

**NORTHERN SYDNEY  
REGIONAL WASTE STRATEGY  
Directions Report  
UPDATE 2017**

# NORTHERN SYDNEY REGIONAL WASTE STRATEGY

## Directions Report

### UPDATE 2017

Prepared for and in consultation with the Northern Sydney Regional Organisation of Councils and its member Councils by:

SLR Consulting Australia Pty Ltd  
ABN 29 001 584 612

E: [sydney@slrconsulting.com](mailto:sydney@slrconsulting.com) [www.slrconsulting.com](http://www.slrconsulting.com)

This strategy has been supported by the NSW Environment Protection Authority with funding from the waste levy.

This report has been prepared by SLR Consulting Australia Pty Ltd with all reasonable skill, care and diligence, and taking account of the timescale and resources allocated to it by agreement with the Client. Information reported herein is based on the interpretation of data collected, which has been accepted in good faith as being accurate and valid.

This report is for the exclusive use of Northern Sydney Regional Organisation of Councils, the member councils and the New South Wales Environment Protection Authority.

No warranties or guarantees are expressed or should be inferred by any third parties. This report may not be relied upon by other parties without written consent from SLR.

SLR disclaims any responsibility to the Client and others in respect of any matters outside the agreed scope of the work.

## Table of Contents

1	THE STRATEGY	7
1.1	Purpose of the strategy	7
1.2	Strategy development for the NSROC region	9
1.3	How the strategy fits with other regional plans	<b>Error! Bookmark not defined.</b>
1.4	Strategy consultation process	10
2	WHAT ARE THE KEY DRIVERS FOR CHANGE?	11
2.1	Changes in waste composition	11
2.2	Population is growing and the housing mix is changing	12
2.3	Key legislative and policy drivers	12
2.4	Waste Hierarchy	13
2.5	Lack of waste infrastructure for the northern Sydney region	13
3	WHAT ARE WE DOING TODAY?	16
3.1	Current services	16
3.2	Current waste recovery performance	18
3.3	Landfill and alternative waste management treatment capacity	20
3.4	Regional collaboration for better waste management	22
4	WHERE DO WE WANT TO GET TO?	23
4.1	Strategy vision and objectives	23
4.1.1	Service quality	24
4.1.2	Responsibility	24
4.1.3	Amenity and public health	25
4.1.4	Community engagement	25
4.1.5	Innovation and sustainability	26
4.1.6	Value for money	26
4.2	Regional targets	26
5	WHAT IS THE REGION'S ACTION PLAN FOR IMPLEMENTING CHANGE?	29
6	HOW WILL WE MEASURE SUCCESS?	30

## Table of Contents

### TABLES

Table 1	Council Waste Minimisation Initiatives	17
Table 2	NSROC Regional Waste Strategy Objectives	23
Table 3	NSROC Regional Waste Strategy Targets	27
Table 4	Regional Targets	28
Table 5	Reporting Schedule	30

### FIGURES

Figure 1	Key Steps for Delivery of the NSROC Regional Waste Strategy	10
Figure 2	Regional Planning Framework	<b>Error! Bookmark not defined.</b>
Figure 3	Waste Hierarchy	13
Figure 4	Existing Municipal Waste Transfer and Treatment Facilities Utilised by the Region's Contractors	15
Figure 5	Current Destinations for the Region's Waste	18
Figure 6	Current Landfill Diversion Performance Comparison	19
Figure 7	NSROC Historical Landfill Diversion Performance	20

## Abbreviations and Acronyms

AWT	Alternative or advanced waste treatment
C&D	Construction and demolition
EFW	Energy from waste
EPA	Environmental Protection Authority
e-waste	Electronic waste
LGA	Local Government Area
MGB	Mobile garbage bin (i.e. wheelie bin)
MSW	Municipal solid waste
MUD	Multi-unit dwelling
NSROC	Northern Sydney Regional Organisation of Councils
NSW	New South Wales
POEO Act	Protection of the Environment Operations Act
SMA	Sydney Metropolitan Area
SUD	Single-unit dwelling
WARR Strategy	NSW Waste Avoidance and Resource Recovery Strategy 2014-21

Alternative or Advanced Waste Treatment (AWT)	A facility or chain of facilities that diverts a significant proportion of waste from disposal through biological, mechanical and thermal processes.
Co-mingled	Recyclable materials that are different but are collected together in a single container or receptacle and sent to a materials recovery facility for separation.
Composting	Composting is the biological process of breaking down organic wastes such as food waste, manure, and garden organics in the presence of oxygen.
Garbage	Discarded unwanted materials.
Mechanical Biological Treatment (MBT)	A type of waste processing facility that combines a sorting facility with a form of biological treatment such as composting or anaerobic digestion.
Municipal Solid Waste (MSW)	Solid waste from households and local government operations, including waste placed at the kerbside for council collection and waste collected by councils from municipal parks and gardens, street sweepings, council engineering works and public council bins.
Organics	Organic matter is comprised of carbon-containing compounds that have come from the remains of dead organisms such as plants and animals and their waste products in the environment.
Putrescible Waste	Solid waste that contains organic matter capable of being decomposed by micro-organisms.
Reducing Waste	Reducing waste generation by avoiding or preventing the creation of waste, where possible, along the various parts of the supply chain.
Residual Waste	The waste remaining after reduction, recycling and waste to energy processes.
Resource Recovery	The selection of disposed materials for a specific next use, such as recycling, composting or energy generation.
Sustainable	Capable of being sustained, able to be used without being completely used up or destroyed.
Thermal	Use or production of heat.
Waste Avoidance	Waste that does not enter the waste management system.
Waste Composition	The makeup of waste types disposed of or recycled.

## 1 THE STRATEGY

### 1.1 Purpose of the strategy

The Northern Sydney Regional Organisation of Councils (NSROC) is a voluntary organisation of local councils established to provide strong local government leadership, to work co-operatively for the benefit of the Northern Sydney region, and to effectively advocate on agreed regional positions and priorities.

The NSROC region has traditionally been made up of the following member councils:

- Hornsby Shire Council (Hornsby);
- Hunter's Hill Council (Hunter's Hill);
- Ku-ring-gai Council (Ku-ring-gai);
- Lane Cove Council (Lane Cove);
- North Sydney Council (North Sydney);
- City of Ryde Council (Ryde); and
- Willoughby City Council (Willoughby).

In May 2016 a part of the Shire of Hornsby was excised and transferred to the newly created City of Parramatta Council.

In November 2017 Mosman Council also joined NSROC and over the coming months discussions will be held with Council staff to determine how best to incorporate Mosman's waste priorities into this regional strategy. It is anticipated that a draft Strategy covering the expanded region can be ready for consideration by NSROC's General Managers Advisory Group (GMAC) in April 2018. Until that point this document will not include consideration of the Mosman Local Government Area.

The seven NSROC councils came together in 2014 to prepare a Regional Waste Avoidance and Resource Recovery Strategy (herein referred to as the 'Strategy') to advance sustainable waste management practices within the NSROC region. The strategy was supported by the NSW Environment Protection Authority (EPA) with funding from the waste levy. Part of the funding agreement required this current revision of the Strategy by December 2017.

To ensure consistency and allow comparison with other regions, the structure of this report has again been based on the EPA's *Regional waste avoidance and resource recovery strategy* guidance document (the Guidance document)<sup>1</sup>. The Guidance document provides a suggested structure for the Strategy that supports a focus on increased dry recycling, targeting organics, reducing waste to landfill, and combatting illegal dumping and littering.

Effective municipal solid waste (MSW) management is a crucial responsibility of councils in the NSROC region, as set out in the Local Government Act 1993. Collectively the NSROC councils generate approximately 240,000 tonnes of domestic waste each year. The Strategy will also support the region's proposals for support under the programs of the *Waste Less, Recycle More* initiative which has been extended until 2021.

---

<sup>1</sup> Regional waste avoidance and resource recovery strategy, NSW EPA, Final Draft, March 2014

The revised Strategy was prepared for NSROC by SLR Consulting Australia Pty Ltd in consultation with the waste management staff of the seven councils in the region. The willingness and capacity of the council staff to contribute to the implementation of the 2014 Strategy and the development of the revised Strategy was instrumental in producing the revision in the available timeframe. Their efforts are greatly appreciated and NSROC welcomes this regional cooperation as the revised Regional Waste Strategy is implemented.



## 1.2 Strategy development for the NSROC region

The Northern Sydney Regional Waste Strategy encompasses a series of reports which are outlined below:

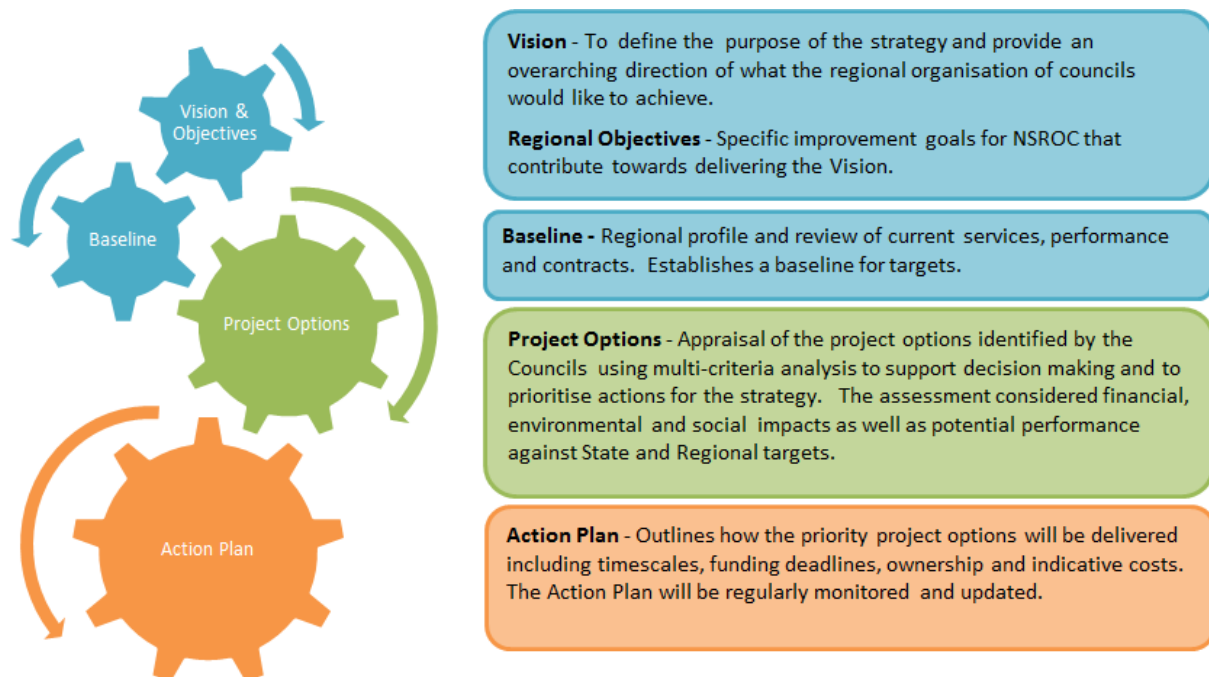
- This Directions Report presents the NSROC councils' vision for future sustainable waste management for the region between 2017 and 2021. It sets out the region's objectives, targets and projects to deliver this vision. It also identifies the priority waste management areas for the region and how progress will be monitored each year. It is designed to align with the NSROC Regional Priorities, the and the *NSW Waste Avoidance and Resource Recovery Strategy 2014-21* (WARR Strategy), including:
  - The Regional Profile Report establishes the NSW waste management context for the Northern Sydney region and describes its geographic and demographic profile and the waste management services currently delivered by the councils. The report provides an overview of the NSROC councils' current position while baseline data was generally provided in the original report.).
  - The Project Options Assessment Report explains the process and the results of an appraisal of an updated range of regional waste management options developed in consultation with representatives from the Northern Sydney councils. It identifies the highest priority options to help achieve the NSROC region's waste management targets and objectives.
  - The Action Plan presents a detailed list and timetable of actions necessary to implement the prioritised projects. The Action Plan is a living document which will be regularly reviewed to reflect progress made in achieving the vision and updated to ensure actions are based on the best available information. The will allow NSROC councils to adapt to any changes in the waste management environment and compete effectively for EPA funding available through the *Waste Less, Recycle More* initiative.

The revised Strategy is intended to assist the NSROC councils to continue to identify key actions to deliver the region's vision and objectives for MSW management. The conceptual basis of the revised Strategy is again the response to the following questions:

- What are the key drivers for change?
- What are we doing today?
- Where do we want to get to?
- What is the Region's action plan for implementing change?
- How will we measure success?

A summary of the Strategy development process is represented in Figure 1.

**Figure 1 Key Steps for Delivery of the NSROC Regional Waste Strategy**



### 1.3 Strategy consultation process

All seven councils in the region have developed their Community Strategic Plans (CSPs) based on extensive community consultation. The Plans are reviewed every four years after each Council election. Waste management is an integral component of the CSP and the four year Delivery Programs and one year Operational Plans which underpin it.

In addition, NSROC facilitates several cross-council professional officer groups (POGs) and advisory groups which meet on a regular basis to exchange information on relevant technical issues. The NSROC Waste Advisory Group (WAG) came together in 2013. Its members are waste managers from each member Council and it was established to develop a shared service approach to regional waste disposal and processing for residual (red bin) waste.

The consultation process for the original Strategy and this revision involved workshops with members of the WAG and other waste staff from each Council, staff from NSROC and review by Council General Managers. Waste management staff are engaged in the day-to-day delivery of the Councils' waste services and have a very good understanding of their community's needs and aspirations as well as an appreciation of what improvements in waste services are realistic and achievable, given resources and other constraints.

## 2 WHAT ARE THE KEY DRIVERS FOR CHANGE?

Waste management is influenced by a complex web of legislative, policy, market, demographic and behavioural factors. In developing the Strategy, these factors have been condensed and taken into account as a set of key drivers, identified and discussed in brief below:

- Changes in waste composition;
- Changes to population and housing mix;
- Key legislative and policy drivers;
- Waste Hierarchy; and
- Lack of waste infrastructure in the Northern Sydney region.

### 2.1 Changes in waste composition

The composition of MSW in urban areas such as the NSROC region changes continuously, albeit generally slowly, as a result of dynamic settlement patterns, new forms of product packaging, and changes in consumer demand, behaviour and attitudes.

Changes in waste composition affect the methods by which waste can be collected, transported and treated. Advances in design, manufacturing and delivery have resulted in the use of more complex products and packaging materials which impact on the local availability of opportunities for re-use, recycling and recovery. Specific examples of waste streams are provided in the Regional Profile report.

There is often a lag time between the release of significant volumes of new waste materials into the market and the ability of the recycling and recovery industry to respond with treatment technologies and suitable markets for these products. As a result, existing waste infrastructure can become obsolete prior to reaching its design life and new waste infrastructure is needed to meet new demands in advance of expected capital investment cycles.

Waste composition also changes in terms of the relative share of the total volume contributed by different waste materials. For example, the share of dry recyclables accounted for by newspapers is reducing as news is increasingly consumed through electronic devices.

Waste management practices under the Strategy must allow for the currently observed trends in waste composition change, and be sufficiently flexible to deal with emerging waste streams.



## 2.2 Population is growing and the housing mix is changing

The total population for the NSROC region is expected to grow to 700,000 people by 2031. Adding to this challenge is the fact that waste generation has historically grown faster than population, which increased at around 1.7% per annum since the 2011 Census<sup>2</sup>.

In the absence of a major reduction in waste generation per capita or per household, increases in the population and concomitant number of dwellings in the NSROC region will have a direct impact on the demand for waste collection and disposal services, particularly in areas where the increased number of dwellings are coming from more conversion to multi-unit dwellings (MUDs).

The EPA has reported<sup>3</sup> that while single-unit dwelling (SUD) domestic households can divert more than 50% of domestic waste from landfill, the current recovery level in MUDs is often significantly less than 50%. An increasing proportion of MUDs compared to SUDs will result in additional challenges in achieving and maintaining high recycling rates due to reduced space for recycling and storage of waste and a lower volume of garden refuse.

Provisional 2015/16 WARR survey results indicate that waste generation per household may be beginning to fall. To ensure this positive result continues going forward, initiatives to press down on growth in waste generation per household must form part of the national and State-wide response to the region's vision for waste management in the future. Local councils alone or acting in groups are not resourced or enabled by legislation to tackle such major social changes.

## 2.3 Key legislative and policy drivers

The way in which NSW local councils manage waste is affected by a number of pieces of legislation and their associated regulation, including the:

- *Local Government Act 1993*;
- *Protection of the Environment Operations Act 1997 (includes provisions for NSW Waste and Environment Levy)*;
- *Protection of the Environment Administration Act 1991*
- *Waste Avoidance and Resource Recovery Act 2001*;
- *Product Stewardship Act 2011*; and
- *Waste Avoidance and Resource Recovery (Container Deposit Scheme) Regulation 2017*

Alongside this legislation are policies impacting regional waste management, including:

- National Waste Policy: Less Waste, More Resources Implementation Plan;
- The Waste Avoidance and Resource Recovery Strategy;
- The Waste Less, Recycle More Initiative;
- The Energy from Waste (EfW) Policy Statement; and
- National Television and Computer Recycling Scheme.

---

<sup>2</sup> Australian Bureau of Statistics, 2016 Census of Population and Housing

<sup>3</sup> Better Practice Guide for Waste Management in Multi-Unit Dwellings, Department of Environment and Climate Change (now NSW EPA), June 2008

The Strategy takes into account relevant National and State legislation, policies, and targets in developing waste management options and long-term strategies. While Local Government will maintain its frontline delivery role, the Strategy's success will rely in large part on supporting policies and funded programs from other levels of government to implement the improved practices developed in the Strategy.

## 2.4 Waste Hierarchy

The Waste Hierarchy is an internationally recognised guideline for prioritising the management of waste to deliver the best overall environmental option. It is generally accepted as the basis for the development of best practice waste management policy in Australia. NSROC councils have all adopted the Waste Hierarchy as the underlying conceptual framework for their waste management practices.

The benefits of applying the Waste Hierarchy are asserted to include: prevention or reduction of greenhouse gas emissions, reduction of pollutants released into the environment, reduced energy consumption, resource conservation and job creation. The five key steps in the hierarchy are shown below.

**Figure 2 Waste Hierarchy**



Source: *Environmental Protection Act 1970*

Further details of the Waste Hierarchy are provided in the Regional Profile report.

## 2.5 Lack of waste infrastructure for the northern Sydney region

Constrained capacity for the management of residual waste has been highlighted in the WARR Strategy as a key issue, due to the diminishing supply of approved landfill capacity in the Sydney Metropolitan Area and the low likelihood of new or expanded landfills being approved. In order to address this capacity shortfall, the NSW Government's WARR Strategy identifies the need for increased recycling and recovery of waste to meet growing demands. The EPA's draft Infrastructure Strategy<sup>4</sup> for consultation has identified a total of 16 new facilities required to meet projected waste throughputs across Sydney in 2021, including AWT, EfW, packaging MRF, garden organics, and putrescible organics processing facilities.

The majority of the NSROC councils do not have ownership or control over waste sites in their LGA and those that do, do not own, manage or control waste transfer, processing or disposal sites for MSW (refer to Figure 3). Following the sale of the State-owned waste business WSN Environmental Solutions (WSN) in 2011, there is as a consequence, a complete dependence on privately-owned waste service contractors.

<sup>4</sup> EPA, Waste and Resource Recovery Infrastructure Strategy 2017-2021 - Draft for consultation

One of the key projects commenced even before NSROC developed the Regional Waste Strategy but also included in the original strategy was a regional processing and disposal contract for residual waste. Five NSROC councils have formed an alliance and awarded a contract to process 33,000 tonnes of residual waste each year. This contract and a larger contract awarded by six SSROC councils were instrumental in making feasible the construction of a new Mechanical Biological Treatment plant at Veolia's Woodlawn facility. The NSROC alliance contract also involves the construction of a plant to manufacture Refuse Derived Fuel.

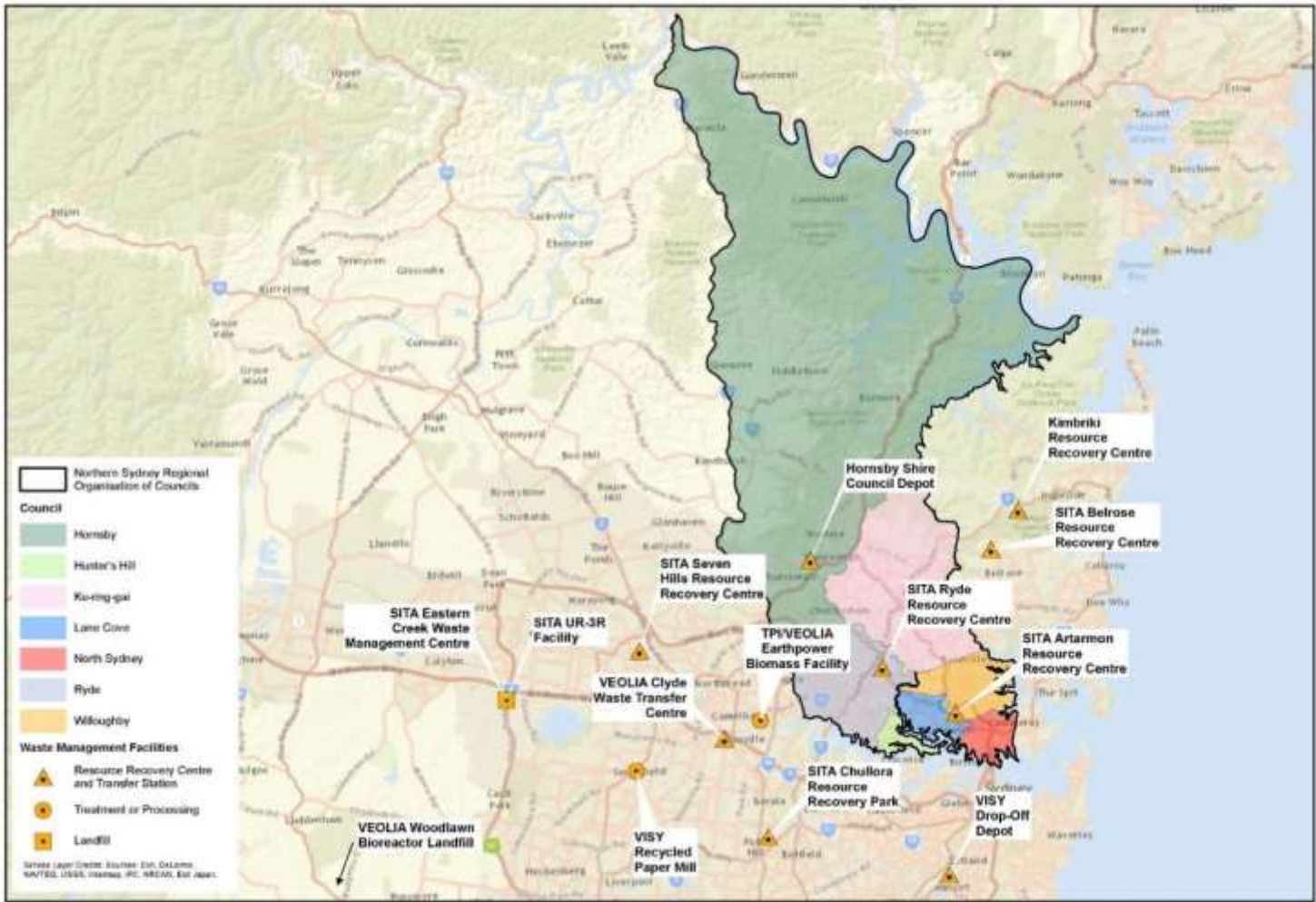
Although there may be some amalgamated councils with sufficient size and population to provide sufficient waste to justify the capital cost of new waste treatment facilities, it is likely to continue to require a regional approach to achieve the necessary volumes and term to make a new waste treatment facility for MSW feasible.

This reality has informed the Strategy's directions and it is expected that the projects under the Strategy will support increased recycling achievements.

However, the Strategy cannot solve the fundamental challenge of inadequate waste infrastructure for northern Sydney. NSROC has made a number of submissions in relation to waste infrastructure including one for the draft North District Plan and one in regard to the EPA's draft WARR Infrastructure Strategy. Advocating for action by other players to make decisions that result in change to this situation will continue to be a policy advocacy position of NSROC and its member councils.



Figure 3 Existing Municipal Waste Transfer and Treatment Facilities Utilised by the Region’s Contractors



### 3 WHAT ARE WE DOING TODAY?

#### 3.1 Current services

The seven NSROC councils each offer their residents kerbside collection services for the following waste streams:

- residual waste (garbage);
- dry recyclables
- garden organics (as an additional charge in some LGAs); and
- bulky waste (as a clean-up service).

All NSROC councils have employed the Australian Standard colour coded bin lid system (i.e. red lid for residual waste, yellow lid for co-mingled recycling, blue lid for paper/cardboard recycling, and green lid for garden organics).

All NSROC Councils contract private sector companies for the core residential waste collection and disposal services. Council waste management staff are responsible for setting policies, managing certain in-house services and assuring performance under contracts for residential services.



The exact configuration of the waste and recycling services offered in each LGA is influenced by a number of factors, many of which also serve to distinguish them from the other councils in the Sydney region. Some notable differences include:





























- The proportion of MUDs and SUDs in each LGA (for example, Hornsby, Hunter's Hill and Kung-ring-gai have less than 35% MUDs as a proportion of total residences compared to North Sydney with over 85% MUDs); and
- The wide range in population density (for example, Hornsby has 314 residents per square kilometre whereas North Sydney has nearly 6,500 residents per square kilometre).

These differences mean that some residents in the region with larger properties have a higher demand for garden waste collections, while residents living in MUDs have a much lower requirement for green waste collection but a higher demand for bulky waste collection due to restrictions on waste storage space and the propensity for increased turnover in occupancy.



An essential element of this Strategy is to continue to improve and expand upon current waste minimisation and re-use initiatives. Across the NSROC region there are a number of initiatives in which NSROC councils are supporting participants or the responsible providers. These are summarised in **Table 1**.

**Table 1 Council Waste Minimisation Initiatives**

Initiatives	Provider/s	Description
<b>National Television and Computer Recycling Scheme</b>		In the past, a free drop-off site was organised by councils (typically 1 day per year) for residents for up to 15 items including televisions, computers, printers and scanners. Now both CRCs offer free drop off for e-waste.
<b>Household Chemical CleanOut</b>		Free drop-off site organised by councils (typically 1 day per year) for residents for hazardous household wastes. May become less frequent as the two CRCs will take the majority of the materials taken to Chemical CleanOut events.
<b>The Compost Revolution</b>		Online educational resource. Councils offer subsidised bins to the community and organise workshops and information sessions on composting and worm-farming.
<b>Love Food, Hate Waste</b>	  	The Food Lovers' Republic initiative aims to raise awareness about the impact of food waste in NSW and reduce how much 'good' food we waste.
<b>Recyclable Drop-Off (Council buildings)</b>	 	Drop-off of domestic recyclable items such as mobile phones, fluorescent light globes, printer toners and household batteries. Can also be dropped at the two CRCs.
<b>Public Place and Events Waste Management</b>		Bins provided in public places such as parks and bus stops, and wastes management for local events.
<b>Christmas Tree Collections</b>		Free Christmas tree collections offered in January.
<b>Chipping and Mulching Services</b>		Mobile (kerbside) and/or site-based service provided for residents.
<b>Fridge Buyback</b>	 	Rebate was provided to residences for a working second fridge until scheme finished in June 2016..
<b>MobileMuster</b>	 	Product Stewardship Program supported by local councils aimed at keeping mobiles out of landfill.
<b>Garage Sale Days</b>		Garage sale events advertised for the region to encourage re-use of unwanted household items.
<b>Clothing Bins</b>	 	Bins provided by charities for old/ unwanted clothing drop-off.
<b>Medical Waste Disposal</b>	 	Councils support pharmacies in the local area providing facilities for needle and sharps disposal.
<b>Public Facility Tours</b>	 	Tours of waste management facility sites offered to the public on a regular basis.
<b>Commercial Waste Services</b>		Including residual, paper & cardboard, mixed recycling and garden waste
<b>Better Business Partnership</b>	 	Project designed to improve the sustainability of businesses on Sydney's North Shore including cost saving benefits through reduced energy and water bills and improved environmental performance.
<b>Anti-litter and illegal dumping programs</b>	 	Educational campaigns supported and operated by Councils, involving research, community engagement and development of marketing materials. Also, monitoring and investigation into illegal dumping and problem waste areas.
<b>Recycling Near You</b>		Website containing information about the recycling and waste services offered by Councils and local drop-off options.

**Table Key:**



Federal Government



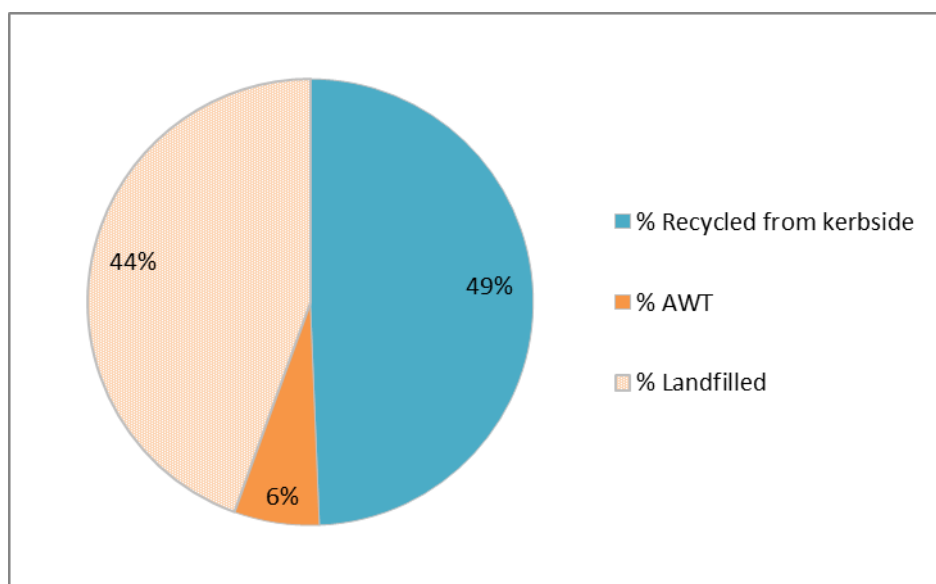
Regional/ Council Partnership

- State Government
- Local Government
- Private Industry
- Not-for-Profit Organisation

### 3.2 Current waste recovery performance

According to provisional results from the 2015/16 WARR survey, approximately 50% of all household waste produced in the NSROC region is recycled from waste separated by residents at the kerbside. An additional 6% of waste is recovered for recycling at an alternative waste treatment (AWT) facility, which means that approximately 56% of waste generated within the NSROC region is currently diverted from landfill. This means approximately 44% of total household waste is disposed of at a landfill facility (refer to **Figure 4**)

**Figure 4 Current Destinations for the Region's Waste**

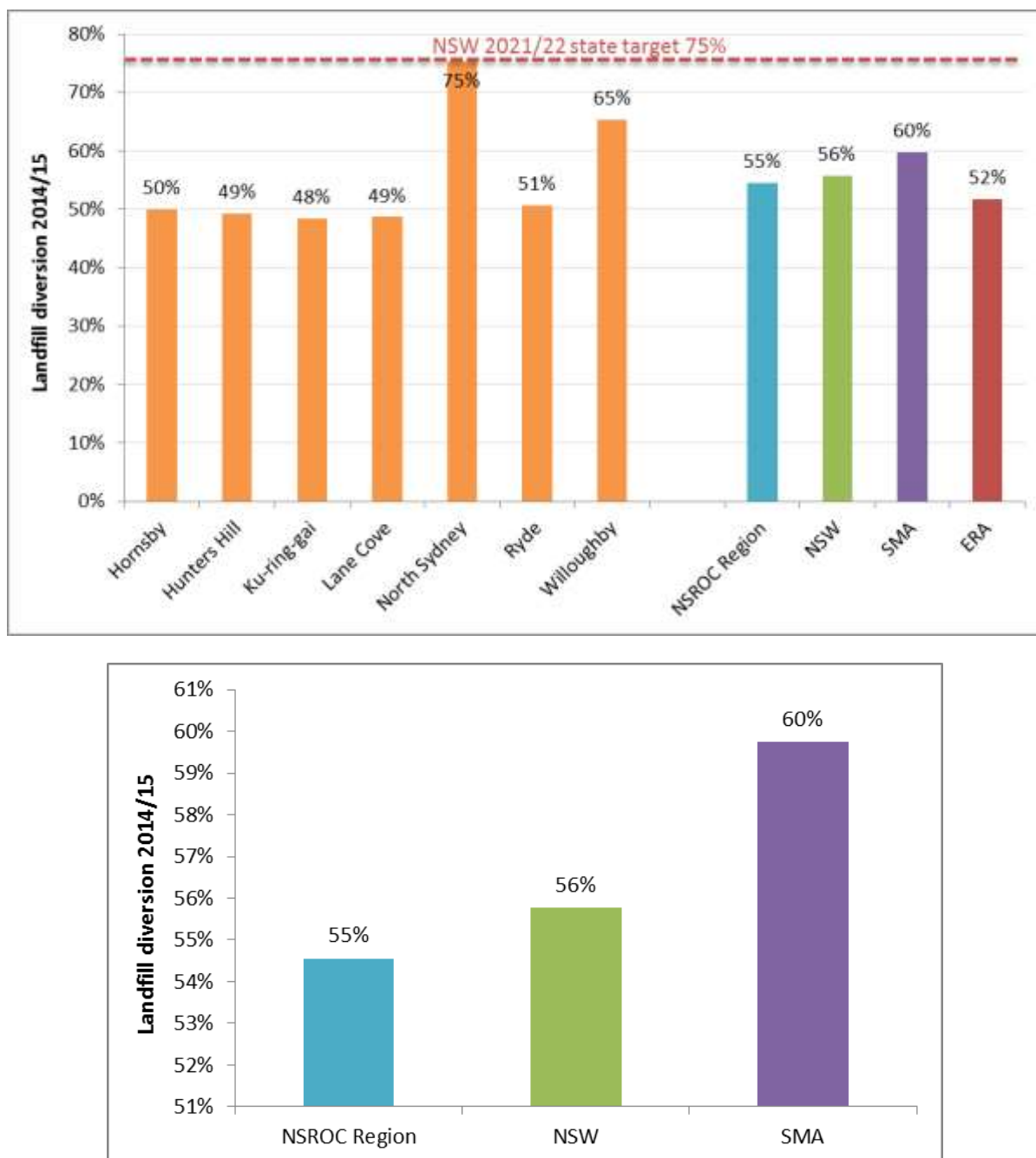


The latest available performance data for both NSROC and the wider regions of New South Wales (NSW), Sydney Metropolitan Area (SMA) and Extended Regulated Area (ERA) is from 2014/15<sup>5</sup>. The

<sup>5</sup> NSW Local Government, Waste and Resource Recovery Data Report 2014–15

landfill diversion performance of the NSROC councils in 2014/15 was below the average for the SMA and NSW, as shown in Figure 5.

**Figure 5 Current Landfill Diversion Performance Comparison**

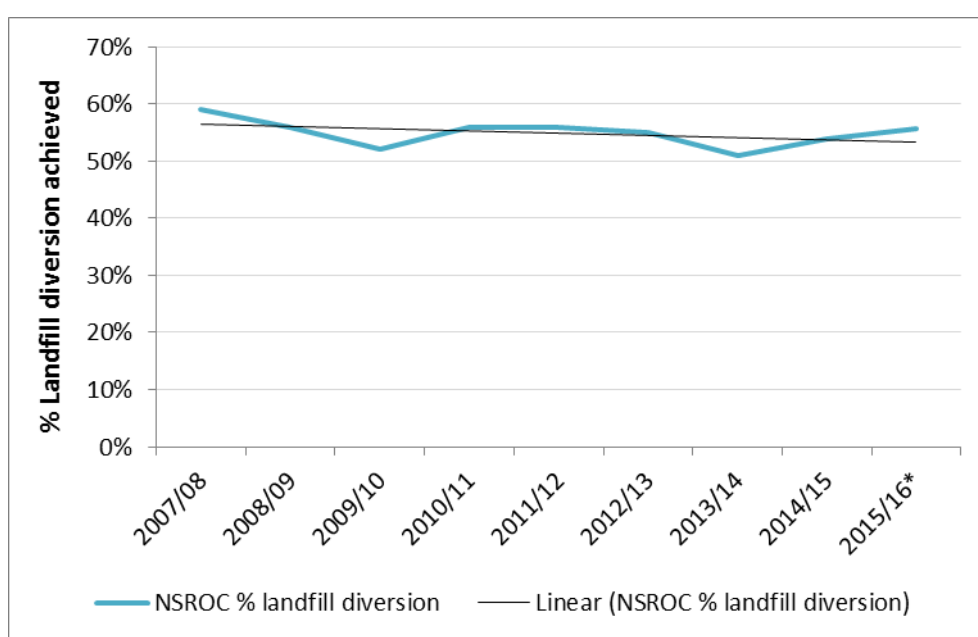


The stagnated performance of the region highlights that more work by all levels of Government and the local community is required over the coming years to encourage greater landfill diversion and to meet the State target of 75% recycling of MSW.

Trends revealed in data<sup>6</sup> compiled for the NSROC region from the last nine years suggests that further increases in recycling by kerbside collections alone are unlikely to result in major uplift in landfill diversion. While the total diversion figure has been consistently higher than 50% the trend line suggests that this performance has plateaued and is decreasing very slightly. Although the previous two years have shown a slight uplift in diversion rates, whether this trend will continue or it simply represents a natural fluctuation remains to be seen.

This means additional options for increasing waste reduction, re-using, recycling and recovering waste currently going to landfill need to be investigated and implemented. Figure 6 below shows the landfill diversion performance of the NSROC councils since 2007/08, noting that 2015/16 results are provisional.

**Figure 6 NSROC Historical Landfill Diversion Performance**



\*2015/16 results provisional.

### 3.3 Landfill and alternative waste management treatment capacity

Landfill is the current method of disposal for approximately 44% of the region's waste. A study published by NSW Planning in 2009<sup>7</sup> predicted that Sydney's landfills would reach capacity by 2016 based on waste forecast assumptions. Since the report's publication, SUEZ's Belrose and Eastern Creek landfills stopped receiving waste in 2014 and 2017 respectively, whilst the Lucas Heights landfill has been granted consent to receive waste until 2037<sup>8</sup>. More recent analysis by the EPA in September 2017 predicts that NSW will have sufficient landfill capacity in 2021, but falls short of predicting when this capacity may run out in the future<sup>9</sup>.

<sup>6</sup> NSW EPA Regional Waste Data

<sup>7</sup> Public Review Landfill Capacity and Demand, Wright Corporate Strategy Pty Ltd for State Government of New South Wales, March 2009

<sup>8</sup> [http://www.sita.com.au/media/publications/Signed\\_Development\\_consent\\_Lucas\\_heights.pdf](http://www.sita.com.au/media/publications/Signed_Development_consent_Lucas_heights.pdf)

<sup>9</sup> NSW EPA, WARR Infrastructure Strategy 2017-2021 - Draft for consultation

Whether additional capacity becomes available or not, reliance on landfill to manage residual wastes is contrary to the intent of the *Waste Avoidance and Resource Recovery Act 2001* and the philosophy of the Waste Hierarchy. As such, NSROC councils support the view that landfill should not be seen as a long-term sustainable solution for the management of residual wastes that could be otherwise treated or processed for beneficial use, including the production of energy.

Available capacity for the management of residual waste has been highlighted in the WARR Strategy 2013-21 as a key issue due to the diminishing supply of approved landfill capacity in the Sydney Metropolitan Area. In order to address this capacity shortfall, NSROC councils had recognised that the availability of waste treatment capacity is critical to meeting this demand. The regional processing and disposal contract signed by five of the region's councils has helped guarantee sufficient residual waste to support the establishment of a Mechanical Biological Treatment (MBT) plant operated by Veolia at Woodlawn in southern NSW. In addition, that contract requires Veolia to construct a facility to convert waste into Refuse Derived Fuel.



In 2011, the Office of Environment and Heritage (OEH) produced a Resource Recovery Infrastructure Needs Analysis report<sup>10</sup>. The report states that existing waste treatment capacity (separated organics and mixed waste processing facilities plus kerbside recyclables material recovery facilities) is in the region of 400,000 tonnes per annum (tpa) (based on 2011 data) and identifies the need for a further 300,000 tpa by 2017 and increasing to 500,000 tpa by 2036. The report recommends three new waste facilities for the Sydney area.

The EPA's draft WARR Infrastructure Strategy 2017-2021 predicts that existing / pipeline waste treatment capacity for non-putrescible waste MRFs and C&D waste processing facilities in the Sydney area will be sufficient to meet throughput in 2021, whilst approximately 16 new facilities for other waste streams will be required as described in **Table 2**.

**Table 2 Known capacity and projected throughput for waste facilities within the Sydney area in 2021<sup>11</sup>.**

	Mixed Waste Treatment	Energy Recovery Facility	Non-putrescible Waste MRF	C&D Waste Processing	Packaging MRF	Garden Organics Processing	Putrescible Organics Processing
<b>2021 Known capacity ('000 tpa)</b>	639	53	3,388	4,503	808	603	319
<b>2021 Projected throughput ('000 tpa)</b>	1,197	286	1,943	2,973	936	876	585
<b>2021 Gap ('000 tpa)</b>	-558	-234	1,445	1,530	-128	-273	-266
<b>No. of new Facilities</b>	3	2	0	0	2	5	4

<sup>10</sup> GHD, Resource Recovery Infrastructure Needs Analysis, Background Report, November 2011

<sup>11</sup> NSW EPA, WARR Infrastructure Strategy 2017-2021 - Draft for consultation



The *Waste Less, Recycle More* initiative which commenced in 2013/14 offered new incentives for new and enlarged waste facilities and has awarded over \$85m to date. The funding has leveraged around \$160m in additional investment from the waste industry and is expected to increase recycling capacity by 1 million tonnes per annum across NSW. The program has been extended from 2017 to 2021 with an additional \$48m allocated for new and expanded infrastructure. The landfill levy continues as the primary economic lever designed to stimulate the waste management market to develop new waste infrastructure. However, the risks (and significant costs) associated with obtaining sites and planning approvals for new waste facilities has proven to be a significant blockage to private-sector investment in waste management facilities for Sydney.

The draft District Plans for metropolitan Sydney prepared by the Greater Sydney Commission highlight the need for waste infrastructure serving the metropolitan area, and action *S6 Identify land for future waste reuse and recycling* in the Draft North District Plan refers to Action 4.3.2 of *A Plan for Growing Sydney (the State Government's 20 year plan for metropolitan Sydney)*. That Action requires the Environment Protection Authority and the Department of Planning and Environment in participation with councils to identify additional land for waste management, reuse and recycling. However, although *A Plan for Growing Sydney* was released in 2014, there has been no additional land identified for waste facilities in the district apart from a new Community Recycling Centre established at Artarmon by NSROC and five partner councils with funding assistance from the Environment Protection Authority through the waste levy.

### 3.4 Regional collaboration for better waste management

NSROC has recognised the benefits of regional collaboration in waste management over a lengthy period, and has initiated various cooperative projects over its twenty year history.

A strategic waste management project commenced in 2012 resulted in agreement amongst five NSROC Councils to procure processing and disposal of residual waste and clean up waste on a regional basis. Councils funded a position to project manage the planning and government approvals required to call tenders. In August 2015 a contract was signed by the councils to process and dispose of these waste streams under a single contract with Veolia Environmental Services Pty Ltd, for a ten-year period.

In July 2017 processing commenced for 42% of the Councils' waste through a Mechanical Biological Treatment (MBT) facility. The contract with Veolia includes commitment by the contractor to construct two additional facilities to convert the MBT residual and clean up waste into refuse-derived fuel.

The regional waste contract is underpinned by a documented governance structure between the Councils which ensures high levels of robust decision-making and detailed reporting to Councils. The regional contract and the governance arrangements are integral components of the region's strategic waste management.



## 4 WHERE DO WE WANT TO GET TO?

### 4.1 Strategy vision and objectives

The purpose of this revised Strategy is to build on achievements since 2014 and continue to plan for the NSROC region to work together to manage its MSW over the period 2017 to 2022. In developing the Strategy the NSROC councils used their comprehensive understanding of the existing challenges and opportunities in the region to inform the future vision and objectives for waste management in the region.

The vision for this Strategy was developed to capture the overarching aspiration shared by the councils.

**NSROC VISION:** *A community actively engaged in waste reduction, recycling and resource recovery, to protect the environment and enhance community well-being.*

This vision will be given life by pursuing regional objectives to provide specific improvement goals and assist with identifying those projects suited to the region. The regional objectives developed by the NSROC councils for realisation of the vision are provided in **Table 4**.



**Table 3 NSROC Regional Waste Strategy Objectives**

Concept	Regional Objective
<b>Service Quality</b>	To continuously improve waste management services for the community.
<b>Responsibility</b>	To better integrate waste management into council policies, plans and processes. To contribute to an improved policy framework with appropriate allocation of roles and responsibilities consistent with statutory powers.
<b>Amenity and Public Health</b>	To improve public amenity and maintain public health and safety through effective waste management.
<b>Community Engagement</b>	To increase the regional community's understanding of and participation in waste reduction, recycling and resource recovery.
<b>Innovation and Sustainability</b>	To increase access to improved waste management services and facilities for the region.
<b>Value for money</b>	To increase the cost effectiveness of waste management services.

A detailed description of the elements addressed by each of these objectives as discussed and agreed by the WAG members is provided in the following sections.

#### 4.1.1 Service quality

The quality of services provided by councils is fundamental to ensuring the satisfaction of the local community. In delivering their waste management services, councils will manage both the needs and expectations of the local residents and the demands for new and better service arising from the legislative and policy aspirations of other jurisdictions.

Councils are committed to enhancing services to increase performance against the high standards they set themselves. Meeting this objective requires that waste management services are part of a continuous improvement approach to:

- sustainability;
- cost effectiveness;
- compliance with applicable regulations and industry best management practices;
- consistent service standards within each LGA and, ideally, throughout the region.



#### 4.1.2 Responsibility

'Responsibility' refers to the provision of a comprehensive waste management service that meets the needs of the community which appropriately reflects both State and local government roles and responsibilities. The level of service is dependent on the resources available to councils and, at the local level, requires integration of waste management policies into a coherent, whole-of-council approach.

However, the region's councils do not operate independently of the State government framework and rely on the State Government to address legislative, urban planning and strategic issues affecting waste management.

Fulfilment of this objective will require:

- acceptance by State level agencies of their overarching role in providing an effective legislative and policy framework within which local government can deliver on its waste management objectives;
- clear lines of responsibility within councils for waste management outcomes and recognition of waste management goals in land use and strategic planning;
- adoption of clear and concise minimum waste management standards for new construction and site re-use development state-wide strategic planning for waste management integrated across planning, environmental, health and transport portfolios; and



- the provision of both State and local government support and funding for long-term maintenance of new sustainable waste management programs.

#### 4.1.3 Amenity and public health

The protection of public health & safety and the environment will underpin all tasks undertaken in implementing the Strategy. Meeting the objective requires employing waste management practices which reduce (or eliminate) adverse risks to public health & safety and the environment.

Specifically:

- amenity objectives include the maintenance of attractive streets and buildings and access to green space;
- protection of public health and safety will include prevention of exposure to harmful materials and reduction of the risks of water pollution; and
- minimising increased levels of noise, dust, and litter.



#### 4.1.4 Community engagement

Public participation is at the heart of sustainable waste management and underpins both regional objectives and State objectives. Successful community engagement includes targeted public education campaigns (such as surveys, workshops and advisory committees) as well as on-going consultation with stakeholders and the local community as new challenges emerge and to keep residents informed and motivated to maintain new behaviours that support sustainable waste management.

A wide range of communication tools are available to facilitate community participation and can include letter mail-outs and flyers to residences and businesses, public space advertising, online content and mobile phone applications.

Local governments acting individually or as a regional group can foster public awareness of new services and encourage take-up of new approaches to waste separation and collection through its existing channels of communication with residents and its role as a trusted provider of waste services.

While local government can reinforce messages delivered through mass media, social media and other levels of government, large scale behavioural change must be part of a more sophisticated and city-wide communications strategy.

Meeting this objective will require that governments at NSW and local level adopt programs that are part of long-term, consistent communication strategies aligned between levels of government and providing on-going education to reinforce behaviour change in new generations of consumers.

#### 4.1.5 Innovation and sustainability

In delivering waste management services, local councils will strive to maintain an awareness and understanding of industry and policy changes and to keep abreast of innovative and sustainable waste management practices and/or technologies offering potential social, environmental and/or economic benefits to their local community.

This objective can be met through:

- on-going engagement and collaboration with the EPA and local waste industry and business groups such as the Waste Management Association of Australia (WMAA);
- information and knowledge sharing between staff from the region's councils and with staff from neighbouring regions;
- supporting the on-going professional education of waste officers through such measures as attendance at waste management industry conferences and workshops, access to current research and case studies and subscriptions to annual waste treatment technology reviews; and

#### 4.1.6 Value for money

The community, through the domestic waste charge included in council rates, provides funding for councils to procure appropriate waste management services. Councils seek practical, reliable options with good environmental outcomes while at the same time assessing opportunities for cost efficiencies associated with providing different and innovative waste and recycling services to the community.

Measures that will be part of work on this objective may include:

- seeking appropriate State Government direction and support for the provision of waste infrastructure servicing Sydney;
- benchmarking of councils' waste management services;
- identifying and monitoring waste management service key performance indicators (KPIs);
- robust contract management to ensure that adequate resources are provided by waste management contractors to deliver outsourced services
- undertaking periodic and regular audits of waste management services;
- maintaining a summation of findings and recommendations; and
- implementing and monitoring a plan of action.

#### 4.2 Regional targets

Regional targets are informed by the State-wide NSW Waste Avoidance and Resource Recovery (WARR) Strategy 2014-21, which sets a number of objectives and targets, as follows:

- Avoid and reduce waste generation (per capita);
- Increase recycling (70% MSW by 2021-22);
- Divert more waste from landfill (75% by 2021-22);
- Manage problem wastes better (establish or upgrade 86 drop-off facilities for managing household problem wastes);
- Reduce litter (reduce by 40% compared with 2011-12 rates); and
- Reduce incidences of large-scale illegal dumping (by 30% by 2016 compared with 2010-11 rates).

The State targets aim to drive the efficient use of resources, reduce the environmental impact of waste and improve the well-being of the NSW environment, community and economy. In recognition of the NSW State targets, the Strategy has adopted a number of regional targets which will contribute to the State objectives while also reflecting the existing circumstances and challenges of the region. The regional targets were developed during workshops with the NSROC councils and have been used to identify the key areas of focus for the Strategy's Action Plan. The targets are presented below in Table 4.

**Table 4 NSROC Regional Waste Strategy Targets**

Regional Target	Relevance to WARR Themes
75% landfill diversion by 2021-22	✓ Increase recycling
	✓ Divert more waste from landfill
1% per capita reduction in waste generation by 2021-22 (based on regional 2013-14 data)	✓ Avoid and reduce waste generation
Access to waste drop-off centre for all NSROC LGA residents on the basis of 1 per 50,000 households by 2021-22 OR within 11 km <sup>1</sup> of home	✓ Divert more waste from landfill
	✓ Manage problem wastes better
	✓ Reduce illegal dumping
20% reduction in reported illegal dumping incidents by 2021-22 (based on regional 2012-13 data) <sup>2</sup>	✓ Reduce illegal dumping
	✓ Manage problem wastes better
20% positive change to survey responses describing the Northern Sydney community's view towards taking responsibility for their own litter by June 2021 based on public surveys undertaken within the region	✓ Litter

Table notes:

1. Distance inferred from Program Grant guidelines 2013.
2. Measurement of WARR target only includes incidents where more than 200m<sup>3</sup> of illegal dumped waste is detected.

The successful implementation of the Strategy through the Action Plan will be measured against the regional objectives through monitoring of the regional projects and targets. An on-going assessment of these Key Performance Indicators (KPIs) will inform modifications to existing services and future proposals for new waste services and infrastructure.

During the development of the Strategy NSROC councils' waste management operations and data were analysed to ensure that the regional targets and objectives are achievable and realistic. A summary of this analysis is presented in Table 5.

Achievement of the targets will be heavily influenced by external economic and social impacts such as the commercial sector's response to increased service demand and success in influencing behaviour of local residents and businesses. In addition, changes to legislation and State waste management policies and objectives will impact local council waste management services and policies. Project specific targets will be determined as appropriate data is collected and analysed. In response to these external influences the tools for achieving the Strategy targets and objectives the Action Plan will need to incorporate some flexibility.

**Table 5 Regional Targets**

Regional Target	Basis of target	Achieving Regional Targets
<b>75% landfill diversion by 2021-22</b>	<p>NSROC councils are currently achieving greater than 50% landfill diversion. Of the remaining waste currently going to landfill, compositional data suggests that 22% can be recycled through better segregation of dry recyclables under existing collection services.</p> <p>The waste which cannot be recycled through existing services (up to 40% of the red bin) can be managed through mechanical biological treatment (MBT) process similar to composting to produce a soil improver for land application and rehabilitation. The regional waste tender for disposal and recovery will set this goal.</p> <p>A further 16,000 tonnes of clean-up waste is currently managed in the region. Much of this waste stream can be re-used or recycled.</p> <p>Problem waste services could be increased, as demand is strong.</p>	<ul style="list-style-type: none"> <li>• Joint residual waste treatment contract</li> <li>• Regional drop-off centres for managing problem wastes</li> <li>• Regional education programs to improve the performance of existing recycling schemes</li> <li>• Increased recycling from clean up waste</li> </ul>
<b>1% per capita reduction in waste generation by 2021-22 (based on regional 2013-14 data)</b>	<p>Achieving a per capita waste reduction target relies predominantly on external factors such as:</p> <ul style="list-style-type: none"> <li>• changes in individual behaviour in respect of waste management ;</li> <li>• economic conditions (e.g. reduction in consumer spending will reduce waste generation); and</li> <li>• changes in technology and manufacturing (e.g. changes to packaging and increased use of electronic equipment can change the overall composition and quantity of waste generated).</li> </ul> <p>Based on the future waste growth forecasts outlined in the Regional Profile report the waste generation per person in 2021-22 will be 509 kilograms.</p> <p>To achieve the 1% reduction in waste generation per person would require a reduction of 5.09 kilograms per year or 100 grams per week.</p>	<ul style="list-style-type: none"> <li>• Regional education programs for minimising waste</li> </ul>
<b>20% reduction in reported illegal dumping incidents by 2021-22 (based on regional 2012-13 data)</b>	<p>Baseline data for regional illegal dumping incidents is not available. At a Strategy workshop one of the councils reported a reduction in illegal dumping incidents of more than 20% in one year following a targeted illegal dumping campaign.</p>	<ul style="list-style-type: none"> <li>• Regional waste management for MUDs education program and planning policy</li> <li>• Regional illegal dumping program</li> </ul>
<b>20% positive change to survey responses describing the Northern Sydney community's view towards taking responsibility for their own litter by June 2021 based on public surveys undertaken within the region</b>	<p>Baseline data for the community's views on taking responsibility for their own litter is not available at the regional level. A public survey will be required in 2018.</p>	<ul style="list-style-type: none"> <li>• Regional education and behaviour change programs complementing state wide litter programs.</li> </ul>

## 5 WHAT IS THE REGION'S ACTION PLAN FOR IMPLEMENTING CHANGE?

The (2017) review of the original (2014) Strategy has included revisiting existing waste services across the NSROC region to identify opportunities for possible collaboration. In consultation with each of the councils, a number of options were identified and assessed against a range of indicators, including:

- Maximising regional access to new services or programs;
- Alignment with regional targets and objectives;
- Alignment with State targets and objectives;
- Prioritising improved management of harmful and problem waste streams;
- Maximising landfill diversion; and
- Maximising value for money.

The top five performing options assessed using the above indicators have resulted in identifying five key Focus Areas for the Action Plan. The five key Focus Areas are:

- Regional Illegal Dumping Program;
- Regional Community Education Programs;
- Investigate Improved Planning Guidance for Waste Management in Mixed Use Developments and MUDs;
- Other Regional Procurement Contracts (e.g. recyclables processing, organics, problem wastes, collections); and
- Regional Plastics Waste Management Strategy.

In each Focus Area, the top performing option has become the priority project and typically consists of a number of individual actions. Further information and research may be required to progress the projects.

The Focus Areas are summarised in pages 31 to 35. Included in this summary is the relevance of each Focus Area to State and regional objectives, an overview of project aims, associated actions, and details of how each project will be monitored and evaluated (e.g. through identification of suitable KPIs).

The original Regional Waste Strategy listed '*Managing Problem Wastes*' and '*Joint Waste Management Contracts*' as priority areas. Although these have been substituted for new areas in the updated strategy due to good progress being made in each area since 2014, it is recognised that some aspects of these areas will still require work between 2017 and 2021; therefore any relevant outstanding actions will be incorporated into the updated Action Plan.

## 6 HOW WILL WE MEASURE SUCCESS?

A detailed Action Plan has been produced as part of this Strategy. The Action Plan for the Strategy includes a number of regular reporting requirements which can be used to track the overall progress of the Strategy against timelines and to evaluate whether key targets are being met. Table 6 below provides details of each Strategy document and its proposed reporting requirements.

**Table 6 Reporting Schedule**

Waste Strategy Document	Reporting Schedule
Regional Profile Report (reporting tables)	Annual submission to EPA
Project Options Assessment Report (assessment assumptions and gap analysis to inform Business Case Submissions)	Update gap analysis and options assessment assumptions to enable compliance with Waste Less Recycle More Funding Stream Application
Directions Report	Every 5 years (except where changes in policy, legislation or regulatory framework requires revisions to the document to maintain relevance)
Action Plan (whole of document)	Annual submission to EPA (from mid-2017/18) and quarterly submission to councils.

During the options assessment process each project was assessed against the following criteria:

- Number of NSROC councils for which the project or initiative is appropriate;
- The anticipated percentage of waste minimised, recycled or diverted from landfill;
- The anticipated cost per tonne of waste managed, minimised, recycled or diverted from landfill;
- Deliverability of objectives and targets within specified timescales;
- Alignment with State targets and objectives;
- Contribution to Regional Strategy objectives;
- Percentage of the region (based on population) anticipated to benefit from the project initiative; and
- Percentage of target waste streams which include priority or problem wastes anticipated to be managed through the project initiative.

The criteria listed above can be used to develop project specific KPIs against which the progress and ultimately the success of the project can be measured. Where the baseline data is considered to be unreliable or dated, part of the Action Plan is to review and update the baseline so that improvements can be measured.

The Action Plan will also enable progress of the Strategy in contributing to both the State and regional targets to be monitored on an annual basis.



## FOCUS AREA 1:

# Illegal Dumping Program

### Project: Regional Illegal Dumping Program

**Aim: To develop and implement a regional illegal dumping program for the proactive prevention and management of illegally dumped wastes.**

Illegal dumping of waste is an on-going problem in NSW that presents unwanted health and safety, and amenity impacts on the community.

Illegally dumped wastes in the region often include:

- large domestic items such as mattresses, furniture, white goods and e-waste;
- construction and demolition waste including excavation waste and asbestos;
- garden organic material;
- chemicals and other hazardous waste; and
- abandoned vehicles, car parts and shopping trolleys.

Councils play a crucial role in managing and preventing illegal dumping. A regional program will help to ensure that illegally dumped wastes are managed and reported on in a consistent manner across the region.



Whilst some progress has been made by individual councils through employing illegal dumping rangers, deterrent surveillance vehicles, use of the EPA's 'RID online' reporting tool, and by considering their own strategic approach to this issue, a regional approach to illegal dumping program still requires collaboration.

NSROC successfully applied for Better Waste funding to run a behaviour change pilot into illegal dumping near MUDs in 2016/17.

Concerns were raised by several councils during consultation about the effectiveness of having a regional ranger due to the variable population densities across the councils.

Actions	
Establish baseline on illegally dumped waste incidents	
Research and evaluate other regional dumping programs	
Apply best practice to developing a regional dumping program for northern Sydney	
Develop business case and apply for <i>Waste Less, Recycle More</i> funding for a NSROC solution	
Alignment with Regional Objectives	
✓	Service quality
✓	Responsibility
✓	Amenity and public health
✓	Community engagement
Alignment with Regional Targets and WARR Themes	
✓	70% landfill diversion by 2021-22
✓	20% reduction in reported illegal dumping incidences by 2021-22 (based on regional 2012-13 data)

## FOCUS AREA 2:

### Community Education Programs

**Project:** Regional community education programs

**Aim:** To develop a regional education campaign that provides consistent and relevant messaging to the public and promotes active community participation and behaviour change in waste management, including residents in MUDs.

Education is essential to raising awareness of the importance of social responsibility and changing behaviours in a community. This is particularly important for residents in MUDs due to the specific challenges posed to waste management by this increasing portion of the dwelling stock.

Targeted waste management campaigns help to educate the community on improved recycling, litter prevention and environmental sustainability and are necessary to achieve greater participation in recycling and changing behaviours across the region.

In MUDs, education is necessary to keep residents informed about recycling services, particularly due the variation in collection



configurations and the transient nature of the MUD population.

Joint educational programs ensure the efficient use of resources by Councils across the region.

Residential dumping of household goods and wastes around multi-unit dwellings is a growing problem in the region given increasing population densities. NSROC successfully applied for Better Waste funding to run a behaviour change pilot into illegal dumping near MUDs in 2016/17.

#### Actions

Establish information on problem areas to identify target waste streams such as litter and plastics
Evaluate best practice models
Develop business case and apply for <i>Waste Less, Recycle More</i> funding
Allocate resources and develop educational materials

#### Alignment with Regional Objectives

✓	Service quality
✓	Responsibility
✓	Amenity and public health
✓	Community engagement
✓	Value for money

#### Alignment with Regional Targets and WARR Themes

✓	70% landfill diversion by 2021-22
✓	20% reduction in reported illegal dumping incidences by 2021-22 (based on regional 2012-13 data)
✓	1% per capita reduction in waste generation by 2021-22 (based on regional 2013-14 data)
✓	Increased promotion of active community participation in litter control through targeted programs
✓	20% positive change to survey responses describing the Northern Sydney community's view towards taking responsibility for their own litter by June 2021 based on public surveys undertaken within the region



## FOCUS AREA 3:

# Improved Planning Guidance for Waste Management in Mixed Use Developments and MUDs

**Project:** Investigate Improved Planning Guidance for Waste Management in Mixed Use Developments and MUDs

**Aim:** To manage waste generated in MUDs through regional planning policies.

Residential dumping of household goods and wastes around multi-unit dwellings is a growing problem in the region given increasing population densities, with the majority of new housing in the region being MUDs.

Recycling rates are also impacted by the transient nature of the occupancy of MUDs and the smaller average household size.

The effective management of waste in MUDs relies on early consultation by developers with



Council planners and waste managers regarding specific requirements for waste management systems and collection methods and on shared goals between regulators within Councils.

Actions	
Establish baseline data on waste management in MUDs	
Continue to seek regional harmonisation of regional approaches to waste management planning for MUD developments	
Conduct workshops to identify pathways for improved planning and communications with strata managers	
Allocate resources and develop educational materials	
Alignment with Regional Objectives	
✓	Service quality
✓	Responsibility
✓	Amenity and public health
✓	Community engagement
✓	Value for money
Alignment with Regional Targets and WARR Themes	
✓	70% landfill diversion by 2021-22
✓	1% per capita reduction in waste generation by 2021-22 (based on regional 2013-14 data)
✓	20% reduction in reported illegal dumping incidences by 2021-22 (based on regional 2012-13 data)
✓	Increased promotion of active community participation in litter control through targeted programs

## FOCUS AREA 4:

### Other Regional Procurement Projects

**Project: Other Regional Procurement Contracts (e.g. recyclables processing, organics, problem wastes, collections)**

**Aim: To achieve council participation in a regional tender for the collection and processing of recyclables, organics and problem wastes to stimulate development of increased recycling processing capacity for the region.**

The drivers for a regional approach to joint waste services procurement identified by the NSROC councils include:

- an opportunity for better waste outcomes such as increased recycling and diversion of waste from landfill; and
- an opportunity to encourage innovation and influence commercial activity by providing sufficient volume and duration of supply to the market.



Progress has already been made for the disposal of residual waste, with five NSROC councils having procured a joint contract for processing and disposal of residual waste; in August 2015 a contract was signed by the councils to process and dispose of residual waste under a single contract with Veolia Environmental Services Pty Ltd, for a ten-year period. This focus area will look at options for similar regional procurements for non-residual waste streams.

Actions	
Establish delivery mechanism for managing the contract payment and reporting requirements for the regional disposal and processing and other shared waste management services.)	
Issue tender and execute contract for regional waste service for disposal and processing	
Evaluate actions and learnings for application to future contracts	
Identify further regional procurement opportunities and develop business case for councils	
Develop business case and apply for <i>Waste Less, Recycle More</i> funding	
Alignment with Regional Objectives	
✓	Service quality
✓	Innovation and sustainability
✓	Value for money
Alignment with Regional Targets and WARR Themes	
✓	70% landfill diversion by 2021-22

## FOCUS AREA 5:

# Regional Plastics Waste Management Strategy

**Project:** Regional Plastics Waste Management Strategy

**Aim:** To develop a regional strategic approach to the collection, processing and monitoring of the plastics waste stream.

Plastics are an increasing component of modern consumer products, with their diverse nature presenting a unique challenge to recycling. The recent policy change in China to limit contamination levels of imported material has created uncertainty in the plastics recycling market. Plastics are becoming an increasing global environmental concern, with the implications of increasing plastic-particle volumes accumulating in oceanic ecosystems not fully understood.

NSROC councils have also expressed concerns about what potential impact the upcoming Container Deposit Scheme (CDS) may have on recycling performance.



A regional approach to plastics will create the potential for collection and recycling infrastructure to be developed at appropriate economies of scale. Harmonised policies will also create more certainty in the private and potentially help to stimulate investment in infrastructure in conjunction with the *Waste Less, Recycle More* Waste and Recycling Infrastructure Fund.

Actions	
Assess baseline arisings and composition of the plastics waste stream in NSROC.	
Consult with member councils and agree strategic priorities.	
Research best practice in single use plastics initiatives to inform potential options.	
Develop business case and apply for <i>Waste Less, Recycle More</i> funding for soft plastics processing infrastructure.	
Alignment with Regional Objectives	
✓	Service quality
✓	Amenity and public health
✓	Innovation and sustainability
✓	Responsibility
Alignment with Regional Targets and WARR Themes	
✓	70% landfill diversion by 2021-22
✓	20% positive change to survey responses describing the Northern Sydney community's view towards taking responsibility for their own litter by June 2021 based on public surveys undertaken within the region

## SUPPORTING DOCUMENTATION

- GHD, Resource Recovery Infrastructure Needs Analysis, Background Report, November 2011
- NSW Environment Protection Authority, Regional waste avoidance and resource recovery strategy guidance, May 2014
- NSW Environment Protection Authority, Regional Waste Strategy Review Guidelines, 2017
- NSW Environment Protection Authority, NSW Waste Avoidance and Resource Recovery Strategy 2014–21
- NSW Environment Protection Authority, Waste and Resource Recovery Infrastructure Strategy 2017-2021 - Draft for consultation

Also:

- Member Council Waste Strategy Documents (as available)
- Member Council Community Strategic Plans
- EPA Data Tables (5-Year Historical 2007-08 – 2011-12) and 2012/13, 2013/14, 2014/15) for Northern Sydney Councils
- EPA Data Tables 2012/13, 2013/14, 2014/15 for Northern Sydney Councils
- Provisional WARR Surveys results 2015/16 for Northern Sydney Councils
- NSW Local Government, Waste and Resource Recovery Data Report 2014–15
- Australian Bureau of Statistics, 2016 Census of Population and Housing