



NetWaste Strategic Waste Plan

2013 – 2017

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PART 1 STRATEGY CONTEXT

1.1 BACKGROUND

NetWaste is a collaborative environmental management project sponsored by the NSW Environment Protection Authority (EPA) and the Central West (CENTROC) and Orana Regional Organisation of Councils (OROC), located in the central and western regions of New South Wales, Australia. The region comprises 28 councils, covering a total area of 317,942 square kilometres and supports a population of more than 400,000 people. The total NetWaste area represents over one third of the State of New South Wales.

In 2012 NetWaste commissioned Robert Bailey Consulting to undertake a major review of waste management. This culminated in the production of the NetWaste Strategic Waste Plan - July 2012 to June 2015.

However during the period from 2012 major changes to National and NSW policy, legal and funding arrangements have been unfolding which will have profound impacts on waste management and resource recovery for the NetWaste region.

Federal and State policy and legislation is driving greater resource recovery and reduction of waste to landfill. The Federal Government's carbon pricing mechanism imposes significant disincentives to landfill organics in the form of Carbon Taxes. Whilst the newly elected coalition has a mandate to scrap the carbon tax, it appears likely that this will be opposed by the Senate. It remains to be seen what form of carbon abatement scheme will eventuate. Under the existing legislation, several Councils that operate landfills in the NetWaste Region are likely to be captured as "liable entities" under that scheme. The NSW Government's Section 88 Waste Levy which at this stage only applies to Blue Mountains Council within the NetWaste region may well be extended to affect other NetWaste Councils in future.

The NSW Government has recently launched the Waste and Resource Recovery Initiative *Waste Less, Recycle More* for NSW¹, a \$465.7 million package over 5 years that will influence waste and recycling in NSW.

NetWaste has therefore determined to update the Strategic Waste Plan 2012-2013 to address the above and to better position member councils to respond to these changes. A key aspect of this update is to best place NetWaste to take advantage of funding opportunities that may arise from the *Waste Less, Recycle More* for NSW program.

This *2013 – 2017 NetWaste Strategic Waste Plan*, which has been undertaken by Impact Environmental Consultants (IEC), will provide directions as to future waste management priorities.

1.2 GUIDING PRINCIPLES FOR THE STRATEGY

This *2013 – 2017 NetWaste Strategic Waste Plan* has been developed as a high level framework for the delivery of sustainable waste management across the NetWaste region. The *Strategy* will guide waste management practices and initiatives until 30 June 2017 and beyond. Current needs are targeted and medium to longer term challenges are identified.

1. NSW Office of Environment and Heritage, *Waste Less, Recycle More: Waste and Resource Recovery Initiative*, Feb. 2013. <http://www.environment.nsw.gov.au/resources/waste/130050WLRM.pdf>

Decision making for NetWaste and constituent Councils regarding waste management practices is increasingly influenced by NSW and National Waste Policy. However local considerations such as status of existing infrastructure, costs and funding, employment, opportunities to enhance regional co-operation and community wishes are equally important.

NetWaste Councils routinely consider environmental, economic and social outcomes in their decision making. For waste management this includes considering sustainable management practices. Councils can add value to waste management practices by recognising the possibilities for waste avoidance and resource recovery for the local community, both present and future.

The need to adopt sustainable approaches is well recognised for a number of reasons including:

- The continued use of limited resources by future generations depends on sustainable resource management today.
- There are opportunity costs to disposing of resources to landfill, apparent in lost employment and economic opportunities.
- The disposal of waste contributes to the production of greenhouse gases.
- Waste and resource management is necessarily the responsibility of all sections of the community.
- Resources are lost in disposing of materials that can be a source for reprocessing.

This *2013 – 2017 NetWaste Strategic Waste Plan* recognises the community's changing attitudes and behaviour to achieving sustainability. The pursuit of sustainability through better waste management practices has shifted from the issues of how to collect waste and where to dispose it, to advancing the development of resource recovery and recycling through efficient processes resulting in social, economic and environmental gains.

1.3 AIMS

NetWaste seeks to align with the NSW EPA's *Strategic* directions that are identified in the NSW WARR Strategy 2007 (pending review), and the NSW Environment Protection Authority Strategic Plan 2013–2016.

This NetWaste Strategic Plan aims to progress towards the following key NSW waste reduction targets.

- Growth in waste generation is held to the level of population growth by 2021–22
- Recycling rates increase to 70% for municipal solid waste and commercial and industrial waste, and 80% for construction and demolition waste by 2021–22
- Waste diverted from landfill increases to 75% by 2021–22
- Problem waste collection services are available for 80% of households by 2021–22
- Litter is reduced by 40% by 2016–17 compared with 2011–12 levels
- Illegal dumping reduces after 2016–17

1.4 OBJECTIVES

The following objectives have been defined based on the NetWaste Strategic Waste Plan - July 2012 to June 2015, and further consultation with NetWaste members:

- Reducing the amount of waste being generated
- Increasing resource recovery
- Reducing greenhouse gas emissions
- Delivering environmentally responsible waste management systems
- Improving awareness of waste minimisation and resource recovery principles and influencing behavioural change
- Improving recycling and composting
- Reducing litter and illegal dumping
- Managing problem wastes
- Facilitating information exchange and skills development
- Optimise procurement of grant funding

1.5 DEVELOPMENT OF THIS 2013-2017 STRATEGIC WASTE PLAN

This 2013-2017 Strategic Waste Plan updates the 2012-2015 Strategic Waste Plan. As this project was a review and update of the 2012-2015 Strategic Waste Plan rather than a complete rewrite, much of the content and format of the earlier edition has been retained in this document.

The brief required completion of the project within a constrained timeline, and this was achieved in the following stages:

Stage 1 Reviewed Current NetWaste Strategy and Emerging Issues

IEC conducted a review of the 2012-2015 NetWaste Strategy, waste data, emerging issues and priorities in the NetWaste region. This included phone discussions and emails with the NetWaste Coordinator and Council representatives as necessary. Recent and proposed Federal and State legislation and policy changes were investigated. This included evaluation of the implications of the new NSW WARR strategy, review of NSW waste regulations, potential extension of Section 88 regulated areas in the NetWaste region, the *Waste Less, Recycle More* funding program, the roll out of the National Waste Policy, and the Carbon Pricing Mechanism including carbon abatement obligations and carbon farming opportunities.

As indicated in Section 2.3, Figure 4, local government waste management is undergoing a significant phase change in the government policy, statute and funding arenas. Much of which underpins the strategic directions in this Strategic Waste Plan remains in flux. This impeded the progress of this stage of strategy development and will necessitate ongoing review.

Stage 2 Gap Analysis

In this phase IEC conducted a gap analysis to identify areas within the existing Strategy that required changes and areas where further data or actions were required.

Stage 3 Consultation and Workshop

A workshop was held with NetWaste members in Orange on 8 August 2013 to seek input on the gap analysis and draft strategic focus areas, issues, and actions. Following this, updated tables were distributed on 13th August to NetWaste coordinators for further review and input on timelines, responsibilities and budgets. Responses were received in part on 21st August 2013.

Stage 4 Preparation of Draft

Following the above IEC prepared the first Draft NetWaste Strategic Waste Plan 2013 –2017, which was submitted to NetWaste on 26th August 2013 for preliminary review.

Stage 5 Peer Review & Report Finalisation

The Draft NetWaste Strategic Waste Plan 2013 –2017 which was submitted on 26th August 2013 was reviewed by an independent expert appointed by NetWaste. IEC received the Peer Review on the 2nd September and comments from NetWaste staff and members on 5th September 2013. Feedback was incorporated, as appropriate, into the document.

The final NetWaste Strategic Waste Plan 2013 –2017 was submitted to NetWaste on 9th September 2013.

1.6 STRATEGY LAYOUT

The structure of this *Strategy* is explained as follows:

- Part 1** examines the Strategy background and methodology and context.
- Part 2** reviews government policy and legal framework affecting waste management in the region.
- Part 3** considers funding opportunities for NetWaste under the NSW *Waste Less Recycle More* initiative
- Part 4** profiles how NetWaste functions, its membership, and performance in delivering and/or being a conduit for sustainable waste outcomes in the region.
- Part 5** explores the characteristics of the NetWaste region and key waste management data.
- Part 6** addresses the key strategic focus areas, the goals, issues, desired outcomes, and actions required.
- Part 7** provides Action Tables and assigns timing, allocates responsibility for delivery, differentiates between core and grant funding and includes relevant comments.
- Part 8** describes the monitoring and reporting requirements, key performance indicators and measures together with a reporting template.
- Part 9** contains a glossary of terms and acronyms.

1.7 THE POLICY, STRATEGIC AND LEGAL FRAMEWORK

This 2013-2017 NetWaste Strategic Waste Plan seeks to provide a regional plan that has clear links with government policy, legislation and funding regimes, and which informs and supports subregional and local council waste management initiatives.

This plan will sit within a strategic framework that is broadly depicted in Figure 1 below:

Figure 1 – WASTE AND RESOURCE RECOVERY STRATEGIC FRAMEWORK



It should be noted that reliance on Sub Regional Strategies has diminished over time as the NetWaste collaboration has evolved.

Local Councils are required to plan and manage waste responsibilities in accordance with increasing diligence. The complexity of waste legislation and regulation continues to reflect the importance that the community is placing on environmental, economic and social considerations. The following policies, strategic documents and legislation have been considered as the context in this Strategic Plan.

PART 2 LEGISLATIVE AND POLICY CONTEXT

2.1 THE NSW GOVERNMENT

The NSW Government has wide ranging responsibilities for laws and regulations that impact on waste management operations and practices. The waste laws that councils must abide by are complex and diverse, ranging from community strategic planning, procurement, finance and charges, planning and development control, landfill licencing, landfill levies, reporting requirements, air- water-noise-odour pollution control, use of waste materials and waste transport. These are examples of the extent to which waste management is governed.

NSW Local Government Act 1993

The NSW Local Government Act defines the various aspects of Council responsibility for waste management. The provisions of the Act relating to waste management range from defining Council responsibilities regarding waste removal, treatment and disposal; the preparation of local policies; the powers to charge residents for waste services; the requirements for tendering services; to how councils are to be accountable for their decisions.

The Local Government Act 1993 is to be rewritten. A four member Local Government Acts Taskforce has been established to review the Act. Following the release in April 2013 of its discussion paper "A New Local Government Act for NSW" the Taskforce held workshops at various locations across NSW for all interested persons to discuss the proposals contained in this paper. The Taskforce has now moved to Stage III of the review - consideration of the feedback received from both the workshops and written submissions and preparation of its report to the Minister for Local Government containing recommendations for a new Local Government Act for NSW and review of the City of Sydney Act. The Taskforce expects to report to the Minister in September 2013.

At the same time a NSW Independent Local Government Review Panel is investigating and identifying options for governance models, structural arrangements and boundary changes for local government in NSW.

These changes may have a major influence on waste management in the NetWaste region, particularly in terms of procurement, potential council amalgamations, and potential management of waste via County Councils or incorporated entities.

Integrated Planning and Reporting Framework

The NSW Local Government Act 1993 currently sets out an Integrated Planning and Reporting framework which aims to strengthen Councils' strategic focus for a minimum timeframe of ten years. Council must ensure the Community Strategic Plan is adequately informed by relevant information.

The new planning framework does not prescribe a set of principles for councils. Rather a Community Strategic Plan must adequately address social, environmental, economic and civic leadership considerations. Community objectives are identified and strategies for achieving each objective are developed. Waste Management is one area of responsibility that Council must consider in preparing its Community Strategic Plan. Council needs to consider the community's expected level of service in light of the community's willingness or ability to pay for the services.

Perusal of the Community Strategic Plans that have been adopted by NetWaste Councils confirms that sustainability, provision of community services, environment protection, waste management and resource recovery, and collaboration, rank as key strategic focus areas.

For example:

Gilgandra Community Strategic Plan 2009-2020:

- *“Thriving Environment - ...Minimise the environmental impacts of waste and improve resource recovery rates...”*
- *“Catalyst Projects - ...Develop a Waste Management Strategy...”*
- *“Inclusive Community - ...To enhance service quality and sustainability through the integration of service provision...”*

Dubbo Community Strategic Plan 2011-2036:

“3.4 Outcome: The community has a high standard of living through the provision of superior waste management services.

- *3.4.1 The Waste Management Strategy for the City is implemented for domestic recycling, greenwaste collection, processing and industry waste reduction plans.*
- *3.4.2 The community exhibits positive waste avoidance and reduction behaviour within the City*
- *3.4.3 High quality, environmentally sensitive and cost effective waste management services with the capacity to meet current and future growth requirements are provided.*
- *3.4.4 Systems are in place to maximise resource recovery at the Whylandra Waste Depot.*
- *3.4.5 Dubbo is a regional waste management service provider.*
- *3.4.6 The Whylandra Waste Depot is operated to comply with standards and regulations relating to pollution control and climate change.”*

The development and implementation of this NetWaste Regional Strategic Waste Plan is consistent with and will support the Community Strategic Plans of member councils.

NSW Waste Avoidance and Resource Recovery Act 2001

The NSW Waste Avoidance and Resource Recovery (WARR) Act is the framework legislation that provides for the development of a NSW waste strategy, which incorporates the headline targets for waste reduction, resource recovery and the diversion of waste from landfill disposal. The Act allows for the Office of Environment and Heritage to require local councils to provide details for the reporting of all waste types, classification, characteristics, composition or quantities, and the transportation of such waste.

For local waste decision making, the objects of the WARR Act of most significance include the provisions for:

- the continual reduction in waste generation; and
- minimising the consumption of natural resources and the final disposal of waste by encouraging the avoidance of waste and the reuse and recycling of waste.

The NSW Waste Avoidance and Resource Recovery Strategy as required by the WARR Act 2001 has driven the implementation of strategies that have been effective in significantly increasing resource recovery.

The NSW Waste Avoidance and Resource Recovery Strategy 2007 updates the 2003 NSW WARR Strategy, and continues to provide guidance and priorities for action to ensure that efficient resource use and impacts on the environment are considered throughout the life cycle of goods and materials.

The Strategy identifies priority actions that will guide the work of all key groups in NSW in contributing to the minimisation of environmental harm from waste disposal and the conservation and efficient use of resources. The Strategy focuses on solid wastes that, unless recovered and diverted to beneficial uses, would be disposed of to landfills.

The identified waste avoidance and resource recovery goals and targets include four key result areas:

- preventing and avoiding waste;
- increasing recovery and use of secondary materials;
- reducing toxicity in products and materials; and
- reducing litter and illegal dumping.

The WARR strategy is currently being reviewed and is pending release for public comment.

The NSW Waste Avoidance and Resource Recovery Progress Report 2010² highlights the achievements of the WARR Strategy to date as shown in Table 2 below. Note that the 2021 targets were only recently released in the NSW EPA's Strategic Plan and will no doubt be reflected in the revised WARR strategy that is yet to be released.

Table 2 – NSW PROGRESS TOWARDS EPA WASTE TARGETS

Waste Sector	NSW 2000 baseline	NSW Actual 2002-03	NSW Actual 2008-09	NSW Actual 2010-2011	NSW Target 2014 ³	NSW Target 2021 ⁴
Municipal	26%	30%	44%	52%	66%	70%
C&I	28%	34%	52%	57%	63%	70%
C&D	65%	64%	73%	75%	76%	80%
Overall		45%	59%	63%		75%

During the 2010-2011 year NSW recycled on average 63% of waste across the above categories.

² NSW Waste Avoidance and Resource Recovery Progress Report 2010. November 2010

³ WARR Strategy 2007

⁴ NSW 2021 Target adopted in the NSW EPA Strategic Plan 2013-2016, July 2013

As recycling rates have increased, waste disposal has fallen as a proportion of total material flows. However the overall amount of waste we generate is increasing (from 11.8 million tonnes in 2002–03 to 17.1 million tonnes in 2010–11)⁵. The above table highlights the relatively high performance of C&D recovery, versus lesser performance in the Municipal and C&I sectors.

In the Municipal stream, the EPA has identified that in particular recovery of food and more organics is a priority as is recovery of plastics and reduction of plastics.

In the C&I streams more work is needed to focus on recovery of food, plastic, paper, cardboard and garden organics.

In 2010 the NSW Environment Minister commissioned David Richmond⁶ to review the NSW Waste Avoidance and Resource Recovery Strategy and other waste policies. The review recommended identified approaches to continue to support the Strategy and highlighted a number of opportunities for improvement.

The purpose of the Review was to:

- ensure that the policies applied to the generation, collection, separation, processing, and disposal of the waste stream are optimised so as to achieve, or better, the NSW targets, and
- achieve greater community acceptance of the need for resource recovery, waste minimisation and recycling.

The Review's key findings in the municipal waste sector were that although the waste and environment levy does not have a direct impact on individual householders, it is having an impact on the waste accumulators (i.e. councils), and they are actively seeking alternatives to sending waste to landfill.

The NSW Government has responded to this Review through the *Reducing Waste: Implementation Strategy 2011-2015*⁷. The *Implementation Strategy* sets out the next stage of initiatives that focus on those specific waste types, collection systems and infrastructure needs where the potential for improvements has been identified as the greatest. Five new focus areas are proposed:

- making it easier for households to separate and recover their waste
- making it easier for businesses to separate and recover their waste
- reducing or removing problem waste to improve resource recovery and produce environmentally safe recyclable materials
- facilitating investment in waste infrastructure
- reducing litter and combating illegal dumping.

NSW Protection of the Environment Operations Act 1997

The *Protection of the Environment Operations (POEO) Act* is the central environmental protection legislation for NSW and is administered by the NSW Office of Environment and Heritage⁸.

⁵ Minister's Message, Waste Less Recycle More. NSW EPA, 2013

⁶ Review of Waste Strategy and Policy in NSW. Report by the Steering Committee for the Review of NSW Waste Strategy and Policy for the NSW Department of Environment, Climate Change and Water December 2010.

⁷ *Reducing Waste: Implementation Strategy 2011-2015*. NSW Department of Environment, Climate Change and Water. March 2011.

⁸ Office of Environment and Heritage within the NSW Premiers Department.

The POEO Act sets out broad responsibilities for local councils acting in a regulatory capacity. The objects of the Act include measures for the protection of the environment through various regulatory frameworks and enforcement powers. The Act has a scheme for the making of policy instruments which set environmental standards, goals, guidelines or protocols. Local councils must take these policies into account when making decisions that affect the environment.

Under the POEO Act the definition of “Waste” is defined such that a substance is not precluded from being waste for the purposes of this Act merely because it is or may be processed, recycled, re-used or recovered. The use “Waste” is prohibited, except with the benefit of a General or Specific Exemption issued under Clause 51 and 51A of the Protection of The Environment Operations (Waste) Regulation 2005. Such rules have significant impacts on waste processing, marketing, product uses and compliance costs. Several general exemptions, such as The Food Waste Compost Exemption 2008, are expected to be reviewed during the term of this NetWaste Strategic Plan.

Schedule 1 of the POEO Act defines scheduled activities that are required to be licenced. Actions pursued in accordance with this NetWaste Strategic Waste Plan, such as composting facilities and consolidation of landfills may well have implications in terms of requirements to amend existing EPA licences or to seek new licences.

An objective of the POEO Act is to assist in the achievement of the objectives of the *Waste Avoidance and Resource Recovery Act 2001*.

Other particular provisions currently in force in NSW influencing waste management decision making include:

- Section 144AA of the *Protection of the Environment Operations Act 1997* outlines it is an offence and provides for the imposing of penalties for misleading or inaccurate information regarding waste reporting.
- Section 88 of the *Protection of the Environment Operations Act 1997* imposes a levy on each tonne of material deposited in a landfill. The amount of the levy is set by regulation until 2016, for LGAs in the Sydney Metropolitan Area, the Extended Regulated Area and the Regional Regulated Area. Whilst this levy is not currently applied to Moree, the possibility of Government extending its application needs to be recognised.

The Section 88 Levy rates for 2013-14 have been set as follows:

- Sydney Metropolitan Area: \$107.80 per tonne
- Extended Regulated Area: \$107.80 per tonne
- Regional Regulated Area: \$53.70 per tonne

In 2012 the Minister for the Environment the Hon Robyn Parker commissioned KPMG to undertake an independent review of the waste and environment levy ('waste levy'). The review was identified as a priority action under Goal 23 in “*NSW 2021: A plan to make NSW number one*”.

Following extensive consultation KPMG proposed 17 recommendations, of which 15 were adopted by the NSW government to improve the waste levy, drive greater recycling and better align future waste levy funding to stimulate infrastructure, combat illegal dumping and reduce littering. Many of the adopted recommendations form the basis of the Waste Less Recycle More package that is described in more detail later in Part 3.

Of particular relevance to NetWaste councils was recommendation¹⁶ and the NSW government's determination⁹ which is replicated below:

Recommendation 16: The levy should be applied across the whole of NSW, with small regional landfills receiving less than 5000 tonnes of waste per annum remaining exempt from the levy.

The Government does not support this recommendation.

Given that earlier KPMG consultations did not discuss the proposed application of the waste levy across the whole of NSW, the EPA, in conjunction with the Local Government and Shires Associations, will consult with councils likely to be affected by adopting this recommendation, including councils in the Regional Regulated Area, as part of the comprehensive review of the Protection of the Environment Operations (Waste) Regulation 2005 in early 2013.

The consultation with affected councils on the broadening of the waste levy base will also address alternative voluntary mechanisms, the practical application and costs of the proposed levy threshold of 5000 tonnes per year on existing landfills, and the most appropriate mechanism for dealing with new small rural landfill sites greater than 200 tonnes. The result of this consultation will be further considered by Government in mid-2013.

The NSW government is currently considering public input and is yet to determine if, how and when the the Levy would be widened to include other NSW LGAs.

Environmental Planning and Assessment Act 1979

Expansion, modification and establishment of new waste facilities will trigger the provisions of the Environmental Planning and Assessment (EP&A) Act and Regulation thereunder and may require determination under Part IV or Part V of the Act.

Schedule 3 under the Environmental Planning and Assessment Regulation 2000 lists waste operations, including storage, composting, and disposal and recycling which fall under the definition of "Designated Development". A Designated Development is subject to more rigorous assessment via an Environmental Impact Assessment.

Further as "Integrated Development" concurrence of relevant authorities is required, in particular the EPA which is also the licencing authority under the POEO Act.

This legislation is highly relevant to infrastructure activities identified in this NetWaste Strategic Plan. The creation or upgrading of regional landfills, waste transfer stations and composting facilities will be subject to EP&A Act requirements. For example composting operations which fall within the following definition under Schedule 3 constitute "Designated Development":

13 Composting facilities or works

⁹ <http://www.epa.nsw.gov.au/waste/levyrecommendations.htm>

Composting facilities or works (being works involving the controlled aerobic or anaerobic biological conversion of organic material into stable cured humus-like products, including bioconversion, biodigestion and vermiculture):

(a) that process more than 5,000 tonnes per year of organic materials, or

(b) that are located:

(i) in or within 100 metres of a natural waterbody, wetland, coastal dune field or environmentally sensitive area, or

(ii) in an area of high watertable, highly permeable soils, acid sulphate, sodic or saline soils, or

(iii) within a drinking water catchment, or

(iv) within a catchment of an estuary where the entrance to the sea is intermittently open, or

(v) on a floodplain, or

(vi) within 500 metres of a residential zone or 250 metres of a dwelling not associated with the development and, in the opinion of the consent authority, having regard to topography and local meteorological conditions, are likely to significantly affect the amenity of the neighbourhood by reason of noise, visual impacts, air pollution (including odour, smoke, fumes or dust), vermin or traffic.

The implications of NetWaste waste infrastructure activities being caught under EP&A Act provisions include considerable costs of undertaking environmental studies, time taken to gain requisite approvals, uncertainty as to whether approvals will be granted and costs of complying with consent conditions.

2.2 THE AUSTRALIAN GOVERNMENT

Product Stewardship And Extended Producer Responsibilities

Extended producer responsibilities are those placed on the producers of consumer goods whereby the producers are required to take greater responsibility for managing the environmental impact of their products across their entire life cycle.

Extended Producer Responsibilities

Australian Government legislative and regulatory measures will increasingly be used to compel compliance with policies such as the *NSW EPR Priority Statement*.

The National Waste policy commits the Australian Government, with the support of state and territory governments to establish a national framework underpinned by legislation to support voluntary, co-regulatory and regulatory product stewardship and extended producer responsibility schemes. The landmark *Product Stewardship Bill 2011* was passed by the Federal Parliament in June 2011.

The legislation provides a framework to manage the impacts of products, and in particular those impacts associated with the disposal of products.

The first scheme to be established under the new legislation is the national, industry-led television and computer recycling scheme. The Product Stewardship (Televisions and Computers) Regulations 2011 were made in November 2011. The Regulations identify importers of televisions, computers, printers and computer products and domestic manufacturers of these products as 'liable parties' that are obliged to become members of an approved arrangement (known as Approved Co Regulatory

Arrangements in the Act), that will collect and recycle televisions, computers, printers and computer products on their behalf.

National Waste Policy

In November 2009, the Department of the Environment, Water, Heritage and the Arts, on behalf of the Australian Government, released the *National Waste Policy: Less Waste, More Resources*¹⁰. The Policy sets out the aims, principles to guide actions, as well as sets key directions and priority strategies. The Policy targets outcomes for national waste management and resource recovery policy for the next decade.

The aims of the *National Waste Policy* are summarised as:

- avoid the generation of waste, reduce the amount of waste for disposal, manage waste as a resource and ensure that waste treatment, disposal, recovery and re-use is undertaken in a safe, scientific and environmentally sound manner.
- contribute to the reduction in greenhouse gas emissions, energy conservation and production, water efficiency and the productivity of the land.

In July 2010, the Implementation Plan for the National Waste Policy was released. The Implementation Plan sets out the governance arrangements for the priority initiatives and key milestones for the first five years of the ten year National Waste Policy.

A key priority of the National Waste Policy is the development of National Product Stewardship Framework legislation. The framework will aim to support efficient industry based schemes for collecting and recycling end of life products.

Australian Packaging Covenant

The *Australian Packaging Covenant*¹¹ is an agreement between companies in the supply chain and all levels of Government to reduce the environmental impacts of consumer packaging. The focus of the covenant is on sustainable packaging design, recycling of used packaging and reduction of litter from packaging.

The NSW Government is a signatory to the Covenant and must fulfil certain obligations, which include submission of a current action plan and regular reporting against key performance indicators.

The *National Environment Protection Measure (Used Packaging Materials) 2011* requires all States and Territories to provide and enforce regulations to underpin the Covenant to ensure that those who voluntarily participate in the Covenant are not disadvantaged by those that seek to avoid their responsibilities.

The *Australian Packaging Covenant* is a co-regulatory extended producer responsibility scheme. Non-signatories in NSW are subject to Part 5B of the Protection of the Environment Operations (Waste) Regulation 2005 requirements.

Carbon Pricing Mechanism

The decomposition of the organic waste within landfills, under anaerobic conditions causes the emission of landfill gas. Landfill gas consists primarily of methane and carbon dioxide. Methane is a potent greenhouse gas which has a global warming potential (GWP) of around 21 times greater than

¹⁰ National Waste Policy: Less Waste, More Resources. Commonwealth Department of Environment, Water, Heritage and the Arts. November 2009

¹¹ Australian Packaging Covenant 1 July 2010 (as amended).

carbon dioxide. Thus 1 tonne of methane (CH₄) is expressed as 21 eCO₂ tonnes. The GWP is to be increased from 21 to 25 from 2015 onwards¹².

The Carbon Price Mechanism (CPM)¹³ which was introduced by the Federal Government established a carbon tax and emissions trading scheme with wide coverage across the Australian economy including stationary energy, manufacturing and landfills.

Whilst the newly elected coalition led by Tony Abbot has a policy to scrap the Carbon Tax, it appears likely that this will be opposed by the Senate. It remains to be seen what form of carbon abatement scheme will eventuate. For the time being the existing carbon pricing legislation applies.

With respect to landfills, the carbon tax only applies to waste landfilled after July 1, 2012. Under the scheme a Liable Entity includes a council with operational control of a landfill that exceeds the threshold of greater than 25,000 eCO₂ tonnes of legacy emissions and covered emissions. "Legacy emissions" refers to eCO₂ tonnes caused by waste deposited before 1 July 2012. "Covered emissions" refers to eCO₂ tonnes caused by waste deposited after 1 July 2012.

The CPM legislation provides that a threshold of 10,000 eCO₂ tonnes pa may apply if landfills equal to or above that threshold are within a prescribed distance of separation. The prescribed distance has for the time being set at zero, but will be subject to future review.

It will be seen in Table 3 below that the default total emission factor for Municipal Solid Waste is 1.19 eCO₂ tonnes per tonne of MSW and that organic matter such as food, paper, cardboard, and garden organics are primary contributors to emissions. The removal of these materials from the waste stream can substantially reduce eCO₂ emissions and carbon emission liabilities now and into the future

Table 3 – MUNICIPAL EMISSION FACTORS

MUNICIPAL SOLID WASTE emission factors

Waste type	MSW Composition	DOC	DOCf	tCO ₂ -e
Food	35.0%	0.15	0.84	0.56
Paper and cardboard	13.0%	0.40	0.49	0.32
Garden and green	16.5%	0.20	0.47	0.20
Wood	1.0%	0.43	0.23	0.01
Textiles	1.5%	0.24	0.50	0.02
Sludge	0.0%	0.05	0.50	0.00
Nappies	4.0%	0.24	0.50	0.06
Rubber and Leather	1.0%	0.39	0.50	0.02
Concrete, metal, plastic and glass	28.0%	0.00	0.00	0.00
Emission factor (tCO₂-e/t waste)				1.19

Source: Technical Guidelines for the estimation of greenhouse gas emissions by facilities in Australia, Department of Climate Change and Energy Efficiency, July 2011.

¹² <http://www.climatechange.gov.au/en/government/initiatives/gwp.aspx> (last accessed 15 May 2013)

¹³ <http://www.cleanenergyfuture.gov.au/clean-energy-future/carbon-price/> (last accessed 21 Jan, 2013)

The CPM commenced on 1 July 2012, with a fixed price period for the first three years. The price started at \$23 per tonne CO₂-e rising e at 2.5 per cent per annum in real terms. On 1 July 2015, the carbon price will transition to a fully flexible price under an emissions trading scheme (ETS), with the price determined by the market.

At this stage no Council within the NetWaste region is listed on the Australian Energy Regulators Liable Entities Public Information Database (LEPID) for 2012/2013¹⁴. However several NetWaste councils have indicated that they may be liable in the future.

Landfill gas capture is a key measure to reduce potential or actual liability under the CPM.

With the Coalition government now in power, the carbon abatement obligations of NetWaste Councils and potential carbon farming opportunities will be highly dependent on the outcomes of negotiations between the major and minor parties, and disparate groups within the Senate.

2.3 POLICY, LEGAL AND FUNDING UNCERTAINTIES

As described in this Part and Part 3, this NetWaste Strategic Waste Plan has been prepared at a time when waste policy, guidelines, laws and funding are undergoing major change. These changes are still in flux as shown in Figure 4 below.

Figure 4 – POLICY, FUNDING AND LEGAL UNCERTAINTIES



Resolution of the above uncertainties will have have major implications for the management of waste in the NetWaste region. This has proved to be a challenge in preparing this NetWaste Strategic Plan. As such this Plan will require ongoing monitoring and review to respond to the above changes as they unfold.

¹⁴ <http://www.cleanenergyregulator.gov.au/carbon-pricing-mechanism/Liable-Entities-Public-Information-Database/Pages/default.aspx> (accessed 20 Mar 2013)

PART 3 THE WASTE LESS RECYCLE MORE FUNDING PROGRAM

An outcome of the KPMG report¹⁵ was that the NSW Government recently announced the “*Waste Less, Recycle More: Waste and Resource Recovery Initiative*”, a 5 year \$465.7 million waste funding program that has been designed to transform waste and recycling in NSW.

The new Waste and Recycling Infrastructure package commits \$250 million over 5 years for targeted but wide-ranging funding that includes new large-scale waste and recycling infrastructure to support communities that pay the waste levy, recycling facility upgrades, drop-off centres, food and garden organics processing, and recycling innovation, as well as support for businesses to increase recycling on site.

The Waste Less, Recycle More initiative also guarantees \$137.7 million over 5 years to help councils support their own waste and recycling initiatives for their local communities, and makes available at least a further \$219 million in contestable grants.

Five key areas of the \$465.7 million package over 5 years include:

1. waste and recycling infrastructure package - \$250 million
2. supporting local communities - \$137.7 million
3. combating illegal dumping - \$58 million
4. tackling litter - \$20 million
5. improving the operation of the waste levy.

The EPA is still working through and yet to release the finer details of the package, including how funds would be made available and under what criteria.

The funding program and its relevance to NetWaste is summarised in Table 5.

¹⁵ KPMG, Review of the NSW Waste and Environment Levy, June 2012, <http://www.epa.nsw.gov.au/resources/waste/WasteLevyRevRpt.pdf>

Table 5 – WASTE LESS RECYCLE MORE FUNDING OPPORTUNITIES

PROGRAM	ACTIVITY	ALLOCATED	AVAILABLE FOR NON LEVY PAYING AREAS?	RELEVANCE TO NETWASTE: 1 - yes, 2 - maybe, 3 - no
ORGANICS INFRASTRUCTURE: household and business - food only, garden only, food and garden organics	Organics infrastructure	\$43,000,000	Y	1
	Collection Services	\$17,000,000	Y	1
	Food Waste avoidance education	\$2,700,000	Y	1
	Market development and support	\$3,000,000	Y	1
	EPA research and admin	\$4,300,000	NA	1
	TOTAL	\$70,000,000		
HOUSEHOLD PROBLEM WASTES: paints, oils, batteries, gas bottles, fluoros, smoke detectors etc	Infrastructure	\$20,000,000	Y	
	State wide education	TBA	Y	2
	Collection contracts	TBA	Y	1
	household chemical cleanouts	TBA	Y	1
	TOTAL	\$70,000,000		
WASTE & RECYCLING INFRASTRUCTURE: Household and business waste - recovery of recyclables incl. timber, processing & stabilisation of residual waste, energy recovery from residual waste, Regional Waste Strategy priorities.	Capacity upgrade and enhancement	\$10,000,000	N	3
	Major C&I infrastructure	\$23,000,000	N	3
	Municipal infrastructure	\$23,000,000	N	3
	Business case support and C&I audits	\$4,000,000	N	3
	TOTAL	\$60,000,000		
RECYCLING INNOVATION FUND - for renovating infrastructure, R&D, and increasing recovery rates	Priority Waste Infrastructure program	\$8,500,000	Y	1
	Recycled Markets program	\$1,500,000	Y	1
	Metal Shredders program	\$5,000,000	Y	3
	TOTAL	\$15,000,000		

PROGRAM	ACTIVITY	ALLOCATED	AVAILABLE FOR NON LEVY PAYING AREAS?	RELEVANCE TO NETWASTE: 1 - yes, 2 - maybe, 3 - no
BUSINESS RECYCLING PROGRAM: to improve waste reduction and recycling, improve source separation and recycling services	SME- business advisory services	\$12,000,000	Y	3
	SME - recycling infrastructure rebates	\$9,400,000	Y	3
	Larger Business - industrial ecology networks	\$4,200,000	Y	3
	Larger Business - packaging recycling infrastructure	\$3,700,000	Y	3
	Other	\$5,700,000	Y	3
	TOTAL	\$35,000,000		
SUPPORTING LOCAL COMMUNITIES: non-contestable funding for local councils	WaSIP commitments	\$38,700,000	N	3
	Council waste, recycling, litter and anti-dumping projects	\$70,000,000	N	3
	Regional planning, studies & strategies	\$9,000,000	N	3
	Support of voluntary waste groups with coordination and infrastructure planning	\$13,000,000	Y	1
	Regional and Rural councils with landfill environmental improvements, consolidation and closure, building and upgrading of transfer stations	\$7,000,000	Y	1
	TOTAL	\$137,700,000		
COMBATING ILLEGAL DUMPING: Implement NSW Illegal Dumping Strategy (pending)	Build local community partnerships	TBA		1
	Data collection and analysis	TBA		2
	Strategic enforcement	TBA		2
	Capacity Building: build expertise	TBA		2
	Education	TBA		2
	Community engagement –e.g. volunteer groups to identify dumping, community based clean-ups	TBA	Y	2
	TOTAL	\$58,000,000		
TACKLING LITTER	Implement NSW Litter Strategy (2013 pending)	TBA	Y	2
	TOTAL	\$20,000,000		

Much of the funding set aside in the above program will only be available to Councils that pay the S88 Levy. At this stage Blue Mountains is the only NetWaste council captured by the Levy scheme. However this may change with the NSW government now considering expanding the S88 levy requirements into other LGAs. Should that occur then perhaps additional *Waste Less, Recycle More* funding may be available to the NetWaste region.

This *2013 – 2017 NetWaste Strategic Waste Plan* seeks to align with the goals and objectives of the *Waste Less, Recycle More* program so as to optimise the ability of NetWaste Councils to secure funding to achieve mutual waste management objectives.

PART 4 NETWASTE ORGANISATIONAL PROFILE

4.1 HOW NETWASTE FUNCTIONS

NetWaste is a voluntary alliance of Councils sponsored by the NSW Environment Protection Authority (EPA), the Central West (CENTROC) and Orana Regional Organisation of Councils (OROC). The group comprises 28 councils covering a total area of 317,942 square kilometres and supports a population of more than 400,000 people.

The NetWaste model delivers on collaborative waste projects and education strategies with the opportunity to share resources and knowledge, coordinate planning at regional and sub-regional levels.

Whilst participation in projects is voluntary, consultation and involvement of community and industry in the planning process have been key factors in the implementation of an increasing number of successful programs.

NetWaste Objectives:

- To maintain a waste management model that promotes collaborative, cooperative and cost effective environmental best practice for participating councils
- To develop effective educational strategies
- To identify and complete projects as part of environmental management planning processes.

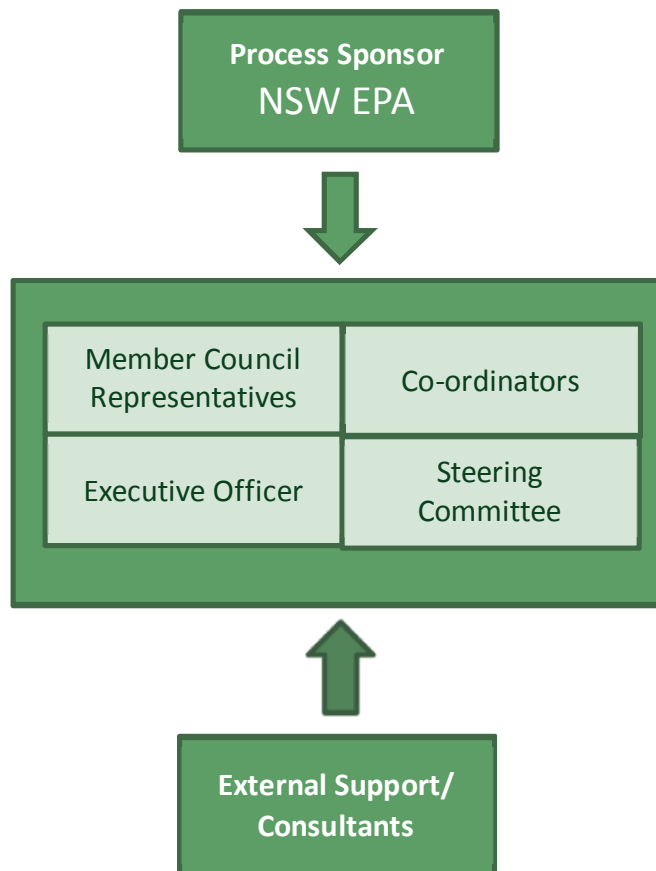
Governance Arrangements:

The councils that are party to NetWaste are bound by a Memorandum of Understanding (MoU). NetWaste is not independently empowered under the Local Government Act. The creation of a NetWaste corporate entity was entertained with the registration of NetWaste Limited, but was later deregistered in January 2006 due primarily to perceived impediments under the Local Government Act. Orange City Council hosts the administration, staffing, finances and contractual obligations of NetWaste. There are three staff. The conduct of these NetWaste activities is in accordance with the Local Government Act and Regulations, the terms of the MoU and Councils' policies and procedures.

A steering committee, made up of 10 representatives from member councils, meet quarterly to consider strategic planning and project initiatives including deliberation over financial/budgeting strategies. The quarterly forum meetings made up of representatives from member councils consider project initiatives and their potential participation. Meetings are convened at various locations within the region.

The structure and relationships of the NetWaste organisation are largely as per the NetWaste 2012-2015 Plan which was prepared by Robert Bailey Consulting, and is described below.

Figure 6 – NETWASTE STRUCTURE AND RELATIONSHIPS



Supporting Plans:

- Sub-regional Waste Plans
- Regional Waste Management Plan

Evaluation Mechanisms:

- Quarterly forums and steering meetings
- Quarterly milestone and diversion reporting to DECCW
- Annual report

The Roles and Responsibilities of the Process Sponsor (EPA)

- delivers funding support
- provides insight into government planning and policy in waste matters
- oversees the function of the Voluntary Regional Waste Groups (VRWG)
- facilitates regional waste group meetings under the banner of *Renew*
- provides overarching technical and administrative support
- coordinates statistical data from the VRWG and reports to government
- facilitates information exchange among the VRWGs

Roles and Responsibilities of the Executive Officer

- recruits staff
- oversees the operation of the staff
- facilitates staff performance assessments
- sources external support/consultants
- configures the makeup of the executive team
- oversees the programs' delivery
- chairs the NetWaste meetings
- allocates tasks to member councils representatives/staff
- attends *Renew* meetings
- represents NetWaste at forums and conferences
- oversees tender processes
- establishes and control budgets
- provides direction and impetus
- authorizes payments

Roles and Responsibilities of the Member Council Representatives

- attend NetWaste meetings and provide input
- undertake tasks that may be assigned by the Executive Officer
- make contributions to tendering processes (and evaluate tenders)
- offer member councils as hosts where trial programs have been identified
- provide waste data in a timely manner
- respond to requests by the NetWaste staff for information or input

Roles and Responsibilities of the NetWaste Staff

- promote NetWaste and the interests of member Councils at forums and conferences, including *Renew* meetings
- Co-ordinate the preparation, implementation and review of the NetWaste Strategic Waste Plan.
- liaise with member Council representatives and with other relevant individuals and organisations
- provide technical and professional advice
- undertake programs, as allocated, from within the strategic waste plan
- coordinate the engagement of contractors for specific projects, including the preparation of tender specifications and the evaluation of tenders
- gather, formulate and distribute relevant waste data
- administer and manage NetWaste's day-to-day correspondence and record keeping
- coordinate NetWaste meetings
- prepare budgets
- monitor expenditure and undertake annual financial reconciliations
- prepare invoicing for the annual EPA funding applications

Roles and Responsibilities of the Steering Committee.

- provide direction and leadership
- provide input on the strategy program priority and delivery
- make recommendations on policy
- streamline decision making processes.

Main achievements:

To date some of the main achievements include:

- regional contracts e.g. domestic waste and recycling, scrap steel recovery; green waste mulching; used oil recycling; *drumMuster* farm chemical drum recycling; household hazardous waste collections; e-waste recycling collection; regional domestic waste audits; landfill gas emission assessment
- regional waste strategy development
- sub-regional and regional waste plans
- regional organics management study
- environmental education programs
- waste to art exhibitions
- community sharps management
- litter projects
- waste managers support guide
- web site and You-tube trial
- small landfill environmental risk assessment and mitigation package

PART 5 WASTE MANAGEMENT IN THE NETWASTE REGION

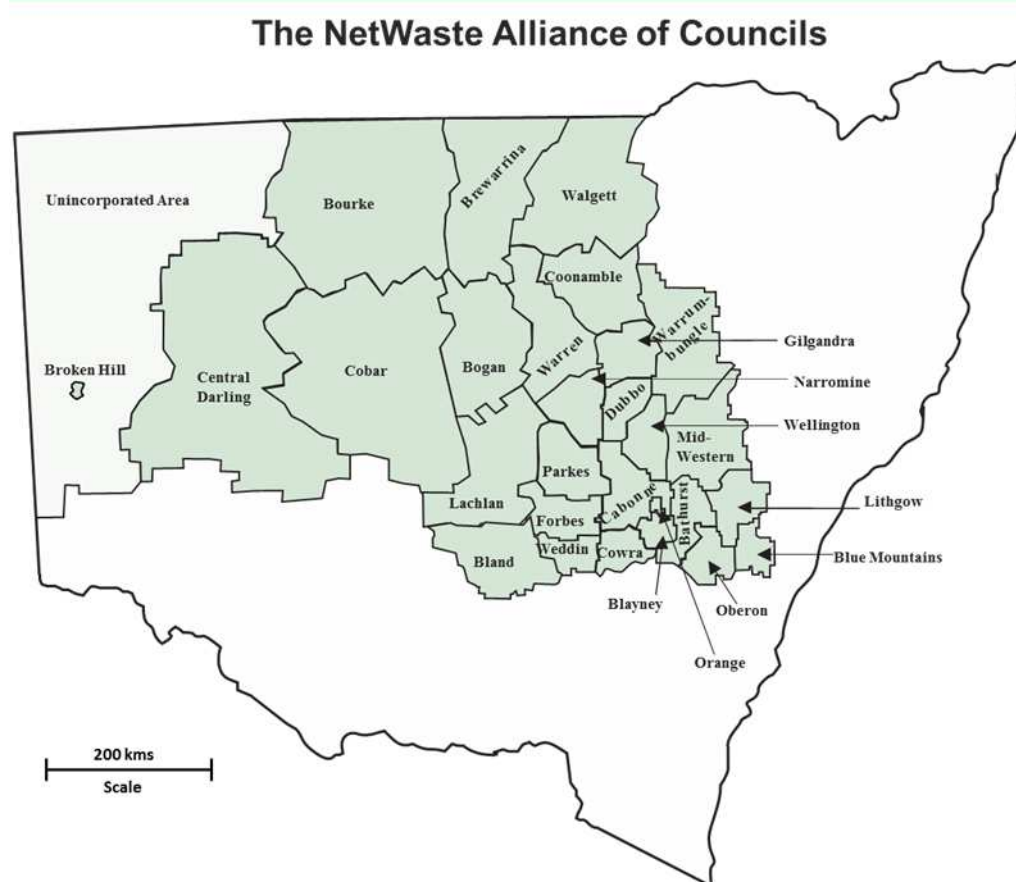
5.1 CHARACTERISTICS OF THE REGION

The most recent 2010 Australian Bureau of Statistics (ABS) census data indicates that the population of the NetWaste region was 404,025. Map 7 highlights the vast area encompassed in the NetWaste region and the huge travel distances. Also included within the NetWaste region is the Unincorporated part of the Far West Region that surrounds Broken Hill. The area is one of only two areas in New South Wales that are not part of any local government area (the other is Lord Howe Island). In these areas, which include the villages of Silverton, Tibooburra, and Milparinka, the Crown Lands assists in co-ordinating various community services.

All of the Crown estate in the Western Division is administered and managed by the Crown Lands Division of NSW Trade and Investment. Crown Lands is not party to the NetWaste Alliance.

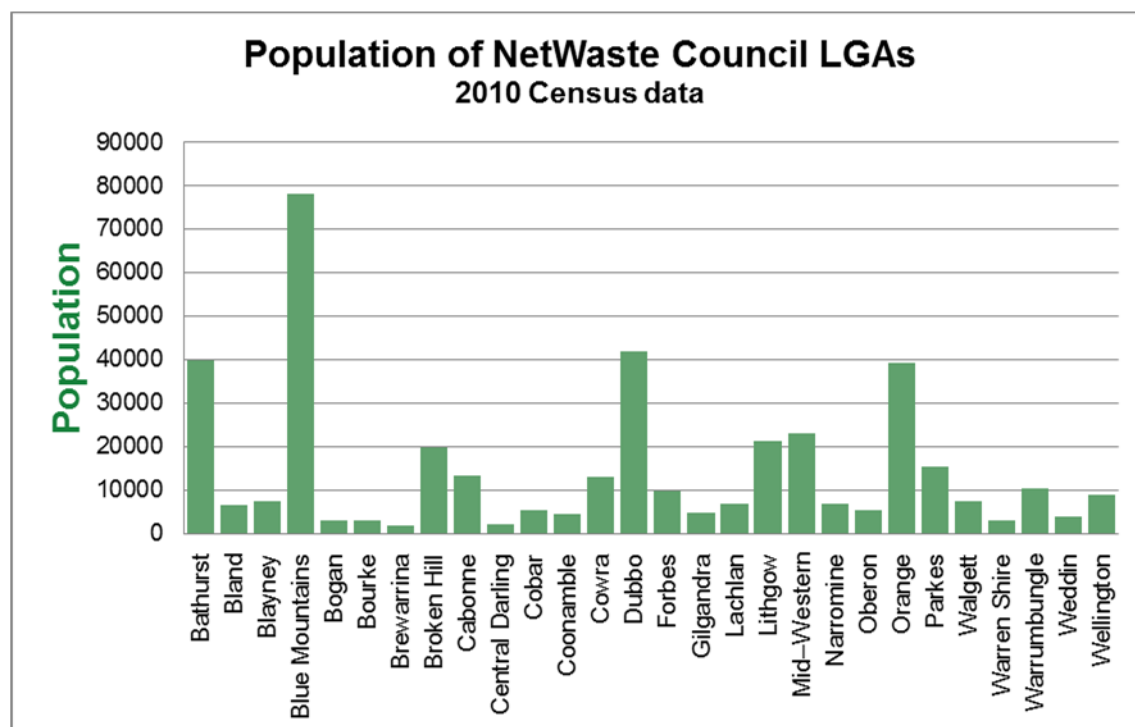
The economy of the NetWaste region is diverse but primarily based upon agriculture, mining, tourism and service industries. Agriculture includes cotton, wheat and other grains, sheep, cattle, oil seeds, olives, nuts and wine growing areas. Mining which served as the foundation of many towns and cities in the region such as Bathurst and Broken Hill is continuing to drive local economies. Tourism continues to strengthen, particularly in areas such as the Blue Mountains, Orange and Mudgee.

Map 7 – THE NEWASTE REGION



It will be seen from Figure 8 below that population densities of LGAs within the NetWaste region are highest in the eastern regions.

Figure 8 – POPULATION OF NETWASTE LGAs



For several of the Councils the vast land areas and very low population densities means that is neither economically viable nor sustainable to provide waste management services that are normally available in the cities.

5.2 LANDFILL MANAGEMENT

The sparseness of much of the population across the region has given rise to the many landfills. Relatively few are licenced by the NSW EPA, even fewer operate weighbridges, and most are largely unsupervised. This has left significant data gaps in terms of the waste stream quantities, composition and sources, particularly with respect to the C&D and C&I waste streams.

Corkery & Hyder¹⁶ identified the 117 operational waste management facilities in the NetWaste region which are listed in Table 9. Whilst this data is now out of date, it is the most complete data set available. Landfill information is to be updated late 2013 as part of the proposed Integrated Infrastructure Plan for the NetWaste Region.

¹⁶ NetWaste. *Regional Resource Management Plan*, 2008 http://www.netwaste.org.au/index.php?option=com_content&view=article&id=9&Itemid=33

Table 9 – LANDFILLS IN THE NETWASTE REGION 2008

LGA	EPA Licensed Landfills	Unlicensed Landfills	Total No. of Landfills	Total Disposal (tpa)	Main Facility Lifespan
Central					
Blayney	1	1	2	>15,343	5 years
Cabonne	-	6	6	Unknown	25 years
Cowra	1	2	3	Unknown	30 years
Forbes	1	5	6	~16,240	11 years
Lachlan	-	8	8	~3,640	20 years
Orange	1	-	1	51,670a	8 years
Parkes	1	7	8	14,950	20+ years
Weddin	-	3	3	~3,000	15 years
Wellington	1	4	5	8,920	1 year
Eastern					
Bathurst	1	6	7	~33,000	45 years
Lithgow	2	5	7	~45550	2 years
Mid-Western	1	3	4	24,020	30 years
Oberon	-	3	3	2,000	20 years
Northern					
Bogan	-	4	4	1,284	8 years
Brewarrina	-	3	3	Unknown	Unknown
Coonamble	-	3	3	Unknown	10 years
Dubbo	1	-	1	47,922	>1,500 years
Gilgandra	-	4	4	1,633	>50 years
Narromine	1	1	2	Unknown	20 years
Walgett	-	6	6	~6,700	5-10 years
Warrumbungle	-	10	10	>9,000	10 years
Warren	-	3	3	3,750	2 years
Western					
Bourke	-	7	7	>9,406	50 years
Broken Hill	1	-	1	25,000	25 years
Central Darling	-	4	4	~865	10-15

					years
Cobar	-	4	4	4,583	50 years
NSW Unincorporated	-	2	2	82	10 years
Total	13	105	117	>328,558	N/A

The “Orange Waste Project” which was approved by the Minister for Planning on 29 April 2010 provides for new landfill capacity and resource recovery operations at Euchareena Road and resource recovery operations, landfilling of asbestos and dead animals at Ophir Road. These were commissioned on 5 August 2013. The Euchareena Road landfill has the capacity to receive 1.8 million cubic metres of bailed and wrapped waste and inert material.

NSW policy and practice is tending towards consolidation of landfills and creation of waste transfer stations where needed. Higher levels of supervision, resource recovery and environmental protection are generally provided to larger licenced regional landfills.

5.3 WASTE GENERATION AND RECOVERY

In April 2013 the EPA released the Local Government Waste and Resource Recovery Data Report 2010-2011, which provides more contemporary data on domestic waste management in the NetWaste region.

Corkery & Hyder 2008 undertook the most comprehensive review of waste streams and waste facilities in the NetWaste region, nevertheless the report contained many data gaps which were attributed to lack of information, such as weighbridge and waste stream audit data.

The C&I and C&D waste stream data is particularly deficient, and this will prove challenging to benchmark waste generation and resource recovery rates now and into the future.

More recently IEC undertook waste surveys and data analysis in preparing the report “Organics Management Options for the NetWaste Region” that was finalised in June 2013.

For the purposes of this Strategic Waste Plan, some of the more salient data has been distilled from the above and other sources and is presented as follows.

Municipal Waste

In 2010-2011 a total of 136,963 tonnes of kerbside domestic waste including organics and recyclables were collected in the NetWaste region. Inclusive of domestic clean-up and drop off, the figure amounted to 231, 209 tonnes.

Figure 10 shows the domestic waste generation by Local Government Area (LGA), highlighting the concentration of waste generators in the eastern areas of the NetWaste region.

Figure 10 – DOMESTIC WASTE COLLECTION

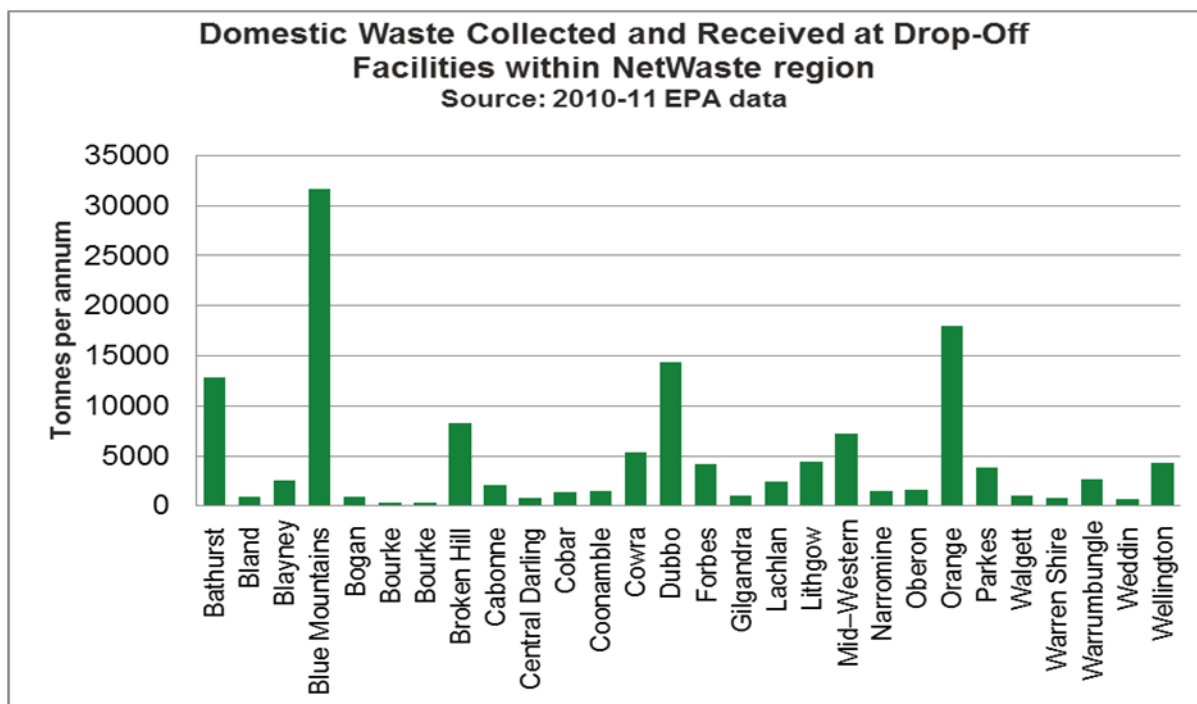
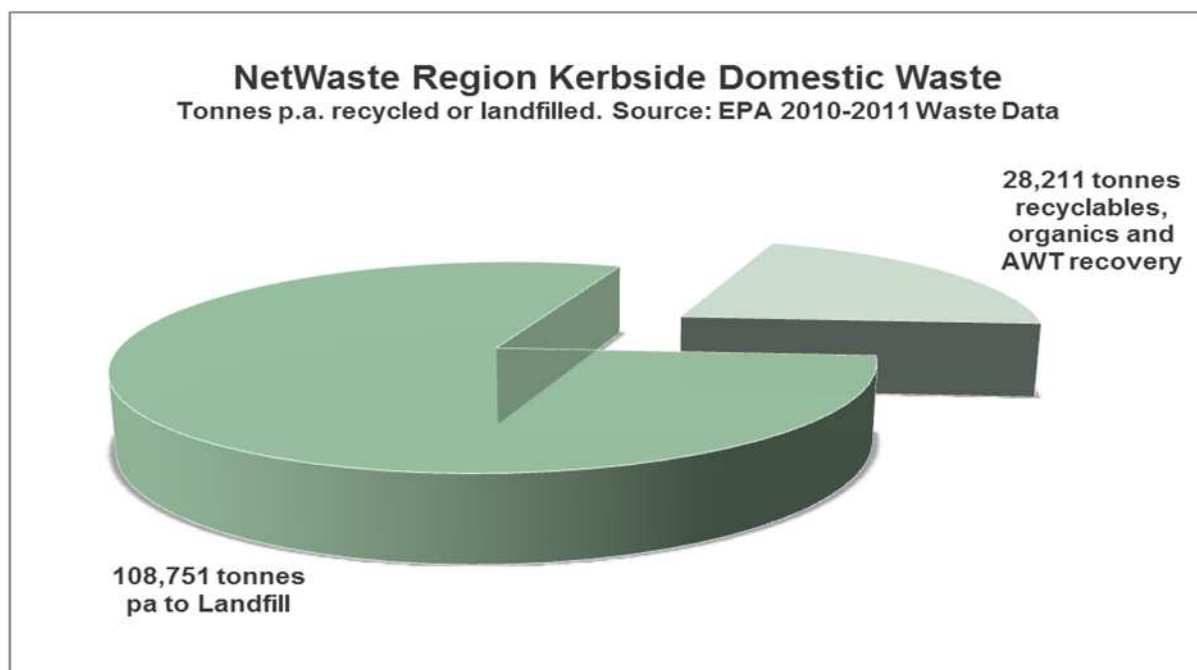


Figure 11 shows that kerbside domestic recycling and recovery is relatively low with only 20.6% being diverted from landfill. The figure improves somewhat to 31.85% when including clean-up and drop off waste, largely due to the contract shredding of organics at several waste facilities.

Figure 11 – DOMESTIC WASTE RECYCLING & RECOVERY



During the 2010-2011 reporting period, only two Councils offered kerbside organics services; Broken Hill and Lachlan, the latter undertook a short term trial which was not continued.

Kerbside domestic recycling is more common, and accounts for most of the domestic diversion from landfill as shown in Figure 12 below.

Figure 12 – DOMESTIC WASTE RECYCLING

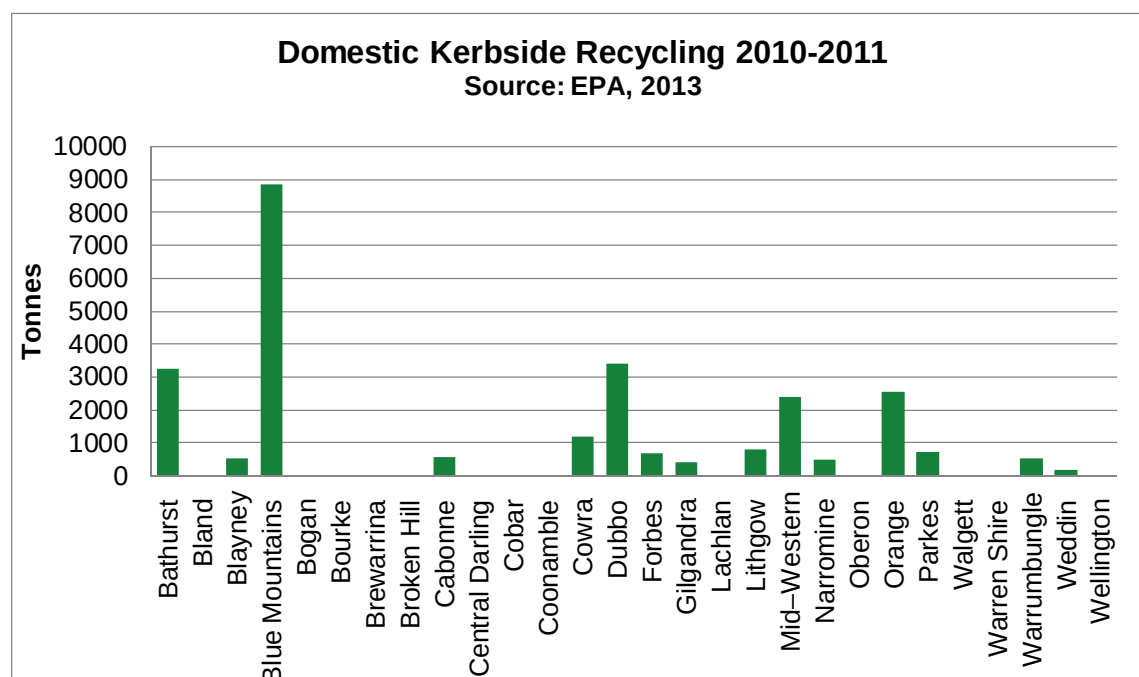
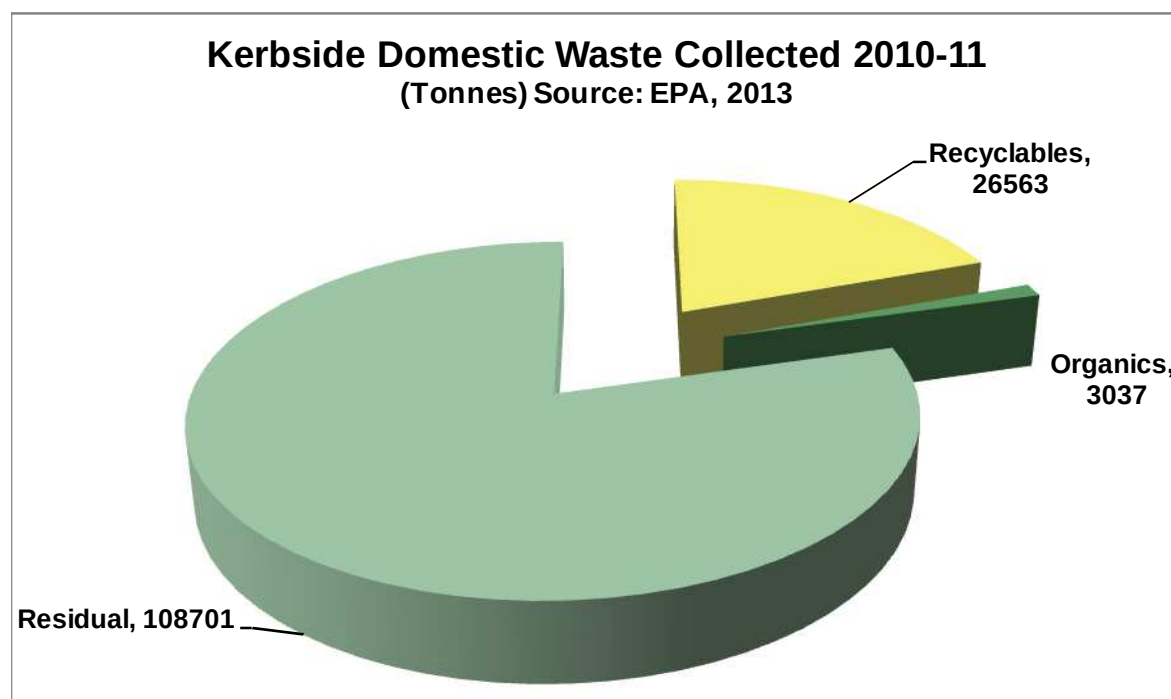


Figure 13 below shows breakup of recovered materials. Note there is a very minor data disparity with that shown in Figure 11 which could not be explained.

Figure 13 – DOMESTIC WASTE RECYCLING & ORGANICS



Recovery of organics from the domestic kerbside services will increase with the establishment of Orange City Council's organics AWT which was commissioned in early August 2013. Adoption and

roll out of the recommendations of the recent organics management report¹⁷ that was prepared by IEC would see significant increase in organics recovery in and around regional centres.

There is an apparent disparity with respect to the number of domestic kerbside services rendered to households versus domestic kerbside services rendered to commercial businesses.

The NSW EPA 2010-2011 reported that domestic services were rendered to 165,662 premises in the NetWaste region and confirmed¹⁸ that this figure pertained to households only and did not include any commercial services.

Corkery & Hyder 2008 reported that 178,134 services were rendered of which it was estimated that 82,923 were commercial. See Table 14.

Table 14 – DOMESTIC WASTE SERVICES 2008

Subregion	No. of Services Provided	Total No. Households	Average No. Households Serviced	No. Households Serviced	Main Container Used	Predominant Collection Frequency	Remaining Services (Commercial)
Central	71,585	39,888	87%	34,798	240L MGB	Weekly	36,787
Eastern	67,519	29,938	71%	21,384	240L MGB	Weekly	46,135
Northern	26,457	29,921	90%	26,457	240L MGB	Weekly	0
Western	12,573	13,442	98%	12,573	205L Drums	Weekly	0
Total	178,134	113,189	N/A	95,211			82,923

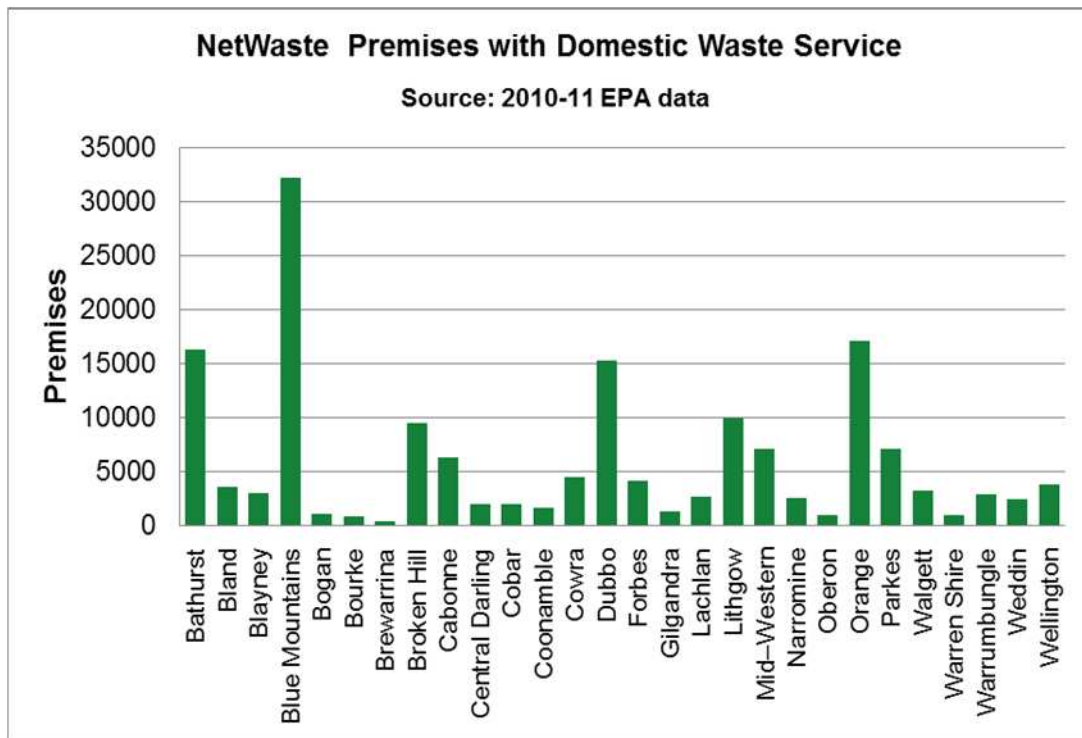
Resolution of this disparity should be pursued. As will be discussed later in this Part, C&I resource recovery rates are quite low in the region. However figures may be distorted because many, perhaps most, commercial premises are rendered domestic kerbside services. The provision of domestic kerbside recycling and organics services to commercial premises is clearly an important means of lifting resource recovery rates in this sector.

Figure 15 below shows the number of premises with domestic waste services within each NetWaste local government area. These are depicted spatially in Map 16, which highlights the areas where waste generation is most concentrated, and the significant travel distances.

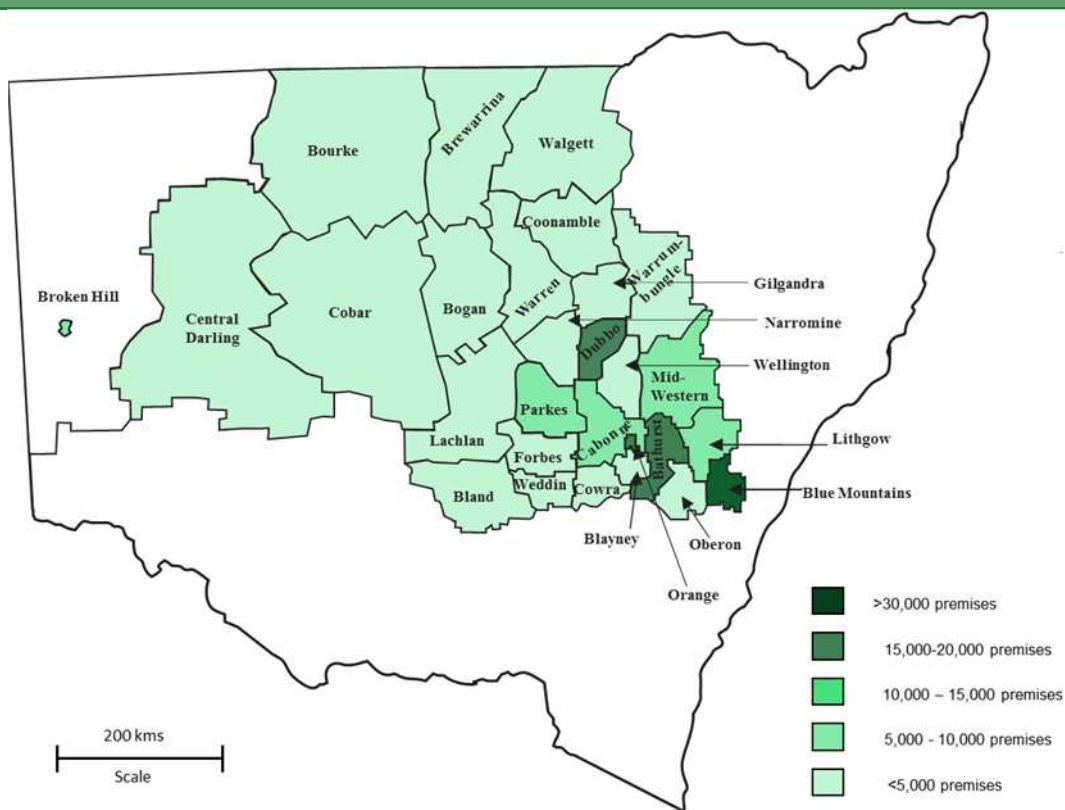
¹⁷ Organics Management Options Report for the NetWaste Region, June 2013

¹⁸ EPA email dated 15 July 2013 in response to query raised by IEC

Figure 15 – PREMISES WITH KERBSIDE DOMESTIC SERVICES



Map 16 – PREMISES WITH KERBSIDE DOMESTIC SERVICES



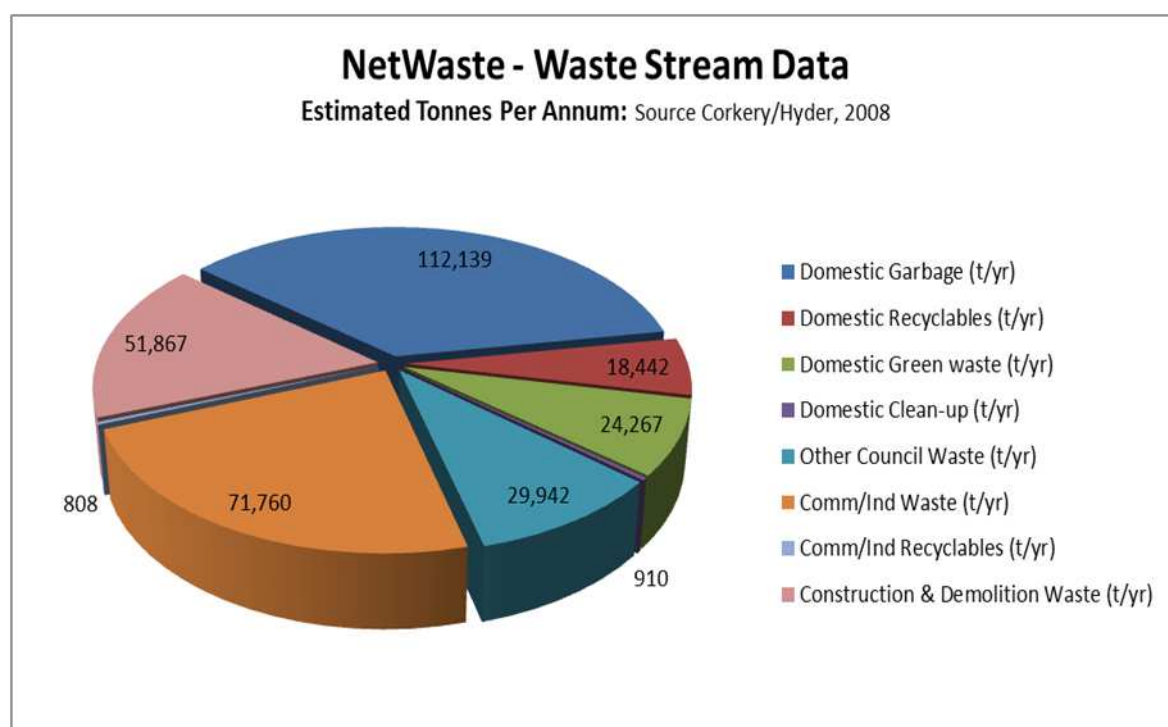
Other Waste Streams

In rural and regional NSW, data available from both licensed and unlicensed landfills suggest that municipal waste is the main contributor to landfills at 58%, followed by 26% commercial and industrial waste and 16% construction and demolition waste¹⁹.

Very little data is available concerning the quantities and composition of C&I, C&D wastes. This is because few landfills in the region have weighbridges and much of these sectors are serviced by private contractors.

Based on information supplied by Councils, Corkery and Hyder, 2008, estimated that the total waste stream in the NetWaste region amounted to at least 303,930 tonnes per annum. However this was a conservative figure as several Councils were unable to provide estimates for some waste streams, in particular C&I and C&D. The collated data for each sector is shown in Figure 17 below.

Figure 17 – WASTE GENERATION BY SECTOR



Corkery and Hyder, 2008, estimated that only around 808 tonnes of C&I waste was recycled, with zero recovery of C&D waste.

As discussed earlier in Part 2 of this document, it is likely that C&I recovery is somewhat higher due to the fact that many commercial premises use Council kerbside services. The provision of domestic kerbside recycling and organics services to commercial premises offers opportunity to lift resource recovery rates in this sector.

¹⁹ Waste Avoidance and Resource Recovery Strategy Progress Report. NSW DECCW. November 2010.

NetWaste Resource Recovery Performance Against NSW Targets`

Based on the EPA 2010/2011 council domestic waste data and the Corkery & Hyder, 2008, C&I and C&D data Table 18 below provides an estimate of NetWaste resource recovery rates versus EPA targets and NSW performance.

Table 18 – WASTE GENERATION BY SECTOR

Waste Sector	NSW 2000 baseline	NSW Actual 2010-2011	Estimate NetWaste 2010-2011	NSW Target 2014 ²⁰	NSW Target 2021 ²¹
Municipal	26%	52%	31.85%	66%	70%
C&I	28%	57%	<5%	63%	70%
C&D	65%	75%	<5%	76%	80%
Overall		63%	<25%	-	75%

Undeniably, the NetWaste region is disadvantaged by the tyranny of distance and population dispersion such that it is highly unlikely that NSW targets can realistically be met. Nevertheless, with funding support, implementation of this strategy will realise significant improvements over the term of the NSW Waste Less Recycle More program.

5.4 COUNCIL SERVICES

Through NetWaste, a number of regional contracts have been established with member Councils, which allows remote areas of the NetWaste region to access services previously not offered due to economic or geographic constraints and the benefits of a regional approach to be realised.

The following regional contracts are currently in place, with these established through an open tender process as necessary:

Processing of Garden Organics and Wood and Timber Contract

Sixteen (16) member NetWaste Councils participate in this regional contract which serves to chip garden organic material and produce a mulch product for Councils. The mulch product can then be used by Councils and the community alike for mulching of gardens and parks, with some councils also utilising it through simple composting processes. The existing contract is held by Shoalhaven Recycling, and expires 12 July 2013, with an additional 12 month extension possible following this.

²⁰ WARR Strategy 2007

²¹ NSW 2021 Target adopted in the NSW EPA Strategic Plan 2013-2016, July 2013

Regional Domestic Waste and Recycling Contract

This contract involves Blayney Shire, Cabonne, Parkes Shire, Forbes Shire and Orange City Councils and is serviced by JR Richards and Sons. This contract has seen significant financial and environmental benefits for the member Councils, with a Material Recovery Facility (MRF) being constructed at the Orange Resource Recovery Centre to process the recyclables collected in each of these Council areas. This contract expires in 2015.

Collection of Scrap Metal

Scrap metal is a prominent waste type received by Councils to their landfills and waste transfer stations, which has significant reuse and recycling opportunities. Twenty one (21) of the NetWaste Councils are part of a regional contract which sees a regular collection service for this material while receiving a price for the commodity. This contract in particular has been effective and beneficial for the more isolated Councils who can be negatively impacted by their geographic locations and also provides an extra opportunity for Councils to direct funds back to their smaller communities by allocating the collected rebate for small community grant opportunities.

Collection of Used Motor Oil

Following the installation of used oil collection units at a number of landfills and waste facilities across the region, NetWaste worked to establish a regional contract for the collection and recycling of this material. A regional contract involving 22 member Councils was established in 2012 which is serviced by Nationwide Oil (Transpacific Industries).

Regional Environmental Monitoring of Licensed Landfills

NetWaste recently worked to establish a new contract with 5 member Councils for a Contractor to undertake the environmental monitoring in accordance with the Environment Protection Licenses for their landfills. Meinhardt Infrastructure & Environment Pty Ltd was awarded this contract, which is a three (3) year arrangement that commenced on 1 July 2012.

PART 6 KEY FOCUS AREAS

6.1 ENABLEMENT

It should be recognised that those members and staff within NetWaste who are given the responsibility to implement the works programs and to deliver the Strategic Waste Plan's primary aim and objectives should be equipped with the skills and knowledge that will help ensure the desired outcomes are achieved.

There will be the need to upgrade the skills of NetWaste staff, member council representatives as well as council field staff for the successful delivery of a number of programs contained within the Strategic Waste Plan.

Identifying these skills improvement needs and developing a skills delivery program will be an integral part of the Plan.

Goal: To empower member councils to better address the waste management challenges within their communities

Issue:

Delivery of waste management improvements will require continuing professional and skills development to assist those who have been given the responsibility of delivering specific programs.

Explanation of the Issue – The identification, handling and storage of chemical and hazardous materials would form part of any program to remove problem materials from the waste stream. It would therefore be essential that staff be given the knowledge and skills to be able to undertake these tasks. Other examples of skills development needs would include monitoring and reporting on Environment Management Plans and the preparation of long term financial models.

Desired Outcomes

- Skills upgrading needs for NetWaste members are identified and corresponding training is provided.
- Skills development has direct correlation to the Strategic Waste Plan programs.

Action Plan

- Maintain and implement the Training Plan in consultation with NetWaste staff and members.
- Maintain the reference document that records the training programs undertaken and recognises those who have successfully completed training courses.
- Provide training to Council staff that are involved in the handling and identification of low risk problem wastes.

Issue:

NetWaste has a range of resources available to member council representatives and to the general public to facilitate the development of knowledge in waste minimisation and resource recovery. These resources require further development, updating and maintaining.

Explanation of the Issue – Although NetWaste has recognised the benefits in providing knowledge resources to its members as well as the general public, and has assembled a range of materials for this purpose, there is also the recognition that these resources can be expanded, formalised and updated. This bank of knowledge can be enhanced from input by members who have experiences from which others can benefit.

Desired Outcomes

- A library of resources is established
- Knowledge resources are further developed, updated and maintained
- Members both draw on, and add to, the resources library

Action Plan

- Further develop and maintain the NetWaste resources available to the Council members and to the general public
- Establish and maintain a web based "members only" forum and library and utilise as the primary communication medium with member Councils
- Seek funding for appointment of PT NetWaste Media/Communications Officer.

Issue:

The NetWaste Communications Strategy requires further development.

Explanation of the Issue – the NetWaste Communications Strategy has become somewhat out-dated and needs to be reviewed and updated to reflect changes that have occurred over recent years and to have the Communications Strategy align with the primary aim and objectives of the strategic plan. Part of the Communications Strategy may need to be program specific with the intent of “readying” the community for changes to policy or for the introduction of programs that will benefit from pre-acceptance.

Desired Outcomes

- The Communications Strategy is updated and made relevant to the strategic waste plan’s primary aim and objectives.
- Specific programs are identified within the strategic waste plan that will benefit from “readying” the community.

Action Plan

- Complete revision of NetWaste's Communications Strategy, ensuring alignment with the Education Strategy, then implement.
- Continue to improve and maintain the NetWaste website.

Issue:

NetWaste forums, steering committee meetings and workshops do not always enjoy full member attendance, participation and input.

Explanation of the Issue – Given the number of councils that make up NetWaste and the significant travel distances required to attend meetings, it is reasonable to expect that not all member council representatives will be in attendance. However, the continuing success of NetWaste is reliant on active member participation and one of its underlying strengths is the networks and bonds that have developed amongst members and staff. Continuing to provide meaningful forums, meetings and workshops that will ensure the ongoing strength of NetWaste is a key element to the successful delivery of the Strategic Plan.

Desired Outcomes

- Forums, steering committee meetings and workshops are well attended with the majority of councils being represented.
- Meetings have relevance and offer benefits to participants.
- Progress on the delivery of the Strategic Waste Plan is monitored at meetings, and reported upon.

Action Plan

- Organise and host regular NetWaste forums and steering committee meetings in conjunction with learning workshops.
- Conduct annual reviews of NetWaste meeting structures and content by undertaking member surveys & implement recommendations.
- Organise site inspections and study tours for NetWaste members of relevant waste management systems, practices and technologies.
- Trial broadcasting forum meetings via web based software so that interaction can be maintained between NetWaste members without travelling long distances.

Issue:

Few NetWaste member council representatives are afforded the opportunity to attend the quarterly *Renew* meetings hosted by EPA.

Explanation of the Issue – *Renew* is the forum made up of representatives of the eight voluntary regional waste groups (including NetWaste) together with officers of the NSW EPA. It is at these forums where government provides insight to future policy and direction for waste management and sustainability and where successful waste programs from participating regional waste groups are showcased. Valuable information coming from *Renew* meetings is disseminated to NetWaste members, but few members have the opportunity to attend *Renew* meetings. Some other VRWGs sponsor a member representative to attend *Renew* meetings.

Desired Outcomes

- Relevant information emanating from *Renew* meetings is disseminated to NetWaste members.
- NetWaste members are given the opportunity to attend *Renew* meetings as observers.

Action Plan

- Provide reports to NetWaste members on the outcomes of quarterly *Renew* NSW forums.
- Gauge interest, and encourage NetWaste members to attend *Renew* forums whenever these are conducted by EPA in the NetWaste region or *Renew* meetings held in conjunction with the Coffs Harbour Waste conference or similar co-ordinated events.

6.2 ENGAGEMENT

Having an engaged community is a strategic objective and the success of many of the actions in the works program will be reliant on community support and participation. It is also important to recognise that the community has both common areas of interest as well as special interests and engagement methods may need to be tailored to address this distinction.

NetWaste should provide a focal point for education, awareness and learning and to disseminate information to encourage and build capacity for behavioural change. Education, awareness and learning are necessary to:

- Promote waste reduction and resource recovery
- Encourage participation in recycling initiatives and promote behavioural change
- Influence the wider community by promoting recycling in the workplace and public places

- Inform businesses of recycling opportunities for waste and promote source separation
- Engaging in partnerships to promote resource recovery opportunities.
- Address anti-social behaviour such as littering and illegal dumping

Local peak industry bodies serve the interests of their members in a number of specific areas and their support in the delivery of programs will be pivotal in the success of achieving a number of the strategic objectives. With the C&I sector featuring prominently in the NSW Government WARR strategy target areas, their engagement at the local level is essential if the goals are to be met. The Richmond Review of the WARR strategy placed emphasis on promotion and education to mobilize householders and business.

Equally, significant gains are to be made in extracting organic waste, paper, plastics and glass from the domestic residual waste bins and “engagement” offers the best opportunity to affect gains with the recovery of these materials.

The Strategic Approach to the Delivery of NetWaste Education

Three delivery models form the basis of the NetWaste strategic approach. All education delivered by NetWaste will occur as a part of one of these models. This structure will enhance the strategic delivery of education and enhance its visibility and partnership with other agencies, most especially Councils. It is noted that additional or varied programs/projects might be added to update the Strategy during its ten year life, however they should be structured to work within these models.

Strategic Model A. Continuation Model

NetWaste has a proud history in developing and delivering high quality education. Waste to Art, schools programs, the work with preschools and other businesses and the home composting/organic programs delivered over a number of years, are highly valued and respected by the community and by NetWaste member Councils.

The intent of *What Waste Where* is to continue the successful work done to date and to build upon it. This part of the ten year strategy identifies continuation activity.

Strategic Model B. Education Across NetWaste - Regional Programs Model

Many of the strategic Programs that NetWaste offers will occur on an across NetWaste regional basis; a number of these continue and extend current NetWaste initiatives. They involve significant and in-depth relationships with a range of organisations, including the school and early childhood sectors, the business sector, community organisations, other Government agencies and member Councils: waste contractors are also a part of this network. Programs to be delivered under this model are:

- *Underpinning Research and Information Program* Note: research conducted as part of this program will provide further direction concerning what education is necessary, locally and across the region.
- *NetWaste Media Campaign*
- *NetWaste Schools Program*
- *NetWaste Early Childhood Program*
- *Waste to Art*
- *NetWaste Business Education Program*
- *NetWaste Community Engagement Program*

Strategic Model C. NetWaste Council Partnership Projects Model

For education to be used flexibly and to its optimum potential, within their significantly constrained resources, NetWaste member Councils must be supported to deliver more education for their communities. All Councils can identify areas where education is needed. The intent of projects under this model is to promote and support local delivery of education, so that more and better locally developed education occurs, with resulting outcomes in waste related behaviour.

The Council Partnership Project Model has been created in response to the input received during the consultation that preceded the drafting of *What Waste Where*. This Model spells out each NetWaste Partnership project and clearly identifies what NetWaste is offering and what Councils will need to commit to in order to deliver the project. Partnership Projects are offered to Councils annually and Councils sign up to be involved. The seven Council Partnership Projects offered in *What Waste Where* are detailed below. It is highly likely that additional NetWaste Council Partnership Projects might be generated during the life of *What Waste Where* and that not all Projects will be offered each year.

- *Why recycle? Project -The Council Kit*
- *Organics management - Home composting*
- *Litter Reduction Project*
- *Cover Your Load Project*
- *Illegal Dumping Project*
- *Waste to Art Regional Event*
- *Working with Schools in LGAs not covered by the NetWaste Contract*

Goal: meaningful connectivity with all stakeholders within the community in the delivery of waste education and awareness in the achievement of strategic goals by creating a sense of community ownership

Issue:

Although NetWaste has historically recognised community education, awareness and learning as a key objective and has achieved significant positive outcomes in this area, a formal draft Waste Education Strategy has only now been developed that aligns with the 2012-2015 Strategic Waste Plan. This should be amended to align with the revised 2013-2017 Plan.

Explanation of the Issue – Affecting behavioural change and mobilizing the community to support resource recovery and waste minimisation initiatives will be fundamental to the success of many of the programs contained within this strategic plan. Through the NetWaste Environmental Learning Advisor, significant engagement has been achieved with the different stakeholders, and the Councils have benefited from having a dedicated resource to work with their communities. Programs have largely been delivered on an as needed basis which offers significant benefits in being able to respond to issues and priorities as they arise. There is however recognised benefit in having a formal Waste Education Strategy which will provide the means to address education, awareness and learning in a comprehensive manner and establish sub programs to help deliver the strategic waste plan objectives.

Desired Outcomes

- The Waste Education Strategy which was adopted in August 2013 is updated to better align with the NetWaste Strategic Waste Plan 2013-2017.
- The Waste Education Strategy is implemented and contributes to the delivery of the strategic waste plan objectives.

Action Plan

- Adopt and seek funding to implement the Waste Education Strategy. Three delivery models form the basis of the NetWaste strategic approach All Education delivered by NetWaste will occur as a part of one of these models. Strategic Model A – Continuation Model. Strategic Model B – Regional Programs Model. Strategic Model C- NetWaste Council partnership Model
- Conduct annual reviews of the NetWaste Waste Education Strategy (adopted August 2013).

Issue:

Significant quantities of paper, plastics, glass and organics continue to be placed in the household residual waste receptacle.

Explanation of the Issue – waste audits conducted on behalf of EPA have demonstrated up to 61% of the average household residual waste bin contains recoverable quantities of paper, plastics, glass and organics that are being confined to landfill. Community education, awareness and learning offer the best opportunity to divert recoverable materials from household residual waste receptacles.

Desired Outcomes

- Quantities of paper, plastics, glass and organics placed in household residual waste receptacles are minimised.
- Community understanding on the benefits of recycling is improved.
- The quantity of collected recyclables and organics per household is trending up.

Action Plan

- Implement waste education programs to improve resource recovery from the domestic waste stream.

Issue:

Significant quantities of food enter the waste stream.

Explanation of the Issue – Food organics in the NetWaste region is largely uncaptured. Diversion of food from the waste stream is a NSW EPA priority. Diversion of food from the waste stream will reduce landfill greenhouse gas emissions and this waste stream may be directed to composting operations for beneficial use on land. The provision of food waste and organics collection and processing operations will require robust community education, awareness and learning programs to maximise source separation of food waste and to minimise contamination..

Desired Outcomes

- Community understanding on the benefits of recycling organics is improved.
- The quantity of collected organics with food per household is trending up.

Action Plan

- Undertake food waste avoidance education, audits and trials

6.3 INFRASTRUCTURE AND SERVICES

The Corkery/Hyder Regional Resource Management Plan of January 2008 prepared for NetWaste identified 118 operational waste management facilities ranging significantly in size and residual effective life. Of these, 13 landfills were licensed by EPA and some of the unlicensed landfill were controlled landfills and others provided unrestricted access. This data which is the most complete data set available, will be updated late 2013 as part of the proposed Integrated Infrastructure Plan for the NetWaste Region.

Unlicensed landfills pose environmental and management issues for councils and the EPA has expressed the view that its preference is that uncontrolled landfills should be closed. Finding a solution where community's waste management needs are met whilst achieving responsible and sustainable outcomes is an issue. NetWaste can assist member councils address these issues by facilitating workshops and training in landfill rationalisation planning, and engaging consultants to undertake necessary studies.

The Richmond Review of 2011 included details of the domestic collection services for all NSW councils and showed recycling, organics and waste receptacle sizes, frequency of service and service combinations that were provided by councils. Demographic information was also included and demonstrated that the "low income rural" communities had the lowest standard of service, that is, few had recycling and organics collection services supporting the residual waste service. Although there is scope to expand recycling and organics collection services in some of the NetWaste council areas, the economic reality is that this may be difficult.

When considering future infrastructure and service opportunities the NSW Waste Less Recycle More program offers funding opportunities for the establishment or improvement of waste infrastructure to improve environmental standards and resource recovery.

Extended Producer Responsibility (EPR) schemes provide opportunities to improve collection, aggregation, potential processing, and transfer of electronic waste and other waste materials.

As identified in the recent NetWaste organics management study²² organics and food is an area where significant gains can be made in diverting waste from landfill. The report evaluates survey data and technology options and provides recommendations concerning the establishment of organics infrastructure across the region and enhanced organics collection and resource recovery.

²² NetWaste Organics Management Options Report, Impact Environmental Consultants, June 2013.

Goal: Providing appropriate infrastructure to meet local & regional needs

Issue:

Many small rural landfills are not controlled, have limited resource recovery, and pose management and environmental concerns to councils and the EPA.

Explanation of the Issue – Small unlicensed landfills pose environmental and management issues for councils and the EPA has expressed the view that its preference is that uncontrolled landfills should be closed. Finding a solution where community's waste management needs are met whilst achieving responsibly sustainable outcomes is an issue.

Desired Outcomes

- Small rural landfills are operated in an environmentally responsible manner and to a standard acceptable by the EPA.
- Community's waste management needs are met whilst achieving responsibly sustainable outcomes.
- Small rural landfills that cannot be operated sustainably are closed and the sites rehabilitated.

Action Plan

- Develop an Integrated Infrastructure Plan for the NetWaste region
- Undertake investigations and cost benefit analysis of reducing and consolidating the number of landfills in the NetWaste region, and building, upgrading or rationalising transfer stations.
- Support councils in implementing the recommendations that emerge from investigations and cost benefit analysis.
- Review design, resource recovery, environmental controls and risks of waste facilities and seek funding to upgrade where appropriate.
- Seek funding to assist smaller Councils to engage suitably qualified consultants to undertake independent audits of unlicensed landfills.

Issue:

Several NetWaste Councils do not have LGA waste management strategies, nor Landfill Environmental Management Plans (LEMP).

Explanation of the Issue –

Each NetWaste member Council should ideally have a current local LGA waste management strategy in place which links to the NetWaste Strategic Waste Plan and funding that is available through the NSW Waste Less Recycle More funding program. The local LGA waste management strategy would reflect the waste management and resource recovery directions and priorities of the local community, taking into account local circumstances.

The EPA requires all licensed landfills to have Landfill Environmental Management Plans (LEMP) in place and prepared in accordance with “Environmental Guidelines: Solid Waste Landfills”. These guidelines are performance based and require minimum standards to be applied for the operation of licensed landfills. The EPA undertakes random, unannounced audits of landfills and it is important that landfill operators are confident that their landfill is being operated in accordance with the LEMP and licence conditions. Simple reporting protocols and quality control can be put in place to ensure the landfill is being operated in accordance with the LEMP and licence conditions.

Desired Outcomes

- Each Council has a current LGA Waste Management Strategy in place which links to the NetWaste Strategic Waste Plan and reflects the waste management and resource recovery directions and priorities of the local community, taking into account local circumstances.
- Licensed landfills controlled by NetWaste member councils are being operated in accordance with the LEMP and licence conditions.

Action Plan

- Review the existing NetWaste template for development of Waste Management Strategy in consideration of recently developed strategies.
- Seek grant funding to support development of Council Waste Management Strategies.
- Seek grant funding to support the development and implementation of LEMPs.

Issue:

The management of organics including food waste, offers an opportunity to significantly reduce the quantity of waste going to landfill, and potential carbon emission liabilities, yet organics recovery rates are relatively low in the NetWaste region with few domestic organics collections services provided and little processing.

Explanation of the Issue – It is clear that Federal and State policy and legislation is driving greater resource recovery and reduction of waste, in particular organics to landfill. There are compelling economic arguments to recover and process organics to compost, enhancing soil carbon, fertility, moisture retention and productivity. The true costs of landfilling, the Carbon Pricing Mechanism and NSW Section 88 Waste Levies will likely increasingly drive organics recovery.

The organics waste stream in the NetWaste region, comprising mainly domestic garden and food organics is largely uncaptured by existing kerbside services. The majority of this material is currently disposed to landfill or bulk green waste delivered to the landfill is chipped to produce basic garden mulch products.

The recent NetWaste Organics Management Options Report found that most NetWaste member councils that responded to a survey were highly supportive of regional collection and processing of organics including food. Although for several councils particularly in the western areas of the NetWaste region travel distances and population make these options less viable.

The review of AWT organics processing technologies that was contained in the Report showed that there are several types of processing technologies that would be suitable in the NetWaste region. However key decision making considerations such as regulatory risks, proven track record and price will tend to favour regional facilities using enclosed aerobic composting technologies such as Tunnel Composting. For more remote NetWaste councils smaller scale composting choices for organics without food are available. Potentially, pilot trials could be conducted in those areas to process organics with food using technologies that are still being proven such as MAF or Inoculated Static Pile.

Orange City Council which commissioned its tunnel composting plant in August 2013 has capacity to receive additional organics from nearby local government areas. The plant also has capacity to expand with the construction of additional tunnels.

Desired Outcomes

- Composting of organic inputs becomes more widespread across the region.
- Increased quantities of organic material are diverted from landfill and are composted.
- All produced compost is successfully marketed.

Action Plan

- Undertake true landfill analysis for interested Councils, with specific consideration to introduction of new organics services and impacts on other waste streams, landfill capacity, services etc.
- Implement the adopted recommendations of the Organics Management Options Report
- Support councils in implementing the recommendations that emerge from investigations and cost benefit analysis.
- Facilitate necessary studies and forums to support the roll out of kerbside collection and processing of organics, with food waste, in the NetWaste LGAs where viable
- Assist organic waste processing contractors to access grant funds for organics market development.
- Support pilot studies and evaluation of small scale organics collection and processing options for remote areas.

Issue:

Electronic waste continues to be landfilled in ever increasing amounts.

Explanation of Issue – It has been estimated that around eight million new mobile phones are sold each year in Australia and almost the equivalent number are discarded. Personal computers are regularly upgraded and television sets replaced with the introduction of improved models of high definition.

The result is that a significant amount of electronic waste is confined to landfill with the loss of potentially valuable resources.

The Product Stewardship (Televisions and Computers) Regulations 2011 identify importers of televisions, computers, printers and computer products and domestic manufacturers of these products as 'liable parties' that are obliged to become members of an approved arrangement (known as Approved Co Regulatory Arrangements in the Act), that will collect and recycle televisions, computers, printers and computer products on their behalf.

Local Government has an opportunity to potentially partner with Arrangement Administrators if desired, however it is not the intention under the scheme that Councils bare the financial cost for construction of collection centres, transport etc. NetWaste is currently finalising an arrangement with one Arrangement Administrator.

Desired Outcomes

- By working with potential Arrangement Administrators under the national e-waste collection scheme, sites are identified for the construction of collection centres that will provide optimum recovery and aggregation of electronic wastes.
- Electronic wastes are recovered and transported to suitable recycling facilities.

- Collection and recycling services are available across the NetWaste region in communities of all sizes.

Action Plan

- Work with Councils and approved Administrators under the Product Stewardship (Televisions and Computers) Regulations 2011, e.g. Reverse E-Waste, to determine e-waste collection and recovery centres in the NetWaste region.
- Implement waste education and communication to raise awareness within the community of the growing volumes of e-waste and opportunities for recycling.

Issue:

There is limited recycling undertaken in the commercial sector and no commercial organics collection service provided in the member councils LGAs.

Explanation of the Issue – according to the NSW Government, the C&I sector is the poorest performing sector in the State when it comes to resource recovery. For this to improve, NetWaste, through its member councils, will need to provide support to the C&I sector by way of fostering commercial recycling and organics collection services and materials processing.

Desired Outcomes

- Viable commercial recycling services and commercial organic services are established by the private sector.
- The C&I sector are supportive of, and receptive to, commercial recycling/organics services.
- Waste diversion from the C&I sector trending towards the EPA strategy targets.

Action Plan

- Develop and undertake a C&I pilot project with one Council and assess viability and future direction.
- Work with small-medium identified business/es to identify waste streams and potential opportunities for enhanced resource recovery.
- Encourage and/or partner with the C&I sector to reduce, reuse and recycle taking advantage of the "Waste Less Recycle More" Business Recycling Program.

Issue:

The Federal Government's Carbon Pricing Mechanism (CPM) poses actual or potential costs and income streams for landfills in terms of carbon offset liabilities and potential carbon farming opportunities. With the change of government that has just occurred it is expected that the CPM will be modified or abandoned, but the timing and outcomes are uncertain at this stage.

Explanation of the Issue – At this stage no Council within the NetWaste region is listed on the Australian Energy Regulators Liable Entities Public Information Database (LEPID) for 2012/2013²³. However several NetWaste councils have indicated that they may be liable in the future.

NetWaste council's liabilities and opportunities may be influenced by many factors including: the increase in the methane GWP from 21 to 25; potential consolidation of landfills; changes to carbon farming rules; grants; reduction in organics to landfill; landfill gas capture; potential changes to the Carbon Pricing Mechanism; and fluctuating market prices for approved carbon offsets.

Desired Outcomes

- Reduction of landfill greenhouse gas emissions
- Reduce cost exposure to Councils under the Carbon Pricing Mechanism
- Maximise potential income streams

Action Plan

- Review and update landfill eCO₂ emissions and potential liabilities and opportunities that may arise in the NetWaste region from changes to the CPM, the methane Global Warming Potential increase from 21 to 25, and other factors such as landfill consolidation.
- Assess opportunities for mitigating carbon financial liabilities including carbon farming initiatives and low cost carbon offsets.

Issue:

Collection centres need to be established across the region to receive problem wastes, for transport to approved processing centres.

Explanation of the Issue - Suitable drop-off centres need to be located throughout the NetWaste region to make them easily accessible for householders to deposit low toxic wastes such as gas bottles, lead acid and household batteries, paint, oils, fluorescent tubes and smoke detectors.

²³ <http://www.cleanenergyregulator.gov.au/carbon-pricing-mechanism/Liable-Entities-Public-Information-Database/Pages/default.aspx> (accessed 20 Mar 2013)

Several basic local problem waste facilities have been established in the region however upgrading these and establishing new larger facilities in regional centres would help reduce contamination of waste streams, and improve the recovery of recyclables.

Significant grants are available for the above under the NSW Waste Less Recycle More program.

Desired Outcomes

- Grants are secured to improve collection, treatment, recycling and disposal of problem wastes
- Quantities of problem wastes to landfill decreases
- Contamination in the kerbside domestic recycling and organics bins is minimised.

Action Plan

- Investigate potential locations, layouts, capital and operating costs for regional public drop off facilities for problem wastes that accord with the EPA's generic designs, and seek grant funding to implement.
- Investigate need to improve existing local public drop off facilities for problem wastes and seek grant funding to implement upgrades where appropriate.

6.4 FINANCIAL

Responsible management of the funding provided by the NSW Office of Environment and Heritage is core to the successful and continuing operation of NetWaste. The delivery of programs and provision of administration support is reliant on this funding source. NetWaste has a history of well managing its financial resources and measures should be put in place to ensure these management practices continue and are enhanced.

The NSW Government's Waste Less Recycle More program offers significant additional grant funding opportunities. Grants will need to be actively sought, and resources will be required to administer those grants and ensure execution of projects in a timely and responsible manner.

Goal: providing financial management solutions to enable the successful delivery of the strategy objectives in the defined time frames.

Issue:

Sponsorship funding from the NSW Environment Protection Authority (EPA) is in three year cycles, with no guarantee of ongoing support.

Explanation of the Issue – The EPA has a long history of providing funding support for the operations of the Voluntary Regional Waste Groups (VRWG) and in return requires agreed goals to be met and statistical data to be provided confirming attainment of these goals. Without funding

support, the successful delivery of NetWaste goals would be difficult. It is therefore most important that NetWaste ensures that it meets its obligations to EPA in order to secure ongoing funding support.

Desired Outcomes

- NetWaste strategy is prepared in accordance with EPA guidelines
- Quarterly progress reports are provided to EPA on the attainment of milestones
- Annual reports are provided on the quantum of materials recovered from NetWaste programs
- NetWaste representation is made at quarterly *Renew* meetings
- Input from NetWaste representatives is given in delivering *Renew* strategy tasks
- Approved budgets are being met
- Successes are promoted
- Annual funding applications are presented to EPA in the timeframe required.

Action Plan

- Ensure NetWaste's obligations to EPA are being met including participation in cross regional projects as appropriate.
- Align NetWaste's programs with NSW EPA policy, strategy and funding programs to achieve mutual objectives.

Issue:

The funding of works programs within the strategic plan and the provision of administration support constitutes the majority of expenditure of the NetWaste budget. Ensuring responsible management of expenditure and the maintenance of balanced budgets is a critical success factor.

Explanation of the Issue – Although works programs within the strategic plan are given budget estimates and administration support costed, the actual cost of programs will vary from the budget estimates. Control measures need to be put in place to ensure the annual expenditure aligns with the available funding.

Desired Outcomes

- Annual expenditure aligns with the available funding.

Action Plan

- The Steering Committee to prepare annual budget and undertake quarterly reviews.
- Prepare annual reconciliation statements of financial performance.

Issue:

Opportunities exist for the funding of additional programs through Government grants. Taking advantage of these opportunities can be time consuming and labour intensive.

Explanation of the Issue – The Waste Less Recycle More program offers significant funding opportunities which will contribute to the attainment of goals within the strategic plan. However grant applications can be time consuming with no guarantee of being successful. Grant applications should be selective and intended programs align with the goals of the Strategic Waste Plan. The execution of grants that are awarded requires administrative and project management resources.

Desired Outcomes

- Grant opportunities are identified, evaluated and pursued where programs align with the goals of the Strategic Waste Plan.
- Grant applications include funding allocations for administration and project management.

Action Plan

- Actively seek, identify and pursue grants through appropriate opportunities where programs align with the goals of the strategic plan.
- Prepare a Workforce Plan following finalisation of the NetWaste Regional Strategy and Integrated Infrastructure Plan
- Seek funding in grant applications for administration, coordination and project management of grant requirements and execution of waste projects.

Issue:

Not all NetWaste member Councils have medium term financial models in place to manage their waste activities.

Explanation of the issue – Having medium term financial models to control waste management activities is fundamental to effective business operations. Such models help predict income streams and operational expenditure and allow the planning of capital programs from free cash flow. Not all NetWaste member councils have medium term financial models in place to manage their waste activities and up skilling in this area would be beneficial.

Desired Outcomes

- Workshops are included into the NetWaste Training Plan on preparing medium term financial models.

Action Plan

- Provide training to Council staff regarding preparation of medium and long term waste financial models.

6.5 PROBLEM WASTES

Implementing measures to ensure appropriate management of problem wastes and hazardous wastes is important in reducing the amount of materials that may contaminate landfills, interfere with composting systems or cause safety problems in waste processing facilities or collection centres.

Materials identified as priority wastes under the National Waste Policy include e-waste, fluorescent tubes and lamps and tyres, however these can be expanded to include used gas bottles, lead acid batteries, pesticides, paint and agricultural plastic wraps. Managing such wastes may include the development of suitable alternatives for householders and business operators through special collection services, by providing drop off centres or targeted education.

Dealing with problem wastes more effectively is a priority under the NSW Waste Less Recycle More grants program.

Goal: To remove problem waste from the waste stream through identification, separation and collection for appropriate recycling or responsible disposal

Issue:

Although the NSW Government provides some collection services for hazardous wastes such as the *ChemClear* and *drumMuster* programs, large quantities of problem wastes continue to enter the waste stream.

Explanation of the Issue – Problem wastes tend to have a multiplier effect in the damage and disruption caused to waste collection and processing systems. For example, lead acid batteries that may find their way into recycling collection vehicles can contaminate entire loads of recyclable materials and if placed in residual waste receptacles bound for an AWT, can cause contamination and render the processed material unsuitable for land application. Equally, hazardous materials placed in landfills have the potential to cause environmental harm. Intercepting problem wastes before they enter the waste stream should be a priority.

NetWaste has done significant work on trying to improve management of these waste types, with recent progress made through the establishment of basic storage enclosures at 18 sites for the storage and aggregation of high volume, low toxic household chemicals (being gas cylinders, smoke

detectors fluorescent light globes and household batteries). Further work is required to enhance these facilities and to establish improved facilities at regional centres. Work is still required on the management of paint and the other high toxic, low volume chemicals which are largely collected through the annual Household Chemical Cleanout coordinated through NetWaste.

Desired Outcomes

- Specific problem wastes are identified as a priority and management programs prepared specifically for these wastes.
- Issues that may occur within communities based on differing population sizes are considered when establishing problem waste programs.
- Community awareness on the proper management of problem wastes forms part of the Waste Education Plan (WEP)
- The incidence of problem waste in the kerbside domestic mixed waste, recycling and organics streams decreases as such wastes are directed to purpose built facilities.

Action Plan

- Co-ordinate regional contracts for the collection, transport and treatment problem wastes from public drop off facilities that are established.
- Conduct communication and education regarding problem wastes.
- Coordinate annual Household Chemical Cleanout (HCC) throughout the NetWaste region.
- Investigate ways of improving collection and disposal of problem wastes in more remote LGAs.
- Work with interested NetWaste Councils to establish tyre demonstration sites using proven approaches (e.g. Ecoflex design, Narromine site)
- Investigate and prepare a report around the issue of liquid waste management across the region, including quantities, how the issue is managed, opportunities for aggregation/centralisation of locations, potential service providers.

6.6 RESOURCE RECOVERY

Currently NetWaste waste recycling and recovery rates fall well below the NSW average and the NSW EPA targets.

If NetWaste Councils are to progress towards the NSW waste recovery targets it will be necessary to invest in new infrastructure and services and to upgrade existing operations. The NSW Waste Less Recycle More program offers significant financial incentives in the form of grants which make this more viable for NetWaste Councils and their communities.

Best practice domestic waste collection systems provide a recycling service, organics service, including food, and a residual waste service combined with an AWT. There are examples in the NetWaste region of best practice, and neighbouring councils sharing established infrastructure and partnering in service contracts. This approach offers a pathway towards best practice.

Goal: the quantity of resources recovered trending up as measured year on year and moving towards attainment of the WARR strategy goals

Issue:

Unsustainable quantities of domestic recoverable resources continue to be lost to landfill, in particular, organics including food waste, glass, metals, hard plastic, paper and cardboard.

Explanation of the Issue – Paper, cardboard, glass and organics represent the highest proportion of materials that can be recovered from the domestic sector, with the lack of council services being seen as a major contributing factor. Expanding service types or improving existing services will reduce the quantity of recoverable resources being confined to landfill.

Desired Outcomes

- Member councils expand the domestic waste collection services to include recycling and organics collections.
- Suitable processing infrastructure is established and shared, where appropriate.
- Member Councils through joint regional contracts divert as much resource as possible from landfill and enjoy the benefits offered through economies of scale.

Action Plan

- Review waste service models in place across the region showcasing a variety of implementation approaches. Possible examples include Nyngan, Gilgandra, Cowra, Orange and Broken Hill.
- Coordinate the Regional Waste Services contract development process.
- Continue to develop and facilitate regional service contracts across the areas of scrap metals, organics processing, kerbside domestic waste, recycling and organics services and collection of used oil.
- Implement the regional media campaign to improve recovery of used oil and evaluate effectiveness through monitoring of used oil collection quantities.
- Implement waste education programs to improve resource recovery from the domestic waste stream.

- Investigate MGB sizes and collection frequencies to optimise costs and resource recovery.
- Develop generic "Waste Not" Development Control Plan requirements and standard conditions.

Issue:

Glass collection and recycling is less viable due to low commodity prices and large travel distances and costs.

Explanation of the Issue – Glass makes up about 13% of recycled materials and of all of the commodities recovered through domestic recycling, glass has the least commercial value, a large proportion is broken during the collection and processing phases, it is difficult to handle and costly to transport. Finding local solutions for the reuse of crushed glass is the most cost effective option and presents a way to use glass that has been broken during collection and processing that may have otherwise been disposed of to landfill.

Desired Outcomes

- Glass crushing facilities are installed in conjunction with existing MRFs, or new fixed or mobile facilities are developed.
- Glass is crushed to suitable grades and local uses are found for the products.

Action Plan

- Finalise the mobile glass crushing project and prepare evaluation report.

Issue:

Significant quantities of recoverable resources from the C&I sector and the C&D sector continue to be landfilled.

Explanation of the Issue – The C&I and the C&D sectors are unregulated, unlike the domestic sector, and therefore improvements to resource recovery are best implemented where economic benefits can be demonstrated. Encouraging source separation and making mixed waste expensive to landfill will send the right pricing signals.

Desired Outcomes

- Reportable trend lines show an increase in resource recovery and a reduction in waste going to landfill.
- Waste diversion targets for the C&I sector and the C&D sector are achieved.

Action Plan

- Prepare template documentation to enable member councils to introduce the requirement for builders and developers to prepare “waste plans” when submitting Construction Certificate applications and Development Applications.
- Support and encourage resource recovery from skip bins by “spill and sort” or by the development of a C&D MRF.
- Prepare a template report for the use by member councils that would support the introduction of differential waste disposal fees to encourage separation of recoverable materials from general waste taken to landfills and transfer stations.
- Investigate cost benefits, potential purchase of equipment, and regional contracts for further recovery and processing of C&D and C&I materials, such as tyres and hard waste, and implementation at locations where viable.
- Include provisions for C&I and C&D in the NetWaste Development Control Plan waste management requirements and standard conditions.

Issue

Significant quantities of food enter the waste stream.

Explanation of the issue – food wastage contributes to the waste stream, and has relatively high environmental impacts when landfilled due to the creation of landfill gas and leachate. Food waste avoidance will better utilise food resources and reduce waste, while segregation and processing of food organics may yield nutrient rich compost for beneficial land application.

Desired Outcomes

- Reduction in food wastage and food in the waste stream
- Food waste is segregated for collection and processing with organics to produce high quality compost.

Action Plan

- Promote home composting of organics including food.

Issue:

The NSW EPA's proposed Energy from Waste Policy may open up new opportunities for waste treatment and disposal.

Explanation of the issue – Until now NSW policy and laws have impeded the development of viable waste to energy plants in NSW. Cost and highest use of resource considerations will likely dictate that only mixed residual waste that has been stripped of organics and recyclables could be viably directed to waste to energy plants. It is highly unlikely that waste to energy would be a viable option during the term of this Strategy, nonetheless it would be prudent to evaluate opportunities that may arise following the release of the NSW Waste to Energy Policy.

Desired Outcome

- Opportunities that may arise to utilise mixed waste for energy production are explored.

Action Plan

- Evaluate opportunities that may arise from the NSW EPA's Energy from Waste Policy when it is finalised.

Issue

Significant quantities of recyclables are not recovered from public places and from events.

Explanation of the issue – although much has been achieved in changing community behaviour, significant quantities of recyclables are not recovered from public places nor from public events. To redress this, a combination of community awareness/education and improved services/infrastructure will be required.

It should be recognised that not all public events will deliver acceptable resource recovery outcomes and that the universal distribution of public place recycling receptacles will not be economical, effective and efficient. Identifying suitable events for recycling endeavours and suitable locations for public place recycling receptacles should be part of the development of any public place and events recycling management guidelines.

NetWaste has been working with the Australian National Field Days (ANFD) at their annual event for over six (6) years and has achieved considerable learning through this process.

Desired Outcome

- Community awareness/education and support for public place recycling is achieved.
- Recycling services are provided at major events.
- Public place recycling is undertaken at suitable locations within member council areas.

Action Plan

- Prepare NetWaste public event recycling guidelines and standard conditions that may be applied to Development Applications, leases and licences.
- Seek alliances with industry and undertake trial programs for events waste management and for public place recycling.
- Investigate cost benefits of public place recycling and seek funding to implement at locations where viable.

Goal: Reduce illegal dumping and litter in the Region

Illegal dumping is an environmental crime and can cause serious pollution to the environment, pose a risk to human health, and impact local amenities and community pride. Cleaning up illegally dumped material is also a significant cost for local communities, councils and public land managers.

Priority wastes include asbestos waste, construction and demolition waste, household waste and garden waste.

Litter continues to be a problem in NSW and the NetWaste region, causing pollution of stormwater and catchments. The cost to councils and communities of cleaning up litter is considerable.

Issue

Need to educate, build community relationships and increase participation to better combat illegal dumping.

Explanation of the Issue – Local councils do not have the resources to deal with littering alone. The general community is better placed to identify offenders. State wide education and media campaigns together with local community engagement can help to reduce illegal dumping.

Advising industry and the community of the social, environmental and economic impacts of illegal dumping will improve knowledge of correct disposal options, while targeted education will empower local communities and businesses to make decisions about and care for their local environment, and remove markets for illegal operators.

Establishing strong and collaborative partnerships with RID Squads, industry and the community will increase opportunities for people to look after their own neighbourhoods and environment, give local communities power to make decisions, provide intelligence on possible offenders and establish positive social norms regarding waste disposal and recycling.

Desired Outcome

- Community awareness/education and support to deal with illegal dumping is achieved.
- Instances of illegal dumping decrease.

Action Plan

- Seek funding to develop a NetWaste regional illegal dumping strategy.
- Seek EPA funding and support for illegal dumping community education programs.
- Work with community groups and agencies to identify and manage illegal dumping hotspots, to identify offenders and assist in the management of this issue.
- Integrate the NSW Dumping Strategy with NetWaste education programs.

Issue:

Need to collect data to identify hotspots, issues and monitor program performance

Explanation of the Issue – increasing knowledge and information through data collection and analysis of illegal dumping, will ensure effective targeted, strategic, localised and prioritised actions to prevent illegal dumping.

Desired Outcome

- Hot spots are cleaned up and offenders are identified.

Action Plan

- Seek funding to identify and manage local illegal dumping 'hot spots' through clean-up actions, surveillance equipment and prevention infrastructure, prioritising measures that help combat asbestos dumping.

Issue:

Need to build capacity and expertise to better tackle illegal dumping.

Explanation of the Issue – increasing knowledge and information through data collection and analysis of illegal dumping, will ensure effective targeted, strategic, localised and prioritised actions to prevent illegal dumping.

Desired Outcome

- Hot spots are cleaned up and offenders are identified.

Action Plan

- Seek nomination to be one of the proposed two new Regional Illegal Dumping Programs that are proposed by the EPA

Issue:

Litter remains a significant problem in the region, which affects amenity and pollutes stormwater and catchments.

Explanation of the Issue – littering has been identified as a growing problem across the region, particularly on major transport corridors and also illegal dumping in smaller communities. Litter enters the stormwater systems, and creeks and rivers causing pollution. To date NetWaste has facilitated a regional awareness campaign to the reduction of litter but recognises that a more effective approach is to work with individual communities.

Desired Outcomes

- Littering hotspots are identified and possible strategies developed and implemented in consultation with the local community.

Action Plan

- Develop and implement an anti-littering education program.
- Identify possible partnerships within communities to develop local initiatives in response to local issues (e.g. the Wilcannia Litter Project, indigenous communities, working with community groups)
- Seek funding for anti-litter education programs and enforcement. This may involve funding of officer/s to address both anti-litter and illegal dumping.

PART 7 SUMMARY - ACTION, TIMING, FUNDING AND RESPONSIBILITIES

7.1 ACTIONS TIMING AND RESPONSIBILITIES

Table 19 lists the actions which are described in Part 6 of this document. With input from NetWaste personnel, timing, responsibilities, and comments are provided.

Timing is expressed and defined as follows:

- “Year 1” – 1 July 2013 to 30 June 2014
- “Year 2” – 1 July 2014 to 30 June 2015
- “Year 3” – 1 July 2015 to 30 June 2016
- “Year 4” – 1 July 2016 to 30 June 2017
- “All” – Ongoing all years

Responsibilities are expressed and defined as follows:

- “All” – All NetWaste staff plus the Executive Officer
- “ELA” – Environmental Learning Advisor
- “PC” – Projects Co-ordinator
- “EO” – Executive Officer
- “NAS” – NetWaste Administration Support

7.2 FUNDING THE STRATEGIC PLAN

Implementation of this Strategic Plan will require funding allocations to execute nominated actions. In this document funding falls in two classes, “Core Funding” and “Grant Funding”. Core Funding comprises the normal budget allocation that is provided to NetWaste by the NSW EPA to support core programs, in particular funding of staff and education programs. With the introduction of the NSW Governments Waste Less Recycle More program, significant additional Grant Funding is available to deliver strategic objectives.

Table 19 includes likely funding sources whether they be “Core” or “Grant”, and relevant comments. This Strategy does not identify specific budgets required, as after communication with NetWaste officers, it became evident that core funding of strategic actions would be determined by the NetWaste board on an annual basis. The amount of grants funds that will be required for projects, will depend largely on EPA grant funding terms, NetWaste grant allocations, and the proposed Integrated Infrastructure Plan for the NetWaste Region which is to be completed late 2013.

Table 19 – ACTION, TIMING, FUNDING AND RESPONSIBILITIES

Ref.	Action	Timing - Year 1, 2, 3, 4, All	Core Funded? (Y/N)	Potential Grant funding? (Y/N)	Responsibility All, ELA, PC, EO or NAS	Comments
NetWaste Enablement						
1.1	Maintain and implement the Training Plan in consultation with NetWaste staff and members.	All	Y	N	All	
1.2	Maintain the reference document that records the training programs undertaken and recognises those who have successfully completed training courses.	All	Y	N	NAS	No specific budget required
1.3	Provide training to Council staff that are involved in the handling and identification of low risk problem wastes	2	Y	N	ELA/PC	Refer Action 1.1. To be included as part of funding app through WLRM program
2.1	Further develop and maintain the NetWaste resources available to the Council members and to the general public	All	Y	N	All	NetWaste Education Strategy using Models B&C
2.2	Establish and maintain a web based "members only" forum and library and utilise as the primary communication medium with member Councils	2	Y	N	All	No specific budget required
3.1	Seek funding for appointment of PT NetWaste Media/Communications Officer	1	Y	Y	ELA/PC	NetWaste may contribute dependent on grants. Implemented under Model B within Education Strategy
3.2	Complete revision of NetWaste's communications strategy, ensuring alignment with the Education Strategy, then implement.	2	Y	N	All	Linked to Action 3.1. Education implemented within Education Strategy Model C - Regional Programs
3.3	Continue to improve and maintain the NetWaste website.	All	Y	N	All	

Ref.	Action	Timing - Year 1, 2, 3, 4, All	Core Funded? (Y/N)	Potential Grant funding? (Y/N)	Responsibility All, ELA, PC, EO or NAS	Comments
NetWaste Enablement						
4.1	Organise and host regular NetWaste forums and steering committee meetings in conjunction with learning workshops.	All	Y	N	All	
4.2	Conduct annual reviews of NetWaste meeting structures and content by undertaking member surveys & implement recommendations	All	Y	N	All	
4.3	Organise site inspections and study tours for NetWaste members of relevant waste management systems, practices & technologies	All	Y	N	All	As identified
4.4	Trial broadcasting forum meetings via web based software so that interaction can be maintained between NetWaste members without travelling long distances.	All	Y	N	All	
5.1	Provide reports to NetWaste members on the outcomes of quarterly Renew NSW forums.	All	Y	N	ELA/PC	
5.2	Gauge interest, and encourage NetWaste members to attend Renew forums whenever these are conducted by EPA in the NetWaste region or Renew meetings held in conjunction with co-ordinated events.	All	Y	N	PC	
Engagement						
6.1	Adopt and seek funding to implement the Waste Education Strategy. Three delivery models form the basis of the NetWaste strategic approach AI Education delivered by NetWaste will occur as a part of one of these models. Strategic Model A – Continuation Model. Strategic Model B – Regional Programs Model. Strategic Model C- NetWaste Council partnership Model	All	Y	Y	ELA	Priority for funding sought for Research Project, Media Officer, Resource and Education Kits.

Ref.	Action	Timing - Year 1, 2, 3, 4, All	Core Funded? (Y/N)	Potential Grant funding? (Y/N)	Responsibility All, ELA, PC, EO or NAS	Comments
Engagement						
6.2	Conduct annual reviews of the NetWaste Waste Education Strategy (adopted August 2013).	All	Y	N	ELA	
7.1	Implement waste education programs to improve resource recovery from the domestic waste stream.	All	Y	N	ELA	Education implemented under Model A, B & C within Education Strategy
8.1	Undertake food waste avoidance education, audits and trials	2 & 3 or as opportunities arise	Y	Y		Education implemented under Model A, B & C within Education Strategy.
Infrastructure and Services						
9.1	Develop an Integrated Infrastructure Plan for the NetWaste region	1	N	Y	PC	Funding secured for plan development
9.2	Undertake investigations and cost benefit analysis of reducing and consolidating the number of landfills in the NetWaste region, and building, upgrading or rationalising transfer stations	1	Y	Y	PC	To be considered as part of Integrated Infrastructure Plan
9.3	Support councils in implementing the recommendations that emerge from investigations and cost benefit analysis.	2 & 3	N	Y	PC	
9.4	Review design, resource recovery, environmental controls and risks of waste facilities, and seek funding to upgrade where appropriate.	1	N	Y	PC	To be considered as part of Integrated Infrastructure Plan
9.5	Seek funding to assist smaller Councils to engage suitably qualified consultants to undertake independent audits of unlicensed landfills.	All	N	Y	PC	

Ref.	Action	Timing - Year 1, 2, 3, 4, All	Core Funded? (Y/N)	Potential Grant funding? (Y/N)	Responsibility All, ELA, PC, EO or NAS	Comments
Infrastructure and Services						
10.1	Review the existing NetWaste template for development of Waste Management Strategy in consideration of recently developed strategies.	2	Y	N	PC	
10.2	Seek grant funding to support development of Council Waste Management Strategies	2	N	Y	PC	To be included as part of funding app through WLRM program
10.3	Seek grant funding to support the development and implementation of landfill EMPs	2	N	Y	PC	To be included as part of funding app through WLRM program
11.1	Undertake true landfill analysis for interested Councils, with specific consideration to introduction of new organics services and impacts on other waste streams, landfill capacity, services etc.	1	Y	N	PC	Investigation to precede Action 11.2
11.2	Implement the adopted recommendations of the Organics Management Options Report	All	N	Y	PC	To be included as part of funding app through WLRM program, expected early 2014
11.3	Support council business case studies for implementation of enhanced organics collection and processing	All	N	Y	ELA/PC	As they become identified. Link with Model B within Education Strategy
11.4	Facilitate necessary studies and forums to support the roll out of kerbside collection and processing of organics, with food waste, in the NetWaste LGAs where viable	All	N	Y	ELA/PC	As they become identified. Link with Models A & B within the Education Strategy.
11.5	Assist waste processing contractors to access grant funds for organics market development	All	N	Y	PC	As they become identified
11.6	Support pilot studies and evaluation of small scale organics collection and processing options for remote areas	2 & 3	N	Y	PC	As identified. Currently researching interest from smaller Councils. First round funding expected October 2013

Ref.	Action	Timing - Year 1, 2, 3, 4, All	Core Funded? (Y/N)	Potential Grant funding? (Y/N)	Responsibility All, ELA, PC, EO or NAS	Comments
Infrastructure and Services						
12.1	Work with Councils and approved Administrators under the Product Stewardship (Televisions and Computers) Regulations 2011, e.g. Reverse E-Waste, to determine e-waste collection and recovery centres in the NetWaste region	All	Y	Y	ELA/PC	Collection points set to be established by late 2013 across 20 NetWaste Councils. Links with Model B within the Education Strategy
12.2	Implement waste education and communication to raise awareness within the community of the growing volumes of e-waste and opportunities for recycling	All	Y	N	ELA/PC	Media campaign & resources currently being finalised. Implemented under Models A,B&C within the Education Strategy
13.1	Develop and undertake a C&I pilot project with one Council and assess viability and future direction.	3	N	Y	PC	Funds already in NW budget.
13.2	Work with small-medium identified business/es to identify waste streams and potential opportunities for enhanced resource recovery.	All	N	Y	ELA	Links with Model B within Education Strategy
13.3	Encourage and/or partner with the C&I sector to reduce, reuse and recycle taking advantage of the "Waste Less Recycle More" Business Recycling Program		Y	Y		
14.1	Review and update landfill eCO2 emissions and potential liabilities that may arise in the NetWaste region from changes to the CPM, the methane Global Warming Potential increase from 21 to 25, and landfill consolidation.	2	Y	N	PC	
14.2	Assess opportunities for mitigating carbon financial liabilities including carbon farming initiatives and low cost carbon offsets.	2	Y	N	PC	

Ref.	Action	Timing - Year 1, 2, 3, 4, All	Core Funded? (Y/N)	Potential Grant funding? (Y/N)	Responsibility All, ELA, PC, EO or NAS	Comments
Infrastructure and Services						
15.1	Investigate potential locations, layouts, capital and operating costs for regional public drop off facilities for problem wastes that accord with the EPA's generic designs, and seek grant funding to implement.	1	N	Y	PC	NetWaste undertaking research in preparation of first round funding expected October 2013.
15.2	Investigate need to improve existing local public drop off facilities for problem wastes and seek grant funding to implement upgrades where appropriate.	1	N	Y	PC	NetWaste undertaking research in preparation of first round funding expected October 2013.
Financial						
16.1	Ensure NetWaste's obligations to EPA are being met including participation in cross regional projects as appropriate.	All	Y	N	ELA/PC	
16.2	Align NetWaste programs with NSW EPA policy, strategy and funding programs to achieve mutual objectives.	All	Y	N	ELA/PC	
17.1	The Steering Committee to prepare annual budget and undertake quarterly reviews.	All	Y	N	ELA/PC	
17.2	Prepare annual reconciliation statements of financial performance.	All	Y	N	PC	Prepared by OCC
18.1	Actively seek, identify and pursue grants through appropriate opportunities where programs align with the goals of the strategic plan.	All	Y	N	ELA/PC	
18.2	Prepare a Workforce Plan following finalisation of the NetWaste Regional Strategy & Integrated Infrastructure Plan	1	Y	Y	EO	

Ref.	Action	Timing - Year 1, 2, 3, 4, All	Core Funded? (Y/N)	Potential Grant funding? (Y/N)	Responsibility All, ELA, PC, EO or NAS	Comments
Financial						
18.3	Seek funding in grant applications for administration, coordination and project management of grant requirements and execution of waste projects	All	N	Y	ELA/PC	
19.1	Provide training to Council staff regarding preparation of medium and long term waste services financial models	1	Y	N	PC	Refer Action 1.1
Problem Wastes						
20.1	Coordinate regional contracts for the collection, transport and treatment problem wastes from public drop off facilities that are established.	2	N	Y		Linked to progress of Action 15.1 & 15.2
20.2	Conduct communication and education regarding problem wastes.	All	Y	Y	PC/ELA	Implemented under Models B & C within the Education Strategy.
20.3	Coordinate annual Household Chemical Cleanout (HCC) throughout the NetWaste region	All	Y	Y	PC	Funded separately by EPA
20.4	Investigate ways of improving collection and disposal of problem wastes in remote LGAs	1	N	Y	PC	Considered as part of Actions 15.1 & 15.2
20.5	Work with interested NetWaste Councils to establish tyre demonstration sites using proven approaches (e.g. Ecoflex design, Narromine)	1 & 2	Y	N	ELA	Implemented under Model C within Education Strategy
20.6	Investigate and prepare a report around the issue of liquid waste management across the region, including quantities, how the issue is managed, opportunities for aggregation/centralisation of locations, potential service providers	1	Y	N	PC	

Ref.	Action	Timing - Year 1, 2, 3, 4, All	Core Funded? (Y/N)	Potential Grant funding? (Y/N)	Responsibility All, ELA, PC, EO or NAS	Comments
Resource Recovery						
21.1	Review waste service models in place across the region showcasing a variety of implementation approaches. Possible examples include Nyngan, Gilgandra, Cowra, Orange and Broken Hill.	1	Y	N	PC	No specific budget required
21.2	Coordinate the Regional Waste Services contract development process	1 & 2	Y		PC	
21.3	Continue to develop and facilitate regional service contracts across the areas of scrap metals, organics processing, kerbside domestic waste, recycling and organics services and collection of used oil.	All	Y	Y	PC	
21.4	Implement the regional media campaign to improve recovery of used oil and evaluate effectiveness through monitoring of used oil collection quantities.	All	Y	N	PC	Links with Education Strategy Model B within the Education Strategy
21.5	Implement waste education programs to improve resource recovery from the domestic waste stream.	All	Y	Y	ELA	Implemented under Models A B & C within Education Strategy
21.6	Investigate MGB sizes and collection frequencies to optimise costs and resource recovery.	2	Y	Y	PC	
21.7	Develop generic "Waste Not" Development Control Plan requirements and standard conditions.	2	Y	N	PC	
22.1	Finalise the mobile glass crushing project and prepare evaluation report	1	Y	N	PC	Externally funded project, scheduled for December 2013 completion

Ref.	Action	Timing - Year 1, 2, 3, 4, All	Core Funded? (Y/N)	Potential Grant funding? (Y/N)	Responsibility All, ELA, PC, EO or NAS	Comments
Resource Recovery						
23.1	Prepare template documentation to enable member councils to introduce the requirement for builders and developers to prepare "waste plans" when submitting Construction Certificate applications and Development Applications.	2	Y	N	PC	
23.2	Support and encourage resource recovery from skip bins by "spill and sort" or by the development of a C&D MRF.	2	Y	N	PC	
23.3	Prepare a template report for the use by member councils that would support the introduction of differential waste disposal fees to encourage separation of recoverable materials from general waste taken to landfills and transfer stations.	1	Y	N	PC	
23.4	Investigate cost benefits, potential purchase of equipment, and regional contracts for further recovery and processing of C&D and C&I materials, such as tyres and hard waste, and implementation at locations where viable.	All	Y	Y	PC	Investigated as priorities or opportunities are identified
23.5	Include provisions for C&I and C&D in the generic "Waste Not" Development Control Plan requirements and standard conditions.	2	Y	N	PC	Refer Action 21.7
24.1	Promote home composting of organics including food	All	Y	N	ELA	Links with Models A, B & C within the Education Strategy
25.1	Evaluate opportunities that may arise from the NSW EPA's Energy from Waste Policy when it is finalised.	2	Y	N	PC	

Ref.	Action	Timing - Year 1, 2, 3, 4, All	Core Funded? (Y/N)	Potential Grant funding? (Y/N)	Responsibility All, ELA, PC, EO or NAS	Comments
Resource Recovery						
26.1	Prepare NetWaste public event recycling guidelines and standard conditions that may be applied to Development Applications, leases, and licences.	3 & 4	Y	N		Link with Models B & C within the Education Strategy
26.2	Seek alliances with industry and undertake trial programs for events waste management and for public place recycling.	3 & 4	Y	N	ELA	Link to Model C within the Education Strategy
26.3	Investigate cost benefits of public place recycling and seek funding to implement at locations where viable.	3 & 4	Y	N		
Combating Illegal Dumping & Tackling Litter						
27.1	Seek funding to develop a NetWaste regional illegal dumping strategy,	1	N	Y	ELA/PC	Links with Model C within Education Strategy
27.2	Seek EPA funding and support for illegal dumping community education programs	1	N	Y	ELA	Education implemented under model A, B & C within the Education Strategy
27.3	Work with community groups and agencies to identify and manage illegal dumping hotspots, to identify offenders and assist in the management of this issue.	3	N	Y		Links with Model B & C within the Education Strategy
27.4	Integrate the NSW Dumping Strategy with NetWaste education programs	All	Y	Y	ELA	Implemented under Model B & C within the Education Strategy
28.1	Seek funding to identify and manage local illegal dumping 'hot spots' through clean-up actions, surveillance equipment and prevention infrastructure, prioritising measures that help combat asbestos dumping	All	N	Y		

Ref.	Action	Timing - Year 1, 2, 3, 4, All	Core Funded? (Y/N)	Potential Grant funding? (Y/N)	Responsibility All, ELA, PC, EO or NAS	Comments
Combating Illegal Dumping & Tackling Litter						
29.1	Seek nomination to be one of the EPA's proposed two new Regional Illegal Dumping Programs.	1	N	Y		Links with Models B & C within the Education Strategy
30.1	Develop and implement an anti-littering education program.	2	Y	Y	ELA	
30.2	Identify possible partnerships within communities to develop local initiatives in response to local issues (e.g. the Wilcannia Litter Project, indigenous communities, working with community groups)	All	Y	Y	ELA	Implemented under Model B & C within the Education Strategy
30.3	Seek funding for anti-litter education programs and enforcement. This may involve funding of officer/s to address both anti -litter and illegal dumping.	1	N	Y	ELA	Implementation under Models B & C within the Education Strategy

PART 8 MONITORING, REVIEW AND REPORTING

The need for monitoring, review and reporting within this Strategic Plan cannot be understated. These actions will ensure that the implementation of the strategy programs deliver the desired outcomes, or may highlight where changes or improvements need to be made.

The application of this part of the Plan will:

- Enable performance to be measured against objectives
- Provide the basis for implementing future change for improved performance
- Assess performance in line with Key Performance Indicators (KPIs)
- Determine if outcomes are in line with expectations
- Examine if anticipated benefits have occurred
- Evaluate if the Strategic Plan has recognised and responded to community needs

8.1 MONITORING

Monitoring will be undertaken by:

- Quarterly NetWaste meetings
- Quarterly *Renew* meetings
- Contractor performance assessments
- Community surveys
- Waste audits
- Examination of trend lines
- Audits of environmental performance
- KPIs

Monitoring should be undertaken progressively and be part of the quarterly NetWaste meetings. The implementation of the strategic waste plan programs should be a standing item on the agenda and progress in the delivery of these programs monitored to establish if they are being delivered in accordance with the adopted timeline and are aligning with the established budgets.

The performance of major service contractors should be monitored to ensure they are meeting their contractual obligations, including service standards. Major contractors would include the collection of scrap metals, mulching of green waste, collection of problem wastes and disposal of hazardous materials for those contracts that do not already include KPIs, then these should be part of any future contracts. Contractor performance assessments should be undertaken at least annually.

The KPI table contained within this section will chart the inclusion of specific data and will become a record of past performance. This information will provide an indication of trends in key areas and this will allow an assessment to be made on whether programs are delivering the desired outcomes.

8.2 REVIEW

This Strategic Waste Plan establishes the pathway for ongoing enhancement of regional waste and resource management over four years. It will be important that the strategy and its programs are reviewed annually to ensure relevance, and that factors have not emerged in the intervening period that will have an effect on the strategic primary aim and objectives.

Equally, it will be important to measure whether the programs are delivering the desired outcomes and goals and therefore performance should be examined against established KPIs. Benchmarks have been determined for a number of KPIs and performance in line with, or exceeding the benchmark will be the measure.

Performance that does not meet the benchmark will serve as an indicator that a close examination of the desired outcome or program is warranted and remedial actions are required.

8.3 REPORTING

Reports that are integral to this strategy include:

Quarterly progress reports to EPA.

As sponsors of the Voluntary Regional Waste Groups (VRWG), the Environment Protection Authority (EPA) requires quarterly progress reports on the delivery of VRWG programs and the attainment of agreed milestones. The programs and milestones are determined at the commencement of each financial year of the three year funding cycle and these quarterly reports provide surety to EPA that the VRWGs are meeting their program delivery undertakings.

Annual report to EPA

The annual report to the EPA is a summary of the quarterly reports and confirms the programs and milestones for the forthcoming year. Diversion reporting is included and highlights the attainment of resource recovery and diversion of waste to landfill across the region. This information forms the basis of the annual EPA report to the Minister.

Strategic Plan Performance reported to Member Councils.

It is important that councils are kept informed on the effectiveness of the NetWaste strategic plan in delivering outcomes benefitting the communities. Councillors can better understand the interrelationships between local waste strategies and the Strategic Plan and the endeavours to achieve common goals.

The NetWaste staff currently produce template reports for this purpose and these should be enhanced by focussing on local relevance and presented to councils as information reports.

8.4 KEY PERFORMANCE INDICATORS

Key Performance Indicators	MEASURE	KPI Achieved				KPI Achieved			Comments - August 2013
		2013/14	2014/15	2015/16	2016/17	2012/13	2011/12	2010/11	
ENABLEMENT									
Training Plan developed and skills programs being implemented	Two training programs/workshops delivered per annum					√	Asbestos workshop, Cowra March 2012	No data	Aug 12 – Landfill compliance workshop, W'ton Accredited Work Cover being investigated. Asbestos & PIRMP training delivered Feb and March 2013
Members only Resources library framework developed. Members only and public access resources added.	Three items of resources data added per annum.					√	√	√	Member section of NetWaste website under development.
ENGAGEMENT									
Visits to the NetWaste website. Trending up.	Number of hits					No data	No data	No data	Currently investigating if possible for new website.
Waste Education Strategy	Programs delivered as per Strategy					Adopted Aug 2013			Programs being delivered.

Key Performance Indicators	MEASURE	KPI Achieved				KPI Achieved			Comments - August 2013
		2013/14	2014/15	2015/16	2016/17	2012/13	2011/12	2010/11	
INFRASTRUCTURE									
Establishment and operation of regional organics, with food, processing facilities. Trending up.	Number of councils directing organics to regional AWT facilities.					Orange AWT completed	Nil	Nil	
Establishment and operation of glass crushing facilities. Trending up.	Number of councils undertaking glass crushing					5	Nil	Nil	EPA exemption provided for five councils.
Quantity of glass crushed and marketed/beneficial reuse. Trending up.	Tonnes of glass marketed/beneficial reuse per annum					No data	Nil	Nil	
FINANCIAL									
Quarterly revisions of established budget.	Established budgets are in line with forecasts when assessed at the quarterly and annual reviews					√	√	√	Budget adjusted accordingly at Steering Cttee mtgs. OCC facilitates annual statements & auditing.
Annual reconciliation statements of financial performance.	Established budgets accord with forecasts at quarterly and annual reviews					√	√	√	
Grants & core funding secured for Strategy implementation	\$ Value of Grants and mn core funding awarded					Incomplete data	Incomplete data	Incomplete data	
Grants programs are properly managed	Compliance with Grant Conditions.					√	√	√	

Key Performance Indicators	MEASURE	KPI Achieved				KPI Achieved			Comments - August 2013
		2013/14	2014/15	2015/16	2016/17	2012/13	2011/12	2010/11	
PROBLEM WASTES									
Collection, aggregation, transportation and recycling/disposal of e-waste. Trending up.	Tonnes processed per annum (through regional program).					Incomplete data	55.54	20.8	
Collection, aggregation, transportation and recycling/disposal of total problem wastes. Trending up.	Tonnes processed per annum Number of customers As a percentage of the waste stream					Incomplete data	No data	No data	Establish the number of categories of problem wastes as the baseline for measurement. Currently have data for HCC & e-waste.
Hazardous materials collection contractor is meeting the established KPIs.	Assessment completed and performance is satisfactory.					√	√	√	All annual collections have been undertaken safely by authorised contractors and without incident.
Problem waste collection contractor is meeting the established KPIs.	Assessment completed and performance is satisfactory.					TBA	TBA	TBA	No specific contractor appointed, likely to be a variety.
Quantity of household chemicals and hazardous materials collected. Trending up.	Quantity of materials collected in kilograms					20,921	16,082	7,799	12/13 collection was first year of servicing fixed drop-offs, breakdown was 13,345 kg from collection & 7,577kg from FDOs (7 serviced).
Waste oil recovered. Trending up.	Litres per annum					Incomplete data	82,970	60,820	Initial collection volume not reflective of material to be collected on ongoing basis.

Key Performance Indicators	MEASURE	KPI Achieved				KPI Achieved			Comments - August 2013
		2013/14	2014/15	2015/16	2016/17	2012/13	2011/12	2010/11	
RESOURCE RECOVERY									
Collection of domestic dry recyclables trending up.	Tonnes of domestic recyclables collected per annum					Data pending	Data pending	26,563	EPA Annual NSW Local Government Waste and Resource Recovery Data Reports
Reduction in domestic waste going to landfill. Quantity trending down.	Tonnes of domestic mixed residual waste collected per annum					Data pending	Data pending	108,701	EPA Annual NSW Local Government Waste and Resource Recovery Data Reports
Collection of domestic organics trending up.	Total Kgs of domestic organics collected per household per annum					Data pending	Data pending	1,648	EPA Annual NSW Local Government Waste and Resource Recovery Data Reports
Quantity of organic material processed to make chips, mulch and compost. Trending up.	Total tonnes of organics processed per annum					37200 Est.	Incomplete data	Incomplete data	Re 2012/13 Estimate see Section 5.4 Organic Management Options report - June 2013.
Scrap metal recovered from landfill and transfer station sites. Trending up.	Tonnes collected per annum.					Incomplete data	7,244	4,012	1,840 (as of April 2013). Fluctuates depending on market.
Recovery of construction and demolition waste trending up.	Tonnes of hard waste processed per annum					No data	No data	No data	Need data collection and establish baseline.
Commercial and industrial waste to landfill trending down	Number of Councils with landfill gate fees priced to encourage C&I recycling					No data	No data	No data	Need data collection and establish baseline.

Key Performance Indicators	MEASURE	KPI Achieved				KPI Achieved			Comments - August 2013
		2013/14	2014/15	2015/16	2016/17	2012/13	2011/12	2010/11	
ILLEGAL DUMPING AND LITTER									
NetWaste programs developed to combat illegal dumping	Illegal Dumping Strategy developed and implemented					TBA	TBA	TBA	To be ramped up as part of NSW Waste Less Recycle More initiative - subject to grants
Illegal dumping trending down	Number of illegal dumping hotspots and incidents reported to Councils					No data	TBA	TBA	Need data collection and establish baseline.
Number of litter and dumping offences trending down.	Number of litter and dumping fines issued by NetWaste Councils.					No data	TBA	TBA	Need data collection and establish baseline.

PART 9 GLOSSARY OF TERMS & ACRONYMS

Appendix A

AD	Anaerobic Digestion
Avoidance	Eliminating waste at its source
AWT	Alternative Waste Treatment
Biosolids	The residual sludge produced from wastewater treatment at sewerage plants.
CENTROC	Central West Regional Organisation of Councils
Commercial and Industrial	Industries that include shopping centres, restaurants, offices, manufacturing, repair workshops, all retail outlets, hotels, clubs and institutions such as schools, hospitals, universities, nursing homes and government offices but excluding construction and demolition industries.
CPM	Carbon Pricing Mechanism
Composting	The process of controlled biological decomposition of organic material.
C&D	Construction and Demolition - actions that arise from construction, demolition, renovations and excavation.
C&I	Commercial and Industrial
Contamination	The introduction of a material in a concentration into a product that makes it unfit for its intended use.
CO2-e	Carbon dioxide equivalent
CPI	Consumer Price Index
Disposable	Any product or material that is designed to be thrown away after a single use.
Disposal Fee	The fee charged at designated facilities for the disposal of waste
Diversion	The recycling or reprocessing of materials that would have otherwise been sent to landfill.
EfW	Energy from Waste
EIS	Environmental Impact Statement
EPA	NSW Environment Protection Authority
EP&A	Environmental Planning and Assessment Act 1979
EPL	NSW Environmental Protection Licence
ETS	Emissions Trading Scheme
Generators	Those responsible for waste creation
GHG	Greenhouse gas
Greenwaste	Waste comprising vegetative organic materials including garden waste, food waste and wood waste
GWP	Global Warming Potential
Household Hazardous Waste	A substance which is explosive, corrosive, flammable, reactive, contagious, and/or toxic, as sourced from the domestic sector.
IEC	Impact Environmental Consultants
KPIs	Key Performance Indicators

Landfill	A facility designed and operated for the disposal of waste material by burying
Landfill Gas (LFG)	Gas generated as a result from the decomposition of decaying waste buried at landfills under anaerobic conditions.
LEMP	Landfill Environmental Management Plan
LFG	Landfill gas
LGA	Local Government Area
MAF	Mobile Aerated Floor composting system
MBT	Mechanical-Biological Treatment
MGB	Mobile Garbage Bin
MRF	Materials Recovery Facility at which recyclable materials are separated into individual commodities.
MSW	Municipal Solid Waste
MUD	Multi Unit Dwellings
ORRF	Organic Resource Recovery Facility
Organic Waste	The part of the waste stream that is comprised solely of animal or plant matter and typically from which compost can be created.
OROC	Orana Regional Organisation of Councils
POEO	NSW Protection of the Environment Operations Act
RDF	Refuse Derived Fuel
Recyclable Material	Material that is able to be re-processed and used as an input for the manufacture of either the same product or another product.
Recycle	The process of source separating from the solid waste stream products that are no longer useable in their present form and that can be used in the manufacture of new products.
Residual Waste	Waste remaining from household sources containing material not separated for recycling or reprocessing
Reuse	The repeated use of a product in the same form but not necessarily for the same purpose, without further manufacture.
RRA	Regional Regulated Area
Source Separation	The separation of recyclables from the waste stream at the source of generation.
Sustainability	Activities that meet the needs of the present without compromising the ability of future generations to meet their own needs.
TBL	It is a triple bottom line approach that includes social, economic and environmental considerations.
tpa	Tonnes per annum
Transfer Station	An intermediate facility where waste material can be delivered locally before transportation to a disposal site.
WARR Strategy	NSW Waste Avoidance and Resource Recovery Strategy
Waste Minimisation	Reducing the quantity of waste requiring disposal through waste reduction, reuse or recycling.
WTE	Waste-to-Energy

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