, creating extra toxic waste. Australia does not have a hazardous waste facility capable of destroying the stockpile and cannot find a suitable location to build such a facility[38], so it must be sent overseas, despite the additional hazards of international transport. Recently the Federal Minister conveyed to the German authorities that he was satisfied Australia does not have the capacity to dispose of the waste. By law, the Federal Minister can not grant an export permit until the German authorities have given written consent to accept the waste.[39] However, the relevant German State governments have recently refused to accept the waste[40] and the waste will therefore continue to be stockpiled until a solution is found.

[34] Orica Australia Pty Limited Application for Basel Export Permit pursuant to the Hazardous Waste (Regulation of Exports and Imports) Act 1989. Dated 4 August 2006 at page 3 clause 2.1 viewed at <http://www.oricabotanyhcb.com/PDFs/HCB_Application_Part_1_Nov_2006.pdf >

[35] Orica Australia Pty Limited above, n 34

[36] see <http://www.oricabotanyhcb.com/export.html>

[37] Orica Australia Pty Limited above, n 34

[38] *"The IRP concurs with Orica's conclusion that there is little prospect of identifying a site that complies with the two central success factors required to facilitate hazardous waste destruction at the scale and concentration of the Orica stockpile: willing community endorsement; and availability of local supporting infrastructure."* NSW Independent Panel Report (IRP) - November 2006 Report - commissioned by the former NSW Minister for Infrastructure and Planning at page 2 <http://www.planning.nsw.gov.au/planningsystem/pdf/orica_hcb_panel_report.pdf >

[39] Media release, The Hon Malcolm Turnbull MP, *Update on application to export HCB's to Germany*, 25 May 2007 at <http://www.oricabotanyhcb.com/PDFs/Turnbull%20Release%20250507.pdf>

[40] 'Sydney stuck with world's largest chemical dump' Tue Jun 19, 2007 <http://abc.net.au/news/stories/2007/06/19/1955122.htm>

3.4.3 Hazardous Waste Transport - National

As noted above, National Environment Protection Measures (NEPMs) are broad framework-setting statutory instruments outlining agreed national objectives for protecting or managing particular aspects of the environment. The Movement of Controlled Waste between States and Territories NEPM establishes a nationwide tracking system for the interstate transport of controlled wastes. The NEPM provides lists of waste streams, specific constituents and hazardous characteristics to identify whether specific materials are hazardous waste. This is similar to the way in which the Basel Convention defines hazardous wastes. Exemptions from some requirements of the Movement of Controlled Waste NEPM may be given based on the direct reuse of some controlled wastes.

3.4.4 Hazardous Waste Transport - State

The Environmental Protection (Controlled Waste) Regulations 2004 manage 'controlled waste' within WA by setting out a licensing and tracking system for transportation and disposal of such waste and making it an offence to not comply with any of the requirements. Controlled wastes are listed in the regulations and are generally waste that are considered hazardous such as mercury, solvents, sewage and lead.

There is a significant degree of overlap between these regulations and the awaited Dangerous Goods Safety Act Regulations in that many of the "controlled wastes" as defined in these Regulations are likely to also be "dangerous goods" under the DGSA.

The Dangerous Goods Safety Act was passed in 2004 but cannot come into force until all supporting regulations are completed. The seven sets of regulations are due to be proclaimed in 2007. The Act will make it an offence to fail to take all reasonably practicable measures to minimise the risk to people, property and the environment in handling, transporting, storing, treating and disposing of "dangerous goods" (the scope of which is to be determined by the regulations).

3.4.5 Hazardous Waste Disposal

As noted above, hazardous waste is considered to be unsuitable for landfill and so alternative waste management options must be utilized. Hazardous waste can only go to landfill where licence conditions allow it or where the Department of Environment and Conservation has given written approval. Hazardous waste is generally disposed of at specialist hazardous waste treatment centres which are licensed under the Environmental Protection Act. Hazardous wastes regularly end up in general landfill however, due to incorrect disposal by the user of the hazardous waste.

In 2001 there was a fire at the Bellevue waste treatment facility which resulted in toxic emissions blowing over the nearby residential area. Bellevue remains closed with a cleanup of the site yet to be completed nearly seven years later. The closure of the

Brookdale waste treatment facility in December 2003 further limited the options for the treatment of hazardous/industrial wastes in Western Australia.

In 2003 the WA Government established the Core Consultative Committee on Waste (3C) to assess options for hazardous waste management in WA. Cabinet endorsed a number of the 3C's recommendations between 2003 – 2005 on possible sites for waste facilities, decision-making approaches and hazardous waste classifications.[41] The 3C noted that although the waste treatment sector had made modifications to incorporate waste previously treated at Brookdale, there was still insufficient hazardous waste treatment capacity in the South-West of WA and some waste streams were being transported long distances to Kalgoorlie, Port Hedland and the Eastern States for treatment.[42] The transport of hazardous waste over great distances causes a number of problems including cost and environmental and community safety.

In October 2006 the 3C recommended that waste treatment facilities be established in the Pilbara, Goldfields and South West regions with legislation developed to strictly monitor and regulate them.[43]

At the end of 2006 the Environment Minister terminated the 3C process and stated that he was not convinced that additional dedicated hazardous waste treatment facilities were required in WA[44]. The Government stated that a government coordinating group was considering the recommendations and would advise Cabinet over the subsequent months.[45] To date there has been no publicly announced progress on this issue however DEC has stated that the coordinating group is finalising its feasibility study and will send its recommendations to the Environment Minister shortly. Cabinet will then decide whether to implement the 3C's recommendations.[46] For now, industries that produce hazardous waste are left to transport their waste to Kalgoorlie or the Eastern States. A number of stakeholders believe there is inadequate management and insufficient disposal options for hazardous waste in WA and strongly believe additional waste treatment facilities are required.

[41] For more information see the Core Consultative Committee on Waste, *Advice to Cabinet on the siting of hazardous/industrial waste treatment precincts and the legislative and regulatory model to be applied to hazardous/industrial waste treatment precincts,* 4 October 2006 viewed at <www.dec.wa.gov.au>
[42] Core Consultative Committee on Waste above n 41
[43] Core Consultative Committee on Waste above n 41
[44] Media Statement, Mark McGowan MLA, *Government to consider hazardous waste report*, 31 October 2006
[45] DEC hazardous waste website viewed at http://portal.environment.wa.gov.au/portal/page?_pageid=157,6190770&_dad=portal&_schema=PORTAL
[46] Pers comm., waste management officer, Department of Environment and Conservation 4 July 2007.

3.5 Nuclear waste

3.5.1 Sources of nuclear waste

Australia's nuclear waste results from three main sources[47]:

1. radioactive medical, scientific and industrial waste
2. spent nuclear fuel from Australia's research reactor at Lucas Heights near Sydney, and
3. site contamination from British nuclear weapons tests conducted in South Australia in the 1950s.

Australia has total holdings of around 4300 cubic metres of radioactive waste.[48]

3.5.2 Regulation of radioactive waste

Nuclear and radioactive waste is dealt with by a number of State and Federal laws.

The *Radiation Safety Act 1975* (WA) mainly deals with radioactive waste for predominantly medical or scientific use. Radioactive waste must be disposed of under a disposal permit prescribed by the Radiological Council, with the exception of "nuclear waste" as defined in the *Nuclear Waste Storage and Transportation (Prohibition) Act 1999* (i.e. waste from a nuclear plant or nuclear weapons). An offence under the *Radiation Safety Act* results in a maximum fine of $1,000 and $50 for every day thereafter if it's a continuing offence.

The *Nuclear Activities Regulation Act 1978* (WA) allows the making of regulations and codes protecting health, safety and the environment from harm of nuclear activities (including waste associated with uranium mining or nuclear facilities). All regulations and codes made under this Act must have Ministerial approval. To date there have been no regulations or codes developed.

3.5.3 Prohibition on storage and transportation of nuclear waste

The *Nuclear Waste Storage and Transportation (Prohibition) Act 1999* (WA) seeks to prohibit the construction or operation of nuclear waste management facilities in WA and to prohibit the transport of nuclear waste in WA.

The objects of the Act are "to protect the health, welfare and safety of the people of Western Australia and to protect the environment in which they dwell by prohibiting the establishment of a nuclear waste storage facility in this State, the use of any place in this State for the storage or disposal of nuclear waste and the transportation in this State of nuclear waste".

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[47] Ian Holland and Matthew James, *Radioactive waste and spent nuclear fuel management in Australia* <http://www.aph.gov.au/library/pubs/online/RadioactiveWaste.htm>

[48] Ian Holland above n 47

The definition of nuclear waste excludes radioactive waste such as that which might be generated by mining radioactive substances. It also excludes waste that results from the use of the products of a nuclear plant.

The Act makes it an offence to construct or operate a nuclear waste storage facility in WA or to use any place in WA for the storage or disposal of nuclear waste. The maximum penalty for contravention is $500,000. It imposes a similar penalty for an offence of transporting nuclear waste in WA. The Minister has power to seek an injunction to restrain a contravention.

Box 3 **Case study: establishing a nuclear waste storage facility**

The Commonwealth Government has recently announced that it will establish a nuclear waste storage facility in the Northern Territory. If the facility goes ahead, it will end years of searching by the Commonwealth across Australia for a suitable site. The Commonwealth has met with consistent resistance in its search for a site from state governments and landowners. The proposed site is at Muckaty Station, 120 kms north of Tennant Creek. The traditional owners of the site have indicated their willingness to have the site investigated for suitability. If the site is found to be suitable, the facility is likely to be operating within the next five years. In return, the traditional owners will receive $12 million from the Commonwealth. The Northern Territory Government is opposed to the facility, but as a Territory of Australia rather than a State, does not have legal power to prevent it. The Northern Territory Government introduced legislation to prevent a nuclear waste dump from being established, however it was overridden in 2006 by the Commonwealth government through the *Commonwealth Radioactive Waste Management Act 2005*.

3.6 Contaminated sites

In 2004 the *Contaminated Sites Act 2004* was passed by Parliament, however it only came into force on 1 December 2006. The significant delay was due to the time taken to develop regulations under the Act. The Act is a significant alteration from the way remediation of contaminated sites was previously treated at law. The basis of the Act is the polluter pays principle which provides that those who generate pollution and waste should bear the cost of containment, avoidance or abatement.

According to the Act a site is contaminated when there is a substance present on that site (including land and water), at above background concentrations that presents or has the potential to present, a risk of harm to human health, the environment or an environmental value. Land can become contaminated through poor waste management practices such as inappropriate disposal of chemicals, accidental spillage of chemicals or leaching from landfill.

Any person may report a known or suspected contamination of any site to the

Department of Environment and Conservation, however landowners, or those who either know or suspect they have caused or contributed to that contamination, must report it within 21 days. Failure to make a mandatory report is an offence with a penalty of up to $250,000. When the Act first came into force, a six month grace period was given for mandatory reporting, up until 1 June 2007.

The Act establishes a scheme for determining when sites must be remediated and who will be responsible. In general the person who causes the contamination will be responsible, however in certain circumstances the owner or occupier may be responsible, or the Government may assume responsibility if another liable party cannot be found.

Contaminated sites are listed on a publicly accessible database and in certain circumstances owners must give notice of contamination to purchasers, mortgagees or lessees of the property, at least 14 days before the completion of the transaction.[49]

355 new reports were classified and loaded onto the contaminated sites database between 1 December 2006 (when the Act came into force) and 18 May 2007 (just before the grace period ended), with a backlog of 60 reports to be processed.[50] On 19 June 2007 (just after the grace period had ended) over 1000 reports had been received and were being prioritised for classification according to the seriousness of the contamination. In the vast majority of cases, the Department of Environment and Conservation are unlikely to meet the 45 day target for classifying sites during that time.[51]

3.7 Illegal dumping, pollution and littering

There are a range of laws that aim to prevent and punish illegal dumping, pollution and littering on land, in waterways or in the ocean.

The Environmental Protection Act deals with pollution events, making it an offence to cause unreasonable emissions or environmental harm[52].

The *Litter Act 1979* includes an offence for littering, with a maximum fine of $1000. The Litter Act will shortly be repealed and new litter provisions will be incorporated in the Environmental Protection Act. The changes include the new offence of illegal dumping, increasing fines for littering by corporations and enhancing the investigative powers of enforcement officers.[53]

The *Waterways Conservation Act 1976* deals with the discharge or deposit of waste which might enter the waterways and cause damage through pollution to the water or water

[49] The contaminated sites database can be found at <www.environment.wa.gov.au>
[50] Pers comm., DEC contaminated sites officer 18 May 2007
[51] Pers comm., DEC contaminated sites officer 19 June 2007
[52] See sections 49 – 50B.
[53] Pers comm., DEC officer 26 June 2007

sources. It also provides a system of licences for the discharge or deposit of material in water or on land controlled by the Commission.

Provisions of the Environment Protection Act that apply to pollution on land equally apply to the discharge of pollutants into the marine environment. In addition, there are laws that apply specifically to disposal of waste into the ocean.

The Environment Protection (Sea Dumping) Act 1981 (Cth) gives effect to the *Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter 1972* (the London Convention). It prohibits the dumping or incineration at sea of radioactive material, wastes and other material without a permit. There is an exemption for dumping conducted to save human life or a vessel in distress. Where dumping has occurred the Minister has power to mitigate the damage or take remedial action and recover the costs from the person convicted of dumping. The Act applies to all vessels in Australian waters and to Australian vessels in international waters. The Act does not apply in relation to the disposal of wastes related to the exploration, exploitation and associated off-shore processing of sea-bed mineral resources.

Western Australia has enacted the *Western Australian Marine (Sea Dumping) Act 1981* to give effect to the London Convention in WA waters.

4. Assessment of current law and practice

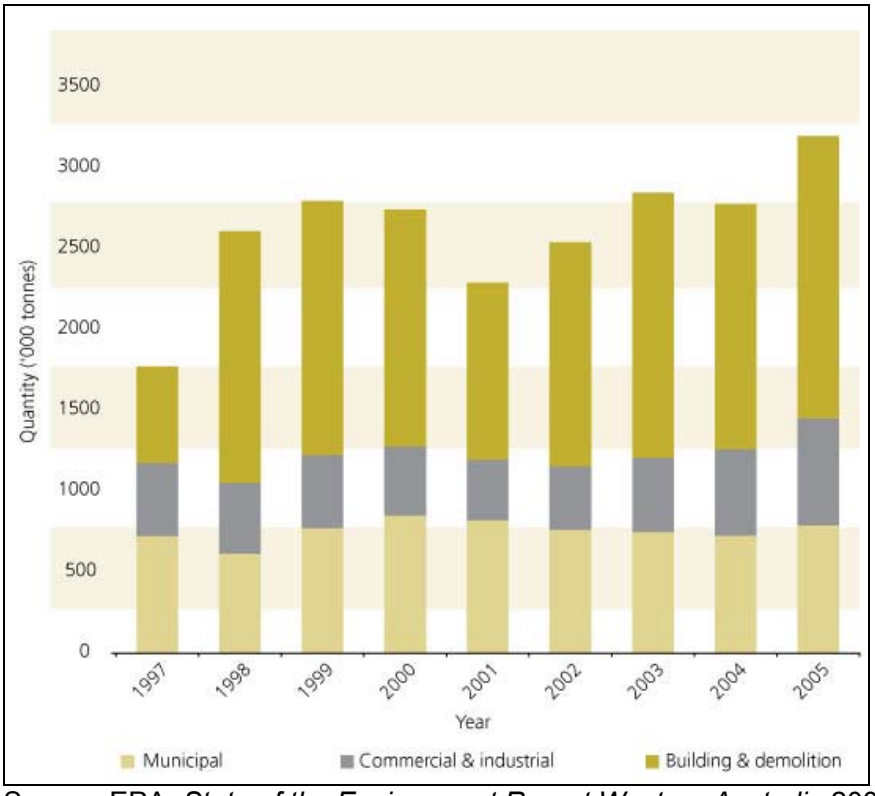
4.1 Overview

In recent years the WA Government has developed numerous policies on waste management, including a target of zero waste to landfill by 2020. There have been few drivers developed, however, to propel the State toward this goal. Despite having a zero waste target since 2000, total waste to landfill continues to trend upwards. A consideration of key waste statistics and WA's failure to meet waste reduction targets makes clear that current law and practice are inadequate and a combination of regulation and economic drivers are urgently needed if we are to reduce waste to landfill and improve waste management in WA.

4.2 Key waste statistics

Waste statistics for WA vary widely, largely due to lack of reporting and changes in collection of data. The most recent publication with waste statistics, the 2007 State of the Environment Report, indicates that total solid waste to landfill in the Perth metropolitan region increased substantially between 1997 and 2005.

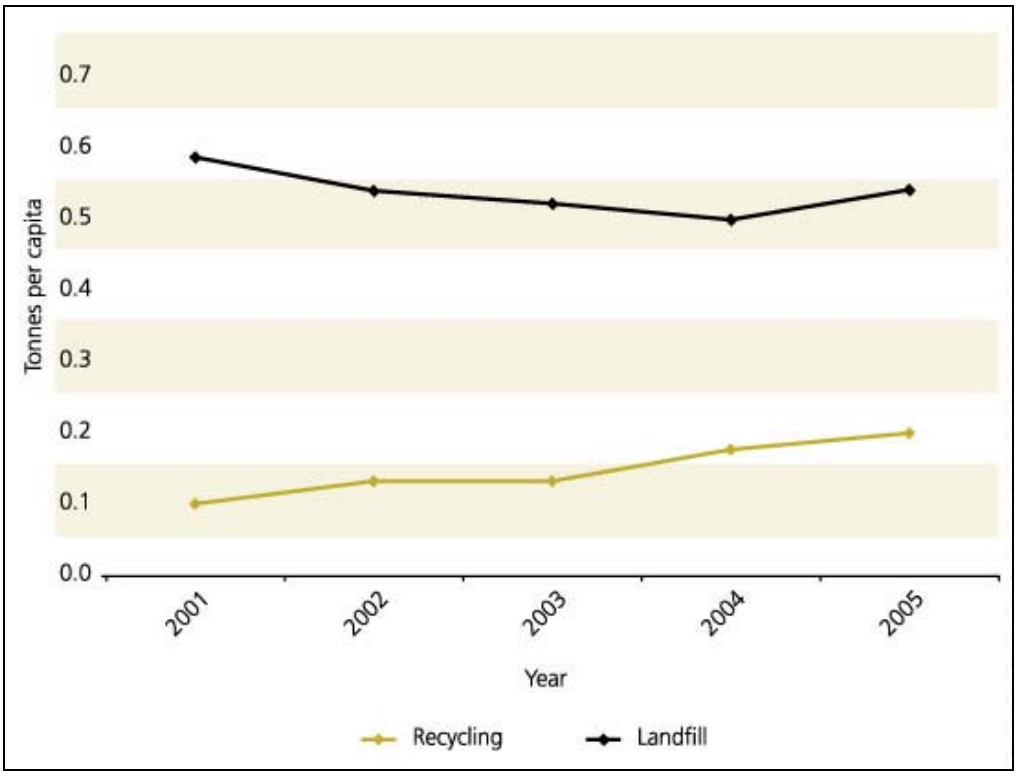
Figure 1 **Solid waste disposal to landfill by waste stream for the Perth metropolitan region, 1997-2005**



Source: EPA, *State of the Environment Report Western Australia* 2007

This increase in waste to landfill was driven by increases in building & demolition waste and commercial & industrial waste. As the following graph shows, the data on municipal waste going to landfill is more positive.[54]

Figure 2 **Municipal waste disposed to landfill and recycled per capita per year, Perth metropolitan region, 2001-05**



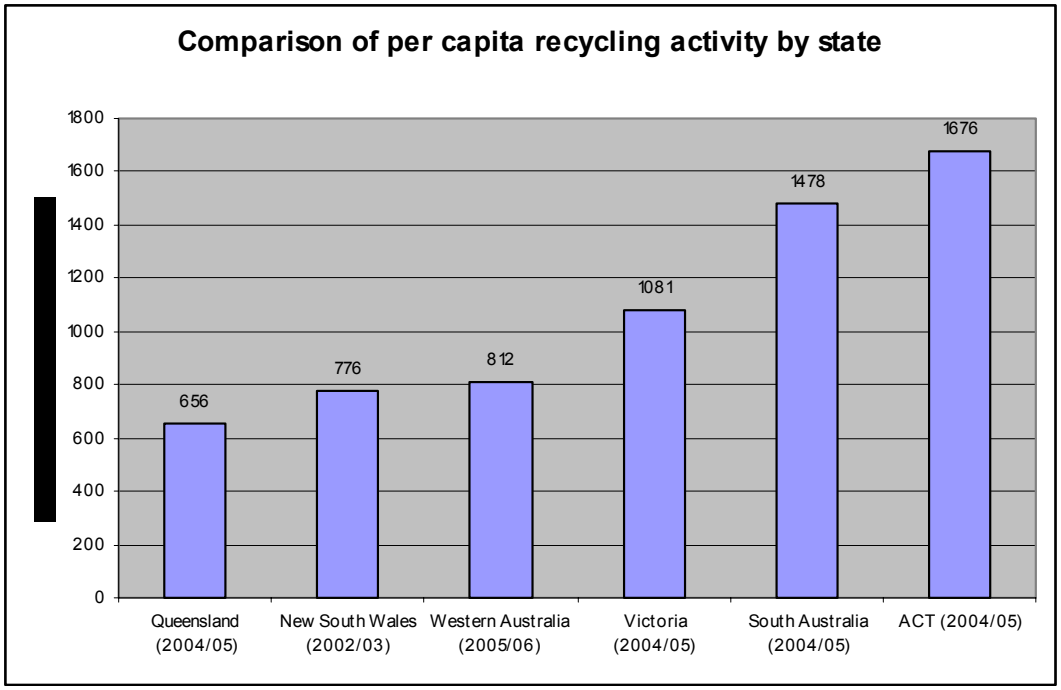
Source: EPA, *State of the Environment Report Western Australia* 2007

Notwithstanding this increase in recycling of municipal waste, a recent report indicates that WA has low overall recycling rates, when measured on a per capita basis, in comparison to other States and Territories.[55] This is illustrated in the Figure 3.

[54] Environmental Protection Authority, *State of the Environment Report Western Australia* 2007

[55] See also Cardno BSD, above n 3. Note that it is very difficult to accurately compare this data as not all data is from the same year and all states report differently. Note also that the comparison does not include the Northern Territory.

Figure 3 **Comparison of per capita recycling activity by state**



Source: Cardno BSD, *Review of total recycling activity in Western Australia,* June 2007

4.3 Failure to meet waste reduction targets

A number of waste reduction targets have been set in the past:

- In 1991, the Australian and New Zealand Environment and Conservation Council's (ANZECC) Waste Minimisation and Recycling Strategy set a national target to halve waste (per capita) to landfill by 2000 based on 1990 levels.[56]

- In 2000, the Waste 2020 taskforce developed a strategic action plan for managing future waste, the Waste 2020 Strategy. The vision for the strategy was "towards zero waste by 2020"[57]

- In 2004, the Statement of Strategic Direction for Waste Management in WA[58] put forward a slightly altered vision of "towards zero waste in WA", with the goal

[56] Waste Management Board, *Summary Report of Waste to Landfill – Perth Metropolitan Region Western Australia (1 July 1998 – 30 June 2002.)* February 2003. Due to a lack of reliable data for 1990, in Western Australia a 1991 baseline figure of 1.6 tonnes per capita was ultimately adopted, with a resulting target for the year 2000 of 0.8 tonnes per capita

[57] Department of Environmental Protection *WAste 2020 Report and Recommendations*, 2001

[58] Waste Management Board, Govt of Western Australia. *Statement of Strategic Direction for Waste Management in WA: Vision and Priorities.* September 2004

that all Western Australians will live in a waste free society.[59] The WMB stated that the vision and goal were to be achieved through reduction of waste creation, recovery of waste materials for reuse and responsible disposal of any residual waste.[60]

The following table summarises these targets against actual performance.

Table 2 **Western Australian waste reduction targets**

Year	Policy document	Target	Outcome
1991	ANZECC Waste Minimisation and Recycling Strategy	50% reduction in per capita waste to landfill by 2000	25% increase in per capita waste to landfill by 2000[61]
2000	Waste 2020 Strategy	Towards zero waste by 2020	Target will not be met on current trends
2004	Statement of Strategic Direction for Waste Management in WA	Towards zero waste in Western Australia	Target will not be met on current trends

As the table makes clear, a number of policies on waste management advocate a reduction or elimination of waste to landfill, but these policies appear to have had little practical effect.

This is not surprising, given that the only regulatory and economic drivers directed towards waste reduction are regulations applying to recovery of packaging materials and the modest landfill levy.

Strong drivers to reduce waste are urgently needed if WA is to even halve waste to landfill, let alone achieve zero waste to landfill by 2020. The following section of this paper turns to consider some of the options that are available.

[59] Waste Management Board September 2004 above n 58
[60] Waste Management Board September 2004 above n 58
[61] Waste Management Board September 2004 above n 58

5. Drivers for improved waste management

5.1 Waste Avoidance and Resource Recovery Bill

5.1.1 Overview

The draft Waste Avoidance and Resource Recovery Bill (WARR Bill) was released for public comment in August 2006. This Bill seeks to establish a framework for waste management in WA, and would replace a number of legislative provisions on waste if it comes into force. The WA government has stated that the Bill will be introduced into Parliament in 2007.

The main features of the Bill are the establishment of a statutory waste management board, introduction of a waste strategy which will establish waste priorities for the whole State, waste management plans for local councils, changes to the responsibility for waste collection, and a framework for extended producer responsibility schemes. It is important to stress that the Bill itself only provides the framework for these structures. Detailed regulations and plans will be needed before the provisions are fully operational.

5.1.2 Discussion

WA is in dire need of legislative reform on waste management, and therefore the EDO is broadly supportive of the WARR Bill. However the proposed Act is only a framework document with much of the detail and future direction for waste management contained in yet to be drafted regulations and plans, and therefore it is not possible to fully assess how effective the Act would be. As outlined in more detail below, some amendments to the Bill are required to ensure that the necessary drivers for waste reduction and improved waste management can be introduced. There are also a number of more minor improvements to the Bill that the EDO has outlined to the Government in an earlier submission on the Bill. A copy of that submission is appended to this report.

5.1.3 Recommendation

The draft Waste Avoidance and Recovery Bill should be supported, with amendments to ensure that the necessary drivers for waste reduction and improved waste management can be introduced as soon as possible.

5.2 Extended Producer Responsibility & Product Stewardship

5.2.1 Introduction

Product stewardship means that all key players in a product's lifecycle (such as manufacturers, governments and consumers) have a shared responsibility for the

environmental impacts the product causes from its manufacture to its end of life management (i.e. reuse, recycle or disposal).[62] Extended producer responsibility (EPR) is one part of product stewardship and is defined as "producers being physically and/or financially responsible for the environmental impacts of their products throughout their lifecycles".[63]

Table 3 **Possible approaches to extended producer responsibility**[64]

Type of EPR approach	Examples
Product take-back programs	- Mandatory take-back - Voluntary or negotiated take-back programs
Regulatory approaches	- Minimum product standards - Prohibitions of certain hazardous materials or products. - Disposal bans - Mandated recycling
Voluntary industry practices	- Voluntary codes of practice - Public/private partnerships - Leasing and "servicizing" - Labelling
Economic instruments	Deposit–refund schemes Advance recycling fees Fees on disposal Material taxes/ Subsidies

Source: CAUDIT Report, *Electronic Waste Research Finding*

The WA Government first advocated the use of EPR schemes as a policy measure for achieving zero waste in its 2004 statement of strategic direction.[65] In 2005 the Government released the 'Extended Producer Responsibility Policy Statement' which outlined the Government's intention to establish voluntary rather than mandatory EPR schemes.[66] The Government has explained EPR as:

> *a means to encourage producers to examine the lifecycle of their products and to identify initiatives that will reduce resource use, reduce wastes at all points in a product's whole lifecycle, reduce the environmental impacts of products and enhance post-consumer resource recovery. Hence, EPR places the responsibility primarily (but not exclusively) on the producers of the*

[62] Govt of Western Australia, *Extended Producer Responsibility Policy Statement* 29 June 2005
[63] Waste Management Board September 2004 above n 58
[64] CAUDIT research report, *Electronic Waste Research Finding*, October 2006 available at <http://www.caudit.edu.au>
[65] Waste Management Board September 2004 above n 58
[66] Govt of Western Australia, 29 June 2005 above n 62

products of concern.[67]

WA has not initiated any mandatory EPR schemes, however some are being considered through the WARR Bill and a possible container deposit system. EPR schemes have been used in Europe and North America for many years. There are a number of ways EPR can be implemented as outlined below.

It should also be noted that a Product Stewardship National Environmental Protection Measure is currently being developed. According to the National Environment Protection Council:

> *The NEPM will consist of a generic framework that establishes guidelines and principles to be applied by governments in determining the merits of a co-regulatory approach for a particular sector, and guides the development of product stewardship agreements for particular sectors. The NEPM will also include schedules relating to sector-specific product stewardship agreements setting out the requirements for non-participants captured under the regulatory safety net for a particular sector. Sector-specific schedules under consideration for initial incorporation in the NEPM include, but may not be limited to, televisions and tyres.*[68]

Product stewardship and EPR will gain a measure of legislative backing if the WARR Bill comes into force. The WARR Bill (as it is currently drafted) sets up a framework for establishing voluntary industry product stewardship agreements and voluntary or mandatory EPR schemes. The Minister will have power to make regulations to set up EPR schemes, but must first consider whether there is an effective product stewardship agreement or other voluntary or mandatory schemes in place to deal with that product. The Waste Authority (a new statutory body) will have to advertise each year which EPR schemes it is going to recommend for introduction and seek public comment. The Bill does not set out a structure for the EPR schemes - this will be left entirely to the regulations and is likely to differ for each scheme. Schemes could be voluntary with a legislative structure, or mandatory. As the Bill is currently drafted, the maximum penalty for a breach of EPR regulations would be $5,000.[69]

5.2.2 International examples of Product Stewardship and EPR

Canada

Canada is one of the most advanced users of EPR. British Columbia's container deposit system was initiated in 1970, followed by numerous recycling programs for products such as tyres and lead-acid batteries. In 2004 all EPR schemes were brought under the *Recycling Regulation*. The Regulation covers all products that were previously regulated and creates a framework for introducing additional product categories[70].

[67] Govt of Western Australia, 29 June 2005 above n 62
[68] See the EPHC website <http://www.ephc.gov.au/nepms/product_stewardship/product_stewardship. htm>
[69] WARR Bill, Schedule 3, Item 3.
[70] Sheehan,B & Speigelman, H; *Extended Producer Responsibility Policies in the United States and*

The Recycling Regulation sets up a minimum mandatory standard that brand-owners must meet, but allows industry to develop and implement the program in a way that suits them. The legislation requires a brand-owner to comply in any of the following three ways:

1. By submitting its own EPR plan;
2. By joining an association (a 'stewardship agency', 'third-party organisation' or 'producer responsibility organisation' [PRO]) that implements approved EPR programs; or
3. by operating a stewardship program according to prescriptive requirements set out in the regulations.

All affected brand-owners so far have chosen the second option. This option suits brand owners as they can design a scheme that fits with their business and is the most cost effective solution.

All EPR plans must be approved by government before they are accepted, and the government must be satisfied that plans will achieve a 75% recovery rate, or higher. The government can also impose additional performance requirements or targets on each plan.[71] Non-compliance with the regulation can result in a fine of up to $200,000.

Consumers are charged a levy at the point of sale which the PROs then use to finance their programs. In British Columbia each PRO is industry initiated but each PRO must report to the government and meet environmental performance standards in order to comply with the regulations. Other provinces in Canada have PROs established through regulations, or by government[72]. At present eight categories of products are regulated through this EPR scheme – beverage containers; electronics; lead acid batteries; lubricating oil filters and containers; medications; paint; tyres; and solvents/flammable liquids gasoline pesticides.[73]

European Union

The European Union has implemented a broad range of EPR schemes. The EU is far in advance of Australia in its EPR requirements. For example, since March 2006 all manufacturers in Europe must take back all of their electronic products for recycling or appropriate disposal.[74] The EU Product Directives are based on the polluter pays

Canada: History and Status, December 2005 viewed at <www.productpolicy.org/assets/resources/EPR_in_USA_Canada_Ch14.pdf>

[71] Environmental Management Act Recycling Regulation B.C. Reg. 449/2004, available at <http://www.qp.gov.bc.ca/statreg/reg/E/EnvMgmt/449_2004.htm>

[72] [72] Sheehan,B & Speigelman, H above n 70

[73] For more information on British Columbia's EPR program go to <http://www.env.gov.bc.ca/epd/epdpa/ips/index.html>

[74] Directive 2002/96/EC of the European Parliament and of the Council of 27 January 2003 on waste electrical and electronic equipment [Official Journal L 37 of 13.2.2003].

principle and internalise the waste management costs into the cost of the product.

5.2.3 Discussion

WA should adopt mandatory EPR schemes for a range of problematic wastes as soon as possible. Valuable time will be wasted if voluntary schemes are allowed on a trial basis while an assessment of their effectiveness is conducted. The Canadian model provides a solution that should be agreeable to all parties – mandatory minimum benchmarks set by government, with flexibility for industry to design and implement the most cost effective way of achieving that benchmark. The Canadian model could be implemented under the WARR Bill as it is currently drafted, through targeted regulations. Mandatory schemes with legislative backing are needed to ensure compliance and allow for enforcement. Some specific examples of EPR for targeted products are discussed below.

5.2.4 Recommendation

Western Australia should adopt mandatory EPR schemes with legislative backing for a range of problematic wastes as soon as possible. The provisions in the draft WARR Bill that would enable the creation of EPR schemes are supported, although they should be strengthened to allow strong penalties to be imposed on brand owners who do not comply with their EPR requirements.

5.3 Container Deposit Systems

5.3.1 Introduction

A container deposit system (CDS) encourages recycling of containers by providing a deposit to consumers for each container that they recycle. For example, in South Australia consumers receive 5 cents for every applicable container that they return to a retailer, or a collection depot. There is no container deposit system operating in WA at present. South Australia is the only Australian State or Territory with a container deposit system.

5.3.2 Recommendations of the Stakeholder Advisory Group

In January 2006 the WA Government established the Stakeholder Advisory Group on Best Practice Container Deposit Systems for Western Australia ("advisory group") to investigate a CDS for WA. The group is made up of representatives from state and local government, the waste and beverage industries, and the conservation sector. The advisory group reviewed over 20 international container deposit schemes as well as the South Australian model. In April 2007 the group presented their findings and recommended that CDS be introduced in WA. They found that CDS would dramatically increase the rates of recycling and the value of recycled materials, and dramatically

decrease the amount of littering in public places[75]. The report noted that South Australia recycles about three times as many aluminium cans, almost four times the amount of plastic containers, and more than twice as much glass as is currently recycled in WA.[76]

5.3.3 Discussion

The beverage industry has opposed the introduction of CDS in WA, and in all States in Australia, as they believe it will cost them money. However a well designed CDS can be very cost effective. The deposit price will not be borne by manufacturers, rather manufacturers will increase the purchase price of the item (by 10 cents say). Consumers will not be left with the price increase, as consumers who recycle their container will receive their money back. It is only the consumers who choose not to recycle that will pay the extra 10 cents, which in WA is likely to be added to a fund to facilitate infrastructure development, encourage recycling and educate the community on environmental issues.

CDS could have many benefits beyond increasing recycling rates. These include[77]:

- Reduced to cost to local governments. Local governments currently bear the cost of recycling and this will be reduced by including some products in a container deposit scheme. Increased recycling also means less general waste for local governments to deal with.
- Unredeemed deposits will create a fund which can be used in a number of ways, for example to encourage or facilitate further recycling.
- Reduced litter in streets, parks and other public areas.
- Increased recycling means increased demand for recycling facilities. In the past year two recyclables processing facilities closed in WA, however increased demand will bring recycling facilities back to WA.
- Recycled material will be managed at the point of redemption therefore there will be less contamination of recycled material so the material will be more valuable.
- Drop off points for recycled material could be created, due to the economic incentive for consumers to bring their containers back for a refund. These drop off points can then be expanded to include facilities for recycling goods other than containers. This is particularly useful for rural and remote areas.

In the current climate of excessive waste generation, low recycling rates and poor quality recycled materials, there is no justifiable argument not to introduce CDS in WA, and indeed the rest of Australia.

[75] Advisory Group on Best Practice Container Deposit Systems for WA, *Stakeholder Advisory Group Investigation in to Best Practice Container Deposit Systems for WA; Final Report for the Minister of Western Australia,* January 2007
[76] Advisory Group on Best Practice Container Deposit Systems for WA, above n 75
[77] Advisory Group on Best Practice Container Deposit Systems for WA, above n 75

5.3.4 Recommendation

The Government should follow the recommendations of the Stakeholder Advisory Group on Best Practice Container Deposit Systems for Western Australia and implement a container deposit system through regulations under the WARR Bill or through separate legislation.

5.4 Electronic waste

5.4.1 Introduction

It is estimated that over 9 million computers, 5.3 million printers and 2.1 million scanners are in use in Australia, and all of these will be replaced, mostly in the next couple of years.[78] Australians buy 2.4 million new computers and 1 million new televisions each year.[79]

Electronic waste (e-waste) is a collective name for discarded electronic devices that enter the waste stream from various sources.[80] It includes appliances such as televisions, personal computers, telephones, air conditioners, mobile phones, electronic toys.[81] Due to the high rate of 'built-in' obsoleteness of these products, these sources of waste pose a direct problem, as proper disposal or recycling of e-waste is expensive and technically challenging.[82] Environmental concerns about electronic waste are rapidly increasing as new technology develops.

For example, computers contain an amalgam of several hundred highly toxic substances found inside the central processing unit and monitors.[83] These substances include computer circuit boards containing heavy metals such as lead and cadmium, computer batteries containing cadmium, cathode ray tubes with lead and barium, mercury switches, chromium applied to steel plates as hardeners, and polychlorinated biphenyls found in the capacitors and transformers of older equipment. Due to the presence of these and other hazardous substances in computers, conventional methods of waste disposal are environmentally unsuitable. Landfill can result in leaching of heavy metals and brominated compounds, potentially polluting soil and groundwater. Incineration leads to atmospheric emission of heavy metals, dioxins, furans, and endocrine disrupters. Additionally, discarded computers contain gold, silver, palladium and platinum, 95% to

[78] Australian Bureau of Statistics, *Australia's Environment: Issues and Trends, 2006*, November 2006 available at <www.abs.gov.au>
[79] Australian Bureau of Statistics, above n 78
[80] United Nations Environmental Programme (UNEP), Information and Communications Technology and the Environment in Asia and the Pacific *available at* <http://www.icteap.org/e-waste.htm>
[81] United Nations Environment Program, above n 80
[82] United Nations Environment Program, above n 80
[83] Catherine K. Lin, Linan Yan & Andrew N. Davis (2002) *Globalization, Extended Producer Responsibility and the Problem of Discarded Computers in China: An Exploratory Proposal for Environmental Protection.* 14 Geo. Int'l Envtl. L. Rev. 525, at 531

99% of which can be recovered.[84]

There is currently no legislative framework to deal with e-waste in WA. The only programs that currently exist for recycling of e-waste are voluntary, and often run by non-profit groups. Voluntary programs are not available in all regions, do not accept all types of e-waste, and are unable to cope with the sheer volume of e-waste that is being disposed of.

A legislative framework is urgently required for the management of e-waste as the vast majority of these items are being stored by users because of a lack of viable alternatives, or disposed of to landfill.

5.4.2 International examples

USA

Other countries have imposed effective schemes to deal with various types of e-waste. For example in California a scheme was introduced in 2003 requiring manufacturers of computers to take back old computers for recycling and safe disposal. The cost of recovery is met by a levy of $6 - $10 on the sale of each new computer. Consumers are informed that the extra charge will cover the cost of the eventual disposal of their computer.

In California, it is estimated that an incredible 45,000 mobile phones are disposed of each day. The *Cell Phone Recycling Act of 2004* requires retailers selling mobile phones to institute mechanisms to collect used wireless phones for reuse, recycling or environmentally sound disposal. It is unlawful to sell a mobile phone in the State to a consumer unless the retailer complies with the Act.[85]

European Union

As noted above, all manufacturers in Europe are required to take back all of their electronic products for recycling or appropriate disposal.[86] The WEEE (Waste Electrical and Electronic Equipment) Directives required Original Equipment Manufacturers (OEMs) to develop a full recycling programme for their products by August 2006.

From 1 July 2006 computer OEM's were required to comply with EU legislation restricting the use of certain hazardous substances in electrical and electronic

[84] Catherine K. Lin, Linan Yan & Andrew N. Davis above n 83

[85] For more information see the Ministry of Environment website at <http://www.cellforcash.com/cellular-phone-information/cell-phone-recycling-act-ab2901.asp>

[86] *Directive 2002/96/EC of the European Parliament and of the Council of 27 January 2003 on waste electrical and electronic equipment [Official Journal L 37 of 13.2.2003].*

equipment.[87] From this time lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls (PBBs) and polybrominated diphenyl ethers (PBDEs) in electrical and electronic equipment were required to be replaced by non-toxic substances. This standard now applies to all products marketed in the EU. If a product is found to contain banned substances, the manufacturer can receive a substantial fine.[88]

Canada

As noted above, British Columbia in Canada implements EPR schemes for a range of products under their Recycling Regulation. In 2006, certain electronic products were added to the scheme, namely computers, televisions, computer monitors and computer peripherals.[89] The regulation requires a minimum 75% recovery rate of all products. Under the regulation, brand owners can choose to implement their own EPR scheme, set up an agency to do it for them, or comply with the regime in the regulations. Brand owners chose the second option. A product stewardship agency, Electronics Product Stewardship Canada was set up by industry to develop and implement the EPR plan.

The Regulation requires industry to develop a plan which meets the government's minimum standards, including the 75% recovery rate. The plan that has been developed proposes to do this by providing collection points for electronic products, processing and recycling programs, reuse of products, public awareness and education, and improvements in designs to minimise environmental impact.[90] To fund the program, purchasers are charged a fee when they purchase a new electronic product, for example $10 on a new computer or $8 for a printer.[91]

5.4.3 Recommendation

WA should implement mandatory extended producer responsibility schemes for targeted electronic products such as computers and televisions as a priority.

5.5 Product design and content standards

5.5.1 Introduction

It has been estimated that more than 80 per cent of all product-related environmental impacts are determined during the product planning phase.[92] Product design and

[87] *Directive 2002/95/EC of The European Parliament And of The Council of 27 January 2003 on the Restriction of the Use of Certain Hazardous Substances in electrical and electronic equipment*
[88] CAUDIT research report, above n 64
[89] Ministry of Environment website above n 85
[90] Electronics Product Stewardship Canada, *Stewardship Plan for End-of-Life Electronics,* October 2006 viewed at <http://www.env.gov.bc.ca/epd/epdpa/ips/electronics/pdf/EPSC_plan.pdf>
[91] For information on how the recycling program operates go to <http://www.encorpinc.com/electronics/>
[92] UK Position Paper on the Thematic Strategy on the Sustainable Use of Natural Resources <http://ec.europa.eu/environment/natres/pdf/uk_position_paper_.pdf>

content standards compel manufacturers to design their products in a way which lessens their environmental impacts. A well-designed product can make use of recycled materials, eliminate hazardous components and reduce resource use. Good design can also ensure that the product can be reused, recycled or disposed of with little impact on the environment.

There are currently no minimum mandatory standards that set the amount of recycled content that must be used when manufacturing products. A minimum recycled content standard would increase the use of recycled products and reduce the need for virgin materials. It would also assist in strengthening the market for recycled products.

There are a huge number of products that could be designed in a way that would lessen their environmental impact, however there is currently little incentive to do so. While consumers are increasingly swayed by environmental considerations, this is still outweighed by the desire for cheap products. Minimum standards would set a level benchmark for all affected products.

For example, packaging is a product whose impact on the environment could be greatly reduced if it were subject to minimum design and content standards. As noted in Part 3 above, the voluntary National Packaging Covenant encourages better packaging design and increased use of recycled materials, however this voluntary approach has been criticised as lacking adequate enforcement.

5.5.2 International examples

California – newsprint

Since 1991, California has phased in increasingly strict recycled content requirements for the publishers of 'newsprint', including the publishers and printers of newspapers and advertising inserts. Under the relevant regulations,[93] printers and publishers have been required to include an increasing proportion of 'recycled content newsprint' (defined as 'newsprint in which not less than 40 percent of its fibre consists of postconsumer wastepaper') in their products.

[93] California Code of Regulations, Title 14, Chapter 4, Article 4, <http://www.ciwmb.ca.gov/regulations/Title14/ch4a4.htm>.

Table 4 **Californian recycled-content newsprint use requirements**

On and After	Required Use
January 1, 1991	25 percent
January 1, 1994	30 percent
January1, 1996	35 percent
January 1, 1998	40 percent
January 1, 2000	50 percent

Source: California Code of Regulations, title 14, Chapter 4, Article 4

The California Environmental Protection Agency has estimated that the scheme has achieved the following resource savings:

- 4 million trees;
- 870,000 tons of waste diverted from landfill;
- 600,000 barrels of oil;
- 127 million gallons [481 million litres] of water from the paper making process;
- 212,000 megawatt hours of electricity. [94]

European Union - electronic waste

In Europe, the *Directive 2002/95/EC of the European Parliament and of the Council of 27 January 2003 on the restriction of the use of certain hazardous substances in electrical and electronic equipment* requires member states to:

> *ensure that, from 1 July 2006, new electrical and electronic equipment put on the market does not contain lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls (PBB) or polybrominated diphenyl ethers (PBDE)…*[95]

The EU has also published a more general directive which provides a framework for setting 'eco-design' requirements for 'eco-Energy Using Products.[96]. This Directive

[94] California Environmental Protection Agency, *2006 Compliance Report for the Recycled-Content* Newsprint Program (June 2007), http://www.ciwmb.ca.gov/Publications/BuyRecycled/43307001.pdf, p1.
95 Article 4.
96 *Directive 2005/32/EC of the European Parliament and of the Council of 6 July 2005 establishing a framework for the setting of ecodesign requirements for energy-using products and amending Council Directive 92/42/EEC and Directives 96/57/EC and 2000/55/EC of the European Parliament and of the Council*

"define[s] conditions and criteria for setting requirements regarding environmentally relevant product characteristics such as energy or water consumption, waste generation, and extension of lifetime and allows them to be improved quickly and efficiently".[97] If industry does not adopt self-regulatory initiatives, the European Commission will have the power to establish eco-design requirements for specific energy-using products[98].

5.5.3 Discussion

There is a strong case for mandatory product design and content standards to be implemented on targeted products, starting with packaging materials. Minimum content standards could be achieved through extended producer responsibility schemes or through regulation such as the EU Directive. Under an EPR scheme, each product targeted under the scheme could have a minimum percentage of recycled content that is required to be used in the manufacturer of the product, and a ban on hazardous materials where non-hazardous materials are available. Products that use energy or water could also be required to minimise their consumption. There should be a requirement for all producers to investigate design options that allow low impact disposal. Design and content standards could be applied very easily to packaging materials, where there are already a range of lower impact alternatives available.

Standards would need to be supported through legislation. It does not appear that the WARR Bill as it is currently drafted will contain a power to set mandatory minimum design and content standards, apart from through extended producer responsibility schemes. Although the regulation making powers in schedule 3 include a power to regulate the "*creation*, collection, storage, handling, processing, recycling and disposal of waste" [emphasis added] this may not be strong enough to enable design and contents standards to be regulated under the Act. In addition, even if standards are implemented through EPR, these will only relate to specific products targeted under the EPR scheme. A general power would allow standards to be introduced for a broader range of products.

5.5.4 Recommendation

The WARR Bill should be amended to ensure that the WA Government can set minimum design and content standards for products (e.g. to mandate a minimum proportion of recycled content or to prohibit the use of hazardous materials).

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[97] European Commission media release, *Commission welcomes the adoption of the directive for environmentally friendly design of energy using products*. Brussels 13 April 2005. <http://europa.eu/rapid/pressReleasesAction.do?reference=IP/05/427&format=HTML&aged=0&language=EN&guiLanguage=en>

[98] CAUDIT research report, above n 64

5.6 Waste processing standards

5.6.1 Introduction

There are currently very few minimum mandatory standards for waste processing. As noted above in Part 3, hazardous or controlled wastes are regulated to protect the environment and human health from inappropriate disposal, however there is little or no regulation to improve the standard of non-hazardous waste disposal. For example, recycling of products is not mandatory either in the municipal sector or industrial sector. Local councils can choose which products, if any, they recycle. This is largely due to the varying capacity of councils to cover the costs of recycling services.

5.6.2 Discussion

A range of standards could be introduced to improve the management of many waste types. The particular standards required will depend on whether other waste minimisation drivers are adopted. For example, minimum standards on which products must be recycled should be developed, unless products are being targeted through extended producer responsibility. The government has already announced in its climate change action statement that it would legislate to require all landfill premises to use or destroy their methane. WA should aim to progress to best practice waste management in all sectors.

Mandatory standards for waste processing could be brought in under the WARR Bill, if it comes into force. The WARR Bill contains a power to develop codes of practice for the provision of waste management services, which can be mandatory and enforceable (section 48). Minimum standards can also be included in the Waste Strategy. In addition, the CEO of the Department of Environment and Conservation will be able to direct any local council to provide a particular waste management service (section 47). This power could be used to direct all local councils to provide recycling services for particular products. General regulation making powers under schedule 3 of the Bill will also allow standards to be developed in regulations under the Act. For example, item 4 of Schedule 3 states that regulations may be made "regulating the operation of waste facilities, and the treatment, storage, processing, recycling or disposal of waste at waste facilities".

Increased fees from the landfill levy, which will go into the Waste Management and Recycling Fund, could be applied to assist small and/or regional councils who are not able to cover the cost of providing the required services or installing infrastructure which will meet minimum standards. In limited cases, financially disadvantaged or remote local government areas could be exempt from the standards until such time as they are assisted to meet them.

5.6.3 Recommendation

Mandatory standards for waste processing should be developed and brought into force under the WARR Bill as soon as possible.

5.7 Ban on organics to landfill

5.7.1 Introduction

Several countries have introduced a ban on landfilling of biodegradable municipal waste in an attempt to improve the quality of organic waste treatment and reduce waste to landfill.[99] A number of countries in the European Union have introduced a ban, including Denmark, Italy, Norway, the Netherlands Sweden, France, Finland, Austria, Germany and Luxembourg. [100]

5.7.2 Discussion

It appears that a ban on organic waste to landfill has been considered by the WA Government. The draft Organics Strategy states that "The WMB will investigate a potential staged ban on disposal of mixed municipal waste to landfill where no system has been implemented to reduce the proportion of putrescible material in the waste stream".[101] A report on a landfill ban for recyclable products, construction and demolition waste and organics was prepared for the WMB in October 2006[102]. The report noted the positive environmental benefits from a landfill ban such as "reduced greenhouse gas generation, resource and energy conservation, extended landfill capacities and pollution prevention". However it cautioned against an immediate landfill ban mainly due to the cost of implementation, and uncertainty over the level of demand for the organic product. The report recommended that if a landfill ban is implemented it should be phased in beyond 2010, and funding should be provided by government for infrastructure to support material recovery.

WA could consider a ban on organics to landfill. However, in light of the problems identified in the WMB 2006 report, it is likely that more investigation is needed before a ban could be implemented.

Diversion of organics to more environmentally sound end-uses has been proven to be feasible by the City of Stirling and the SMRC who currently divert all organics received at

99 Henrik Jacobsen & Merete Kristoffersen (2002) *Case studies on Waste Minimisation Practices in Europe*, available at <http://reports.eea.eu.int/topic_report_2002_2/en/tab_content_RLR p.16>

[100] Report From The Commission To The Council And The European Parliament On The National Strategies For The Reduction Of Biodegradable Waste Going To Landfills <http://ec.europa.eu/environment/waste/pdf/reports/com_2005_105_en.pdf>

[101] Waste Management Board June 2006 above n 12

[102] ACIL Tasman, *Landfill ban: Investigation into the environmental, social and economic impacts of a potential ban on disposal of household recyclable packaging, recyclable building products and organic waste to landfill,* October 2006 <http://www.zerowastewa.com.au/documents/landfill_ban_report.pdf>

their recycling facilities to compost. Other metropolitan regional councils who currently do not recycle organics are already investigating this option.

If a ban were adopted, the initial priority should be investment of funding to assist councils to establish appropriate infrastructure to recover organics. If rural councils were not able to provide this service due to resource constraints, the ban could be applied to metropolitan councils only, with regional councils to join as they have capacity. A ban could be brought about through regulations under the WARR Bill (the power to do so is contained in section 87 and Schedule 3 of the Bill) or a code of practice under section 48 of the WARR Bill.

An alternative to banning organics to landfill is to create a credit or trading scheme for reducing organics in landfill. This is discussed further in Part 5.7 below.

Regardless of whether a ban or trading scheme is implemented, WA should implement mandatory minimum standards for all recycled organics applied to land to ensure that any organics diverted from landfill to land application as compost are safe for use. Standards should regulate biological, physical and chemical contamination. The standards must be supported by a rigorous testing regime. The WA Local Government Association supports mandatory minimum standards for organics applied to land and has released a draft policy statement which discusses the issue in more detail.[103] Recycled organics standards could be implemented through the regulations under the Environmental Protection Act.

5.7.3 Recommendation

WA should implement mandatory minimum standards for all recycled organics applied to land including standards on contaminant levels, testing and appropriate uses. WA should conduct further investigation on the implications of a progressive ban to landfill of organic waste.

5.8 Hazardous Waste Treatment

5.8.1 Discussion

As noted in Part 3 above, hazardous waste can only be disposed of at facilities which are authorised to take this waste. In general, hazardous waste can only be disposed of at specialist hazardous waste treatment centres which are licensed under the Environmental Protection Act.

The Core Consultative Committee on Waste (3C) has noted that although the waste treatment sector has made modifications to incorporate waste previously treated at

[103] WALGA, *Draft Policy Statement on Standards For Recycled Organics Applied To Land*, July 2007 <http://www.wastenet.net.au/policy/statements>

Brookdale, there is still insufficient hazardous waste treatment capacity in the WA.[104]

In October 2006 the 3C recommended that waste treatment facilities be established in the Pilbara, Goldfields and South West regions with legislation developed to strictly monitor and regulate them.[105]

The 3C process was an incredibly rigorous and participatory consultation process. It engaged all sectors involved in hazardous waste management and reviewed all facets of hazardous waste management over a number of years. The current practice of shipping significant quantities of hazardous waste long distances for processing is inadequate.

5.8.2 Recommendation

The 3C recommendations to establish specialised waste treatment precincts and facilities should be implemented with legislative backing.

5.9 Market Based Instruments

5.9.1 Introduction

In a recent report, the Total Environment Centre (an environmental NGO) stated that:

> *In a no-waste society all by-products from production and consumption need to have a beneficial use. Western Australia has a number of unique characteristics because of its richness in natural resources, relatively small population base (and hence consumer market size) and geographic isolation. Market based instruments (MBIs) offer a number of opportunities to overcome these challenges and support increased resource recovery.*[106]

A range of the market-based instruments could be used to improve waste management and resource recovery including fees and taxes, market creation, subsidies, and deposits or refunds such as through a container deposit scheme.[107]

The focus of this paper is on legal measures for waste reduction, however for completeness we have included discussion of some important market based instruments below.

[104] Core Consultative Committee on Waste above n 41
[105] Core Consultative Committee on Waste above n 41
[106] Total Environment Centre, *Total Environment Centre State of Waste Series: Western Australia*, 2006
[107] Total Environment Centre above n 106

5.9.2 Discussion

Landfill levy

As noted above, the landfill levy is currently $6 per tonne for biodegradable waste and $3 per cubic metre for inert waste. The Government has indicated that the outlook for the levy involves a gradual increase to $9 per tonne and $9 per cubic metre respectively by 2010-11.[108]

WA's landfill levy is significantly lower than comparable levies in other States, even when proposed future increases are taken into account. In NSW the levy payable on all waste to landfill is $30 per tonne, and it will rise by $7 each year to $58 per tonne in 2010. In Victoria the levy payable on waste to landfill is $15 (industrial) and $9 (municipal) per tonne. In South Australia it is $11.15 per tonne.[109]

A recent report reviewing recycling rates in WA identified low landfill gates fees as one of the main barriers to increasing the rate of recycling. [110] Current fees are so low that there is little financial disincentive to send waste to landfill as opposed to recycling it.

Landfill credits

There are a number of different schemes operating or proposed, where credits can be paid to encourage landfill operators to manage their landfill in a certain way. For example, it is proposed under the State and Territory Governments' National Emission Trading Scheme that landfills who collect and combust methane produced by the landfill or other treatment facilities will be eligible for offset credits under a trading scheme[111]. Credits could then be sold to companies who have not met their emission reduction requirements, creating financial incentive for the landfill operator.

The UK has a landfill allowance trading scheme which requires landfill operators to reduce putrescible waste in their landfill, and rewards operators who exceed the requirement by allocating them credits which they can then sell to councils who have not met the required reductions.[112] The scheme has legislative backing through the *Waste and Emissions Trading Act (2003)* (UK).[113] A similar scheme could be implemented under the WARR Bill through regulations on the provision of waste management services.

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[108] Media Statement by the Hon Mark McGowan MLA, 20 May 2006.
[109] Mark McGowan MLA, Media statement, *Waste levy increase to improve recycling,* 20 May 2006
[110] Cardno BSD above n 3
[111] National Emissions Trading Taskforce, *Possible Design for a National Greenhouse Gas Emission Trading Scheme*, 2006
[112] Total Environment Centre above n 106
[113] For more information on the scheme go to
<http://www.defra.gov.uk/Environment/waste/localauth/lats/index.htm>

Some WA landfills are already participating in a similar scheme under the Federal Greenhouse Challenge Plus. Diversion of organics away from landfill and into compost earns accredited Greenhouse Gas Abatement Providers such as the South Metropolitan Regional Council credits which can be sold to organisations that wish to reduce abate their greenhouse emissions. This assists in recovering the costs of organics diversion.[114]

5.9.3 Recommendation

Following the passage of the *Waste Avoidance and Resource Recovery Levy Bill 2006*, the Waste Authority should review current and proposed landfill levies to assess whether they provide a sufficient incentive to reduce the levels of waste going to landfill. The Government should also investigate the establishment of credit or trading schemes which encourage diversion of organics or other recyclable products away from landfill and if they are found to be viable, implement such a scheme under the WARR Bill.

[114] ACIL Tasman 2006 above n 17

Attachment A – Definitions

Source: Department of Environment Landfill Waste Classification and Waste Definitions 1996 (As amended)

Clinical Waste	Waste generated by medical, nursing, dental, veterinary, pharmaceutical or other related activity which is poisonous or infectious; likely to cause injury to public health; or contains human tissue or body parts.
Biosolids	The stabilised organic solids, produced by wastewater treatment processes, which in most cases can be beneficially used (also known as sewage sludge).
Clean fill	Material that will have no harmful effects on the environment and which consists of rocks or soil arising from the excavation of undisturbed material. For material not from a clean excavation, it must be validated to have contaminants below relevant ecological investigation levels (as defined in the document Assessment Levels for Soil, Sediment and Water, Department of Environment, 2003).
Construction and Demolition Waste	Materials in the waste stream which arise from construction, refurbishment or demolition activities.
Controlled waste	Waste types listed in Schedule 1 of *the Environmental Protection (Controlled Waste) Regulations 2004*.
Cytotoxic Waste	Waste consisting of cytotoxic drugs, material contaminated with cytotoxic drugs or residues, or preparations containing cytotoxic material.
Hazardous Waste	Component of the waste stream which by its characteristics poses a threat or risk to public health, safety or the environment (includes substances which are toxic, infectious, mutagenic, carcinogenic, teratogenic, explosive, flammable, corrosive, oxidising and radioactive).
Inert Waste Type 1	Non-hazardous, non-biodegradable (half-life greater than 2 years) wastes containing contaminant concentrations less than Class I landfill acceptance criteria but excluding paper and cardboard (paper and cardboard are biodegradable materials and are therefore considered as putrescible waste), or materials that require treatment to render them inert (e.g. peat, acid sulfate soils).
Inert Waste Type 2	Waste consisting of stable non-biodegradable organic materials such as tyres and plastics which require special management to reduce the potential for fires.
Inert Waste Type 3	Waste material from DEP licensed secondary waste treatment plants, subject to appropriate assessment and approval of that waste and the specified inert landfill.

Intractable Waste	Waste which is a management problem by virtue of its toxicity or chemical or physical characteristics which make it difficult to dispose of or treat safely, and is not suitable for disposal in Class I, II, III and IV landfill facilities (see Table 2).
Packaged Waste	Waste packed into discrete containers such as 205 L drums or bulk bags so that they meet any requirements under the *Explosives and Dangerous Goods Act 1988* and the *Environmental Protection Act 1986* for packaging, containment and labelling.
Putrescible	Component of the waste stream likely to become putrid.
Poisons	Materials defined as poisons under the *Poisons Act 1964*.
Radioactive	Waste which gives off or is capable of giving off radiant energy in the form of particles or rays, as in alpha, beta and gamma rays at levels exceeding standards defined by the Radiological Council of Western Australia.
Solid	Material that: (a) has an angle of repose of greater than 5 degrees; and (b) does not contain, or is not comprised of, any free liquids; and (c) does not contain, or is not comprised of, any liquids that are capable of being released when the waste is transported; (d) does not become free flowing at or below 60 degrees Celsius or when it is transported; and (e) is generally capable of being moved by a spade at normal temperatures (i.e. is spadeable).
Solid Waste	Waste which meets the definition of a solid.
Special Waste Type 1	Waste which includes asbestos and asbestos cement products.
Special Waste Type 2	Waste consisting of certain types of biomedical waste which are regarded as hazardous but which, with the use of specific management techniques, may be disposed of safely within specified classes of landfill.
Waste	For the purpose of these guidelines waste may mean one or more of the following: ▪ any substance that is discarded, emitted or deposited in the environment in such volume, constituency or manner as to cause an alteration in the environment; ▪ any discarded, rejected, unwanted, surplus or abandoned substance; ▪ any otherwise discarded, rejected, unwanted, surplus or abandoned substance intended for sale or for recycling, reprocessing, recovery, or purification by a separate operation from that which produced the substance; ▪ any substance described in regulations under the *Environmental Protection Act 1986* as waste.

Attachment B – Waste Law Summaries

Waste Law – a summary of the waste legislation and policies of the Commonwealth and Western Australia.

Environmental Defender's Office WA (Inc)

May 2007

COMMONWEALTH LAW

Code of Practice for the Near-Surface Disposal of Radioactive Waste in Australia (1992)

The *Code of practice for the near surface disposal of radioactive waste in Australia (1992)* provides the basis for the near-surface disposal of solid radioactive waste that has been classified as low-level and short-lived intermediate-level waste. The code is intended to apply to disposal of contaminated plant and equipment resulting from handling or processing of naturally-occurring materials which contain radioactive contaminants in low but non-trivial amounts, and to waste arising from processing of minerals remote from any mine site and where disposal at the mine site is inappropriate. The code also applies to disposal of waste arising from the rehabilitation, decontamination or decommissioning of sites or facilities where radioactive materials have been produced, stored, used or dispersed. The code establishes the requirements for site selection, design criteria and operational requirements for either a national near-surface disposal facility or for a purpose-built land-fill disposal trench.

[SOURCE: http://www.arpansa.gov.au/is_waste.htm]

Commonwealth Radioactive Waste Management Act 2005 (Cth)

This Act seeks to over-ride State and Territory legislation purporting to prevent the transport and storage of nuclear waste. Although it refers to three potential sites in the Northern Territory, the implication for nuclear waste management in Western Australia is clear in that, if valid, it would over-ride the *Nuclear Waste Storage and Transportation (Prohibition) Act 1999*.

Environment Protection (Sea Dumping) Act 1981 (Cth)

The Environment Protection (Sea Dumping) Act 1981 gives effect to the *Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter 1972* (the London Convention). It prohibits the dumping or incineration at sea of radioactive material, wastes and other material without a permit. There is an exemption for dumping conducted to save human life or a vessel in distress. Where dumping has occurred the Minister has power to mitigate the damage or take remedial action and recover the costs

from the person convicted of dumping. The Act applies to all vessels in Australian waters and to Australian vessels in international waters. The Act does not apply in relation to the disposal of wastes related to the exploration, exploitation and associated off-shore processing of sea-bed mineral resources

Hazardous Waste (Regulations of Exports and Imports) Act 1989 (Cth)

This Act ratifies the *Basel Convention on the Control of Trans-boundary Movements of Hazardous Waste and their Disposal* 1989.

The main aims of the Basel Convention are to encourage environmentally sound management of hazardous waste, to regulate international trade in hazardous waste and to reduce the generation of hazardous wastes.

Accordingly the Act is relevant in the management of hazardous waste in that it prohibits exporting or importing hazardous waste without a permit. The Minister for the Environment and Heritage can only grant a permit to export hazardous waste where it can be shown that the wastes will be managed in an environmentally sound manner in the country of import. This in turn means that hazardous waste must generally be treated and disposed of in its country of origin, restricting the opportunity to protect the local environment by exporting the problem. The definition of hazardous waste includes household waste.

According to the Department of Foreign Affairs and Trade, "no export permits have been granted for the export of hazardous waste to any developing country since the amendments to the Hazardous Waste Act came into force in December 1996"

[SOURCE: http://www.dfat.gov.au/environment/haz_waste.html as at 29 June 2006].

Hazardous Waste (Regulation of Exports and Imports) (Imports from East Timor) Regs 2001 (Cth)

These regulations are made under the *Hazardous Waste (Regulation of Exports and Imports) Act 1989* (Cth) to allow that the Minister may grant special import permits authorising the import of hazardous waste (as defined in the Act) from the Democratic Republic of East Timor.

"All arrangements in relation to the import of hazardous waste into Australia must not derogate from the environmentally sound management of hazardous wastes, as required by the Basel Convention" (Schedule 1)

Hazardous Waste (Regulation of Exports and Imports) (Waigani Convention) Regulations 1999 (Cth)

These regulations give effect to the provisions of the *Convention to Ban the Importation into Forum Island Countries of Hazardous and Radioactive Wastes and to Control the*

Transboundary Movement and Management of Hazardous Wastes within the South Pacific Region (known as the Waigani Convention). The Waigani Convention is very similar to the Basel Convention, however Waigani is administered within the Pacific Forum region. The Waigani Convention is also different to Basel in that it covers radioactive wastes and extends to the Economic Exclusion Zone (200 nautical miles) rather than the territorial sea (12 nautical miles) under Basel.

The regulations "do not apply to radioactive wastes — the definition of *hazardous waste* in the Act relies on the Basel Convention, which does not cover radioactive wastes. The export from, and import into, Australia of radioactive wastes is regulated under the *Customs Act 1901*, the Customs (Prohibited Exports) Regulations and the Customs (Prohibited Imports) Regulations" (Regulation 3)

[SOURCE: www.oztoxics.org/waigani/waigani/descr_c1.html]

National Environment Protection Measure: Movement of Controlled Waste between States and Territories

NEPMs are broad framework-setting statutory instruments outlining agreed national objectives for protecting or managing particular aspects of the environment. This NEPM establishes a nationwide tracking system for the interstate transport of controlled wastes. The *Movement of Controlled Waste NEPM* defines 'waste' as any matter that is discarded, rejected, unwanted, surplus or abandoned whether the material is for disposal, recycling, reprocessing, recovery, reuse, purification or sale whether of any value or not.

The *Movement of Controlled Waste NEPM* provides lists of waste streams, specific constituents and hazardous characteristics to identify whether specific materials are hazardous waste. This is similar to the way in which the Basel Convention defines hazardous wastes. Exemption from some requirements of the *Movement of Controlled Waste NEPM* may be given based on the direct reuse of some controlled waste.

National Environmental Protection Measure (NEPM): Used Packaging Materials

Businesses producing a significant amount of packaging waste are required to self-regulate to a specified standard under the Used Packaging Materials NEPM, to ensure their packaging materials are recycled or reused appropriately. Failure to comply results in a fine. The penalties are inconsistent and range from $250,000 (ACT) to $4,000 (Tasmania). Regulations to implement the NEPM in WA have recently been re-introduced after the previous regulations expired in 2004. The *Environmental Protection (NEPM–UPM) Regulations 2007*(WA*)* contain fines of $5000 for non-compliance.

National Environmental Protection Measure: Product Stewardship

The NEPM for product stewardship has not yet been finalised. According to the National Environment Protection Council:

> "The NEPM will consist of a generic framework that establishes guidelines and principles to be applied by governments in determining the merits of a co-regulatory approach for a particular sector, and guides the development of product stewardship agreements for particular sectors. The NEPM will also include schedules relating to sector-specific product stewardship agreements setting out the requirements for non-participants captured under the regulatory safety net for a particular sector. Sector-specific schedules under consideration for initial incorporation in the NEPM include, but may not be limited to, televisions and tyres."

[SOURCE: http://www.ephc.gov.au/nepms/product_stewardship/product_stewardship.htm]

STATE LAW Western Australia

Conservation and Land Management Regulations 2002

These regulations impose a penalty for discharging or depositing waste on CALM land ($2,000). The penalty under this regulation for littering on CALM land is potentially twice the penalty prescribed by the *Litter Act 1979*.

Contaminated Sites Act 2003

This Act came into force on 1 December 2006. A site is contaminated when there is a substance present on that site (including land and water), at above background concentrations that presents or has the potential to present, a risk of harm to human health, the environment or an environmental value. Any person may report a known or suspected contamination of any site to the Department of Environment and Conservation, however land-owners, or those who either know or suspect they have caused or contributed to that contamination, must report it. Contaminated sites are listed on a publicly accessible database and in certain circumstances owners must give notice of contamination to purchasers, mortgagees or lessees of the property, at least 14 days before the completion of the transaction.

Dangerous Goods Safety Act 2002

The Act achieved Assent in late 2004. The new legislation cannot be proclaimed until all supporting regulations are completed. The seven sets of regulations are due to be proclaimed in 2007.

The main thrust of the Act is to make it an offence (with a high maximum penalty) to fail to take all reasonably practicable measures to minimise the risk to people, property and the environment in handling, transporting, storing, treating and disposing of "dangerous goods" (to be determined by the Regulations – although Section 5 provides that harm

from dangerous goods is to be assessed having regard to public knowledge).

The Act is accordingly very relevant to hazardous waste management – although much will depend on the Regulations.

The Act repeals the *Dangerous Goods (Transport) Act 1998* and the *Explosive and Dangerous Goods Act 1961* and all related Regulations.

For more information go to:
http://www.docep.wa.gov.au/ResourcesSafety/Sections/Dangerous_Goods/Legislation_and_Policy/Dangerous_Goods_Act.html

Environmental Protection Act 1986

This Act provides the basis for much of WA's waste management regulation through its provisions, powers to make waste policies, and in particular its subsidiary regulations.

While many of the powers established under the Act can be considered to apply to waste (given that the Act deals with pollution and impact on the environment), there are also specific provisions for dealing with waste and waste management.

In addition, the industry licensing provisions of Part V of the Act apply to many sectors of the waste management industry. Detailed obligations on waste management are in various regulations under the Act, which are discussed below.

The Act deals with the Landfill Levy scheme, which is clearly of high relevance to waste management (see also *Environmental Protection (Landfill) Levy Act 1998)*, and in Part VII B deals with waste management operations.

Some provisions in this Act will be replaced by the Waste Avoidance and Resource Recovery Bill, if it comes into force.

Environmental Protection Regulations 1987

These Regulations provide detail for the functioning of the principal Act (that is, the *Environmental Protection Act 1986*). Much of the Regulation deals with prescribing the sorts of activities and premises which attract the attention of the Act, the considerations which should be taken into account in deciding whether to permit those activities, and the licensing and fees for those activities and premises.

Part 9 deals with the Landfill Levy, which is an important part of waste management in WA.

Environmental Protection (Concrete Batching and Cement Product Manufacturing) Regulations 1998

This Regulation made under the *Environmental Protection Act 1986* provides that a person carrying on concrete batching or cement product manufacturing must ensure that all waste created is recycled or disposed of at an appropriate landfill site or waste treatment facility; failure to do so is an offence penalised by up to $5,000.

Environmental Protection (Controlled Waste) Regulations 2004

There is a significant degree of overlap between these Regulations and the awaited *Dangerous Goods Safety Act Regulations* in that many of the "controlled wastes" as defined in these Regulations are in all likelihood "dangerous goods" under the DGSA.

The Regulations control the controlled waste by setting out a licensing and tracking system for transportation and disposal of such waste and making it an offence to not comply with any of the requirements.

Environmental Protection (Landfill) Levy Act 1998

This Act is an enabling Act to allow promulgation of Regulations to prescribe levies on waste disposed of to landfill.

Its function forms part of the incentive to industry to reduce the amount of waste generated (thereby reducing their landfill levy expenses) as well as providing funds to be used in achieving waste management goals.

This Act will be replaced by the Waste Avoidance and Resource Recovery Bill, if it comes into force.

Environmental Protection (Rural Landfill) Regulations 2002

These Regulations set out the requirements and basic standards required for maintaining a putrescible landfill site accepting more than 20 but less than 5 000 tonnes per year (i.e. Category 89 – Class II - landfills). Such sites can accept clean fill, Type 1 Inert Waste, Putrescible Wastes, Contaminated solid waste meeting waste acceptance criteria specified for Class II landfills (possibly with specific licence conditions), Type 2 Inert Wastes (with specific licence conditions), Type 1 and Type 2 Special Wastes (for registered sites as approved under the Controlled Waste Regulations).

The Regulations also provide that the occupier of a landfill site must prepare and submit a post-closure rehabilitation plan for the site to the Chief Executive Officer for approval, within 18 months of the site being registered.

Health Act 1911

This is the primary Act dealing with all matters relating to public health, some of which are relevant to a consideration of waste management.

The focus of the Act (due primarily to its age) is on sanitary considerations and putrescible waste such as sewerage. It also creates the framework under which local government operates its waste removal and disposal function.

It gives local government powers to formulate a scheme for the construction and maintenance of all sewers, drains, and appliances necessary for carrying away or disposing of or treating any noxious or waste matter within its district. It is an offence to discharge any waste into sewers which "causes a nuisance or is injurious to health, or interferes with the disposal of sewage" (section 94). It is also an offence to defile or pollute any water supply (section 129).

The Act also gives local government powers to undertake or contract out works for:

- The removal of house and trade refuse and other rubbish from premises.
- The collection and disposal of sewage.
- The providing, in proper and suitable places, of receptacles for the temporary deposit of refuse and rubbish collected.
- The providing of suitable places, buildings, and appliances for the disposal of refuse, rubbish and sewage.
- The construction and installation of plant for the disposal of refuse, rubbish and sewage.

The local government may destroy, dispose of or sell any of the waste it collects.

The waste management powers of Local Government will be replaced by the Waste Avoidance and Resource Recovery Bill, if it comes into force.

Litter Act 1979

The Litter Act establishes offences for littering, bill posting, and breaking glass in public places.

Although the Act is quite flexible in allowing regulations to be made which are "not inconsistent" with the Act, the powers are limited in that the maximum penalty at present is $1,000. Although the courts can order an offender to clean up the litter, failure to comply only carries a maximum penalty of $1,000.

The Act will shortly be repealed and new litter provisions will be incorporated in the Environmental Protection Act. The changes include the new offence of illegal dumping, increasing fines for littering by corporations and enhancing the investigative powers of enforcement officers.

Mines Safety and Inspection Act 1994

This Act has a narrow application in waste management - specifically the power to make regulations regarding the removal and disposal of waste created during the mining

process.

Mines Safety and Inspection Regulations 1995

The Regulations are authorised under Section 104 of the *Mines Safety and Inspection Act 1994*, and their relevance is mostly in relation to waste management of radioactive materials arising from a mining operation.

Radioactive waste management is achieved through the requirement that plans are drawn up prior to commencement setting out the proposed waste management plan, and again when mining operations are suspended or abandoned. The plans require approval of the State mining engineer.

Penalties for failure to observe the obligations in the Regulations are restricted to $50,000 for Corporations on a first offence ($62,500 for a second offence).

National Environment Protection Council (Western Australia) Act 1996

This Act recognises the creation of and assignment of power to the National Environment Protection Council ("NEPC").

The NEPC was an outcome of an Intergovernmental Agreement on the Environment (IGAE), which was reached at a Special Premiers Conference in October 1990 and came into effect in May 1992. Membership of NEPC includes environment ministers from the Australian Government and each state and territory. The Australian Government Minister for the Environment and Heritage chairs NEPC. Each NEPC minister has equal voting power. Decisions of NEPC can only be made with a two-thirds majority of ministers. The Australian Government does not have the power of veto

The NEPC achieves its objectives by introducing National Environmental Protection Measures ("NEPM") which the Commonwealth, State and Territory Governments are obliged to enact laws to implement (although note that they do not always do so).

The NEPC may formulate NEPM on a variety of issues which include

- general guidelines for the assessment of site contamination
- environmental impacts associated with hazardous wastes
- the re-use and recycling of used materials.

For more information see http://www.deh.gov.au/about/councils/nepc/index.html

Nuclear Activities Regulation Act 1978

The object of this Act is to make provision for protecting the health and safety of the people of the State, and the environment, from possible harmful effects associated with nuclear activities. The definition of 'nuclear activities' in this Act includes waste generated by any activity associated with mining or processing etc of radioactive

material.

The ambit of the Act in a waste management context is limited although flexible within its area of effect since it allows for the promulgation of Regulations and Codes of Practice and provides for reasonably high penalties to be imposed for offences thereby created. Note however that enforcement of offences created by Regulations may only take place with Ministerial approval.

Nuclear Waste Storage and Transportation (Prohibition) Act 1999

The objects of this Act are "to protect the health, welfare and safety of the people of Western Australia and to protect the environment in which they dwell by prohibiting the establishment of a nuclear waste storage facility in this State, the use of any place in this State for the storage or disposal of nuclear waste and the transportation in this State of nuclear waste" (Section 4).

This Act is by its nature very limited in scope and only seeks to prohibit the construction or operation of nuclear waste management facilities in WA and to prohibit the transport of nuclear waste in WA.

Note however that the definition of nuclear waste excludes radioactive waste such as that which might be generated by mining radioactive substances.

Radiation Safety Act 1975

This Act creates a scheme of licensing and registration in relation to possession, storage, use, handling or disposal of, or other dealing with, any radioactive substance, irradiating apparatus or electronic product.

Accordingly the relevance of the Act to waste management considerations is limited to the storage and disposal of radioactive material and waste (mainly generated in a medical or scientific context).

Radiation Safety (General) Regulations 1983

These regulations are made pursuant to the *Radiation Safety Act 1975*. The regulations prohibit a person from knowingly causing or allowing any radioactive substances to be released or disposed of in such a manner as to cause such contamination of the environment as to result in a person receiving an effective dose in excess of the appropriate effective dose limit (section 31). In addition it prohibits the disposal of solid radioactive waste by near-surface disposal unless the disposal, the disposal facility and the disposal site comply with the requirements of the appropriate code of practice. As with the *Radiation Safety Act 1975*, the penalty for contravention is very low.

This Act is relevant only to disposal of radioactive material and waste (mainly generated in a medical or scientific context).

Waterways Conservation Act 1976

The Act deals with the discharge or deposit of waste which might enter the waterways and cause damage through pollution to the water or water sources.

It also provides a system of licences for the discharge or deposit of material in water or on land controlled by the Commission.

Waterways Conservation Regulations 1981

These Regulations are made pursuant to the *Waterways Conservation Act 1976*.

Where exercise of power by the Commission is in conflict with exercise of power by local authorities in relation to waters comprised within a management area concerning the discharge or proposed discharge of water or any waste into any waters, or onto or under any land so as to be likely to enter any waters, the Commission's powers prevail.

Western Australian Marine (Sea Dumping) Act 1981

This Act enacts the provisions of the *International Convention On The Prevention Of Marine Pollution By Dumping Of Wastes And Other Matter* 1972 in WA waters.

It specifically deals with the disposal of waste to the sea, with a view to minimising such disposal and carefully regulating such disposal.

The Act does not apply in relation to the disposal of wastes related to the exploration, exploitation and associated off-shore processing of sea-bed mineral resources.

Waste Avoidance and Resource Recovery Bill

The draft Waste Avoidance and Resource Recovery Bill was released for public comment in August 2006. It is expected to be introduced to Parliament in 2007.

The obligations and powers for waste management services for municipal solid waste – which includes commercial waste in its definition – will be moved from the *Health Act 1911* into this Bill. The Bill allows potential competition for the carrying out of waste management services (primarily between local government and commercial entities with an EP Authorisation from the CEO of the new Waste Authority, but also with the Port Authorities) with the safety net that the CEO may direct that local government provide services if needs be.

The Bill requires a Waste Strategy to be developed by the Waste Authority and Waste Management Plans to be developed by local government. Any entity may be required to report to the CEO of the Department of Environment and Conservation on its state of compliance with the published Waste Strategy and can be named and shamed if it does

not comply with the Waste Strategy. Local Government's Waste Management Plans have the status of local government "plans for the future".

Industry is encouraged to formulate and enter into Product Stewardship Agreements, the existence, implementation and effectiveness of which are taken into account by the Minister in deciding whether to implement powers to put Extended Producer Responsibility Schemes in place. Schedule 3 sets out very specific Regulation-making powers mapping out the terrain in which Container Deposit Legislation may be implemented.

The Bill also consolidates the levy provisions of Part VIIA of the *Environmental Protection Act 1986* and Section 4 of the *Environmental Protection (Landfill) Levy Act 1998*

Attachment C – EDO Submission on Waste Avoidance and Resource Recovery Bill

24 November 2006

The Department of Environment and Conservation
Locked Bag 104
BENTLEY DELIVERY CENTRE
WA 6938

Attn: Dr John Ottaway
Office of the Deputy Director General – Environment
(File 509/97/8)

Dear Dr Ottaway,

Waste Avoidance and Resource Recovery Bill

Thank you for the opportunity to comment on the above Bill. The EDO recognises that a new approach to waste management is required in WA and believes that the Bill goes some way to addressing this. In particular, provisions aimed at improving waste minimisation, recycling, and establishing extended producer responsibility schemes are strongly supported.

Part 1 - Preliminary

The term 'resource recovery' is not defined in the Bill. The objects provision at section 5 describes some matters which could be included in the scope of resource recovery, however it is not a definitive list. There is some contention over exactly which activities fit within resource recovery. For example, some people may contend that incineration fits within this term, however there is strong opposition from many community members to incineration being considered a form of resource recovery, rather than disposal. It is important for the term resource recovery to be defined as it sets the scope of activities that can be put forward as waste management options in the waste strategy.

The fact that 'problematic wastes' are only problematic if they are specifically prescribed as such is a concern. Wastes are hazardous or problematic by their nature, not by their labelling as such by Government. There is strong scope for manipulation of this definition by industries who do not want a particular product classified as problematic. The definition should be altered so that a waste is problematic if it fits within subsection (a) of the current definition or is proscribed to be so by regulations. If a safety net is needed a subsection could be added to remove a waste from this definition through regulations. This is the approach adopted in the definition of 'municipal solid waste'.

Parts 2 and 3 - Waste Authority

The establishment of a permanent statutory authority is a valuable initiative and is supported. It is important that the Authority includes a broad cross section of experience, particularly in the areas of conservation and community, which can be overlooked. This should be enshrined in the Bill by changing the words "should" in section 11(2)(a – e) to "must".

Section 18 should specifically require the establishment of a permanent community committee to assist the Authority in the performance of its functions, to ensure community views are clearly heard.

Section 21 allows the Minister to give mandatory directions to the Authority and so the Authority is not totally independent. At present the Bill requires these directions to be included in the Waste Authority's annual report. Instead, these directions should be tabled in Parliament within 14 days of the direction to ensure full transparency and accountability.

In addition to its current functions listed in Schedule 2, the Waste Authority should also be able to monitor and report on waste management plans and codes of practice.

Part 4 - Management Documents

Waste Strategy

Sections 26 – 33 set out the process for drafting and reviewing the waste strategy. This process does not provide an equal opportunity for all sectors of the community to participate. It is also is cumbersome and is likely to cause delays in the development of the strategy.

It is essential that the community have equal opportunity to express their views as this document will set the standard for many waste management decisions in WA. The process for formulating the draft waste strategy places more importance on industry than the community because the Authority must consult with industry, ("entities involved in waste management and resource recovery") however the Minister has to give permission for it to consult with community (sections 27 & 28). In addition, the draft must be referred back to industry after the community is consulted, and industry has the right to request the Authority to alter any parts it would like to vary.

Section 30 should be removed which would streamline the process and remove the imbalance towards industry. Section 28 should be modified to remove the requirement for the Minister's consent for public consultation – public consultation should be mandatory.

The power of the CEO to request any entity to provide a report on compliance with the waste strategy under section 34 is supported, as many organisations outside the immediate scope of this Bill produce considerable waste and should be putting strategies in place to reduce their waste and dispose of it properly. This will assist WA to reach its state-wide goal of zero waste by 2020. Although this provision will not require entities to comply with the strategy, it will encourage private companies and government agencies to consider waste management more carefully, and will encourage some entities to comply with the strategy to avoid being named in the annual report. A transition to require mandatory compliance with the waste strategy by all government agencies and private companies should be considered in the future.

The Minister can direct that the waste strategy be changed after all other parties have submitted comments. There should be a requirement in section 31 that he/she be required to publicly state which parts have been changed in the interests of transparency.

Waste Management Plans

Waste management plans should not be part of a local council's 'plan for the future' under section 38, rather they should be separate documents with their own development and consultation process. Waste is a core business of local governments and a large revenue source and should be treated separately with focused consultation. Residents of the area should have the opportunity to input into the waste management options that are adopted for their local government area. The Government has stated that financial and other support will be provided, particularly to small councils, so lack of resources should not be a major issue.

It would be useful if the Waste Authority could direct the CEO to request waste management plans from local councils. The Waste Authority will be in an excellent position to advise which councils would benefit from development of a waste management plan. The Waste Authority already has a similar power under section 69(2) and this should be extended.

Rather than just local councils being required to develop a waste management plan there should be power for *any entity* to be directed to develop one. A large proportion of waste comes from industry and they should be required to align their waste management processes with the waste strategy.

The local council waste management plans should have a greater impact on decision making. In section 41, only the CEO of DEC must have regard to a plan when exercising a function under the Act. This should be altered so that any state or local government decision maker who is making a decision that affects a specific local government area must make decisions that are consistent with the plan, or at least be required to consider the plan in their decision making. This includes town planning decisions, water resource considerations, issuing of mining tenements, development proposals, industrial expansions etc. This will ensure that specific waste issues are considered earlier in the planning process and are integrated into the planning process, and that projects take account of local circumstances.

General

The waste strategy and all plans and relevant documents should be available to the public

free of charge in hardcopy and electronically as opposed to being available for a fee as indicated in section 32(5). This is the best way to ensure the whole community is aware of and thinking about waste management for the State and their LGA. There should also be a requirement for data on the amount and types of waste being collected to be publicly available.

Part 5 - Product Stewardship

The introduction of a regime for voluntary and mandatory EPR schemes is strongly supported as a valuable initiative to increase the volume and quality of recycled materials in WA and address problem wastes.

The EDO's main concern with the provisions as they are currently worded is that there could be significant delays in introducing effective voluntary or mandatory schemes. While the EDO has no in-principle problem with voluntary producer-developed schemes, the concern is that there will not be enough incentive to bring in effective schemes that achieve best practice. Producers will need a strong incentive to develop such schemes voluntarily. Although the threat of a mandatory government scheme is an incentive, strong political will is required to keep the pressure on producers. The provisions as they are written could allow long delays in the implementation of effective schemes.

There is no requirement in the Bill that a product stewardship agreement contain best practice approaches and targets, or that it be robust. Provided that it meets the Bill requirements the CEO must accept it. A concern will be whether producers implement ineffective voluntary schemes that take a long time to develop and will delay imposition of an effective mandatory scheme. If this does happen, the Minister will have power to override them with a mandatory scheme as he could deem them ineffective, however in practice this may be controversial.

In a situation when there is a less effective voluntary scheme in place combined with heavy lobbying to prevent a much more effective mandatory scheme from being established it may be very difficult for the Minister to bring in a needed mandatory scheme.

It may be better to alter Part 5 of the Bill to simply require producers to develop their

own scheme for any product that the waste authority identifies in their priority statement. In other words, the Waste Authority identifies priority products that would strongly benefit from an EPR scheme using the process in section 45, and once the list is finalised, producers of that product are required to develop a scheme that meets the targets that the Authority sets for that product. It would be left up to producers to decide what type of scheme they think would be most effective to meet the targets. Thus the schemes would be mandatory, however producers would have great flexibility in determining the most cost effective and efficient type of scheme.

If the current approach is retained, it will be essential for the Waste Authority and Minister to establish EPR schemes as soon as possible, to demonstrate their strong commitment to producers to deal with priority wastes. In particular, a system to establish a container deposit scheme should be established immediately; within the first year of introduction of the Act. Container deposit schemes have strong support within the WA community and have been proven in South Australia and other countries to be an extremely effective way of dealing with disposable containers and improving recycling rates and the quality of recycled material.

It will be very important for a container deposit scheme to be constructed in a way that does not conflict with free trade, excise, competition, fair trading and mutual recognition laws. A carefully constructed scheme under the WARR Bill should not offend any of these laws. To this end, it may be beneficial to make a small amendment to the objects in section 5(a) by adding the words "including pollution through litter" after "…environmental harm". This will assist when interpreting the provisions under mutual recognition laws.

In addition, if the current approach is retained, the wording of section 44 that the Minister "must have regard to" certain issues should remain as it is. In NSW, this provision is worded slightly differently, and specifically prevents the Minister from implementing an EPR scheme unless it is found to be *necessary* after considering a number of items. There is too much potential for manipulation with that wording – the wording of the WA Act is far preferable.

Part 8 - Offences

As it is presently worded, section 66 could capture schools or scout groups etc who are

collecting recyclable containers under a container deposit scheme. It could be argued that a scout group who establishes a program to collect applicable containers (a type of municipal solid waste) is doing so for reward (the redemption fee) and therefore would be required to have a written contract or approval from the local council or an EP authorisation. It is too cumbersome for such organisations to obtain such approvals. It is presumed that this was not the intention of the provision. It should be reworded to make it clear that it does not catch schools, scout groups etc collecting recyclable containers under a CDL scheme.

It is noted that penalties for non-compliance with mandatory EPR schemes are not included in the Bill and will therefore be in the regulations, once drafted. The penalty limit for regulations of $1000 or $5000 for a body corporate will be of no deterrent value whatsoever to many producers. It is preferable that an offence for non-compliance with EPR schemes be included in the Bill so that a penalty can be set which has an effective deterrent value, preferably upwards of $50,000 for bodies corporate. Alternatively, the Bill should include a specific provision allowing penalty levels in the regulations to be set at a much higher level, or specifically note under section 75 that daily penalties also apply to offences under the regulations.

Third party enforcement provisions should be included in the Bill specifically in relation to section 68 to allow members of the public to take action for offences where the Government will not act. The public has a right to expect that waste management services are being carried out appropriately and in accordance with the waste management plan. Third parties should be given the right to institute proceedings where a party is not in compliance with the Act.

Part 10 – Appeals

Under section 78, local governments may appeal certain decisions of the CEO of DEC to the Minister. It is suggested that appeals should go to the State Administrative Tribunal rather than the Minister, as this is the appropriate forum for reviewing these types of government decisions, and was established specifically for this purpose.

Part 11 – General Provisions

Section 82, which requires confidentiality, should be modified and the penalty reduced. This provision is worded too broadly and will have the effect of preventing anyone performing any functions under the Act from disclosing any information for fear of breaching this provision. The provision could be used as an excuse for not disclosing information about waste collection and disposal, which is important information for the community and should be publicly available. The provision should be limited to apply only to information that is actually confidential. The penalty should also be reduced. It is disproportionate to the gravity of the offence, particularly as it is the highest of any penalty in the Bill.

Schedule 1 – Constitution and Proceedings of the Waste Authority

Item 17 should be deleted. Members of the Waste Authority who have a material personal interest in a matter considered by the Waste Authority should not be able to vote on the matter.

Yours sincerely,

Nicola Rivers
Solicitor
Environmental Defender's Office