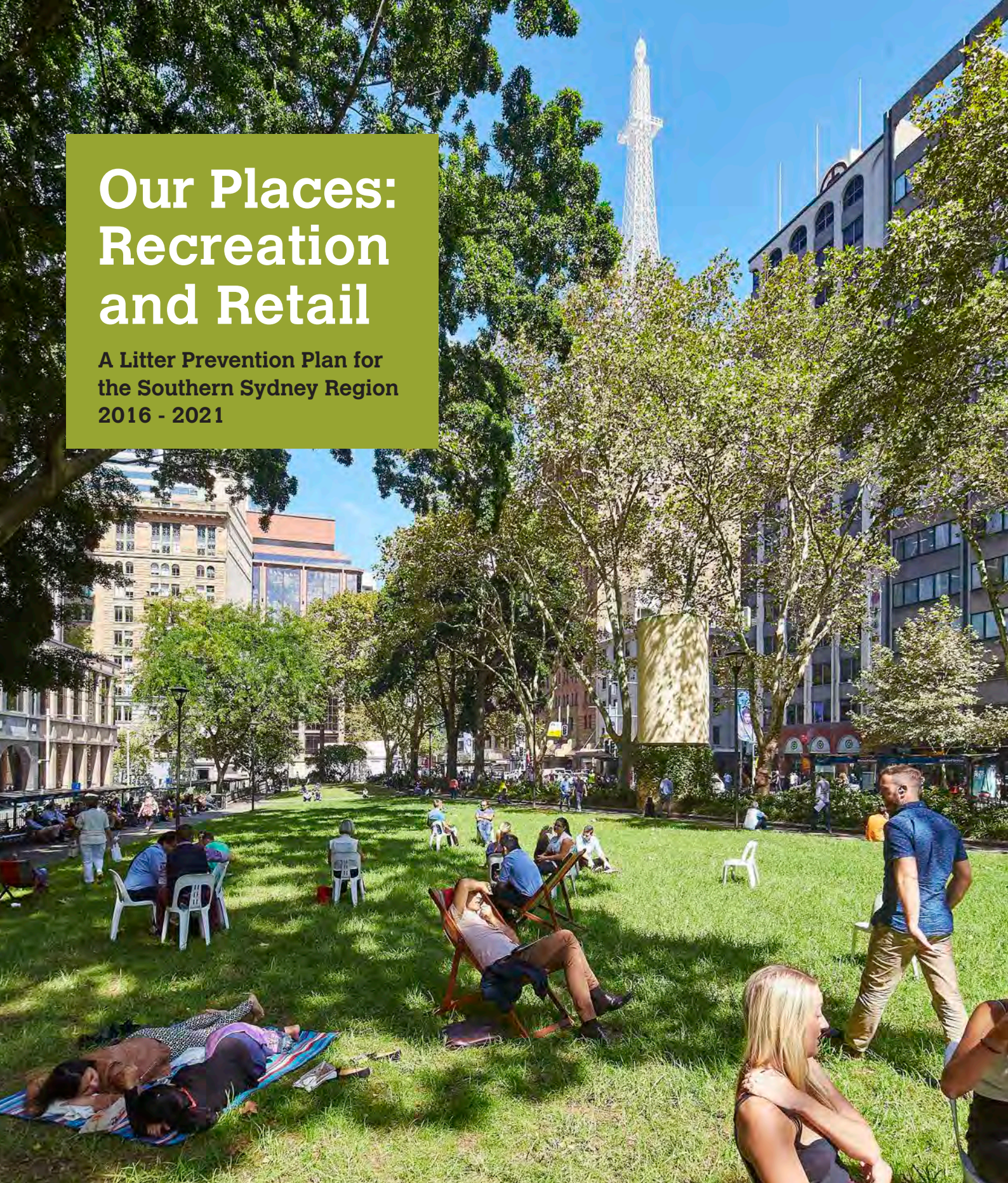


Our Places: Recreation and Retail

A Litter Prevention Plan for
the Southern Sydney Region
2016 - 2021



This project is a NSW EPA Waste Less, Recycle More initiative funded from the waste levy

This Plan has been prepared by Blue Sky Green on behalf of SSROC in accordance with the EPA's Regional Litter Plan and Litter Implementation Plan Guidelines April 2016



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Executive summary

Our Places: Recreation and Retail, A Litter Prevention Plan for the Southern Sydney Region (the Plan), covers the period 2016 to 2021. The Plan is a 'call to

action' to member councils of the Southern Sydney Regional Organisation of Councils (SSROC) to transform litter management from reactive methods such as cleansing and disposal, to proactive approaches using place-based litter infrastructure planning, strategic partnerships and prevention education. The Plan is written to provide direction on priorities for regional or sub-regional litter projects and to guide councils in undertaking litter prevention actions in their own council areas.

'from reactive methods such as cleansing and disposal, to proactive approaches'

This Plan is aligned with the SSROC Regional Waste and Resource Recovery Strategy theme of 'Responsible Citizenship' and aims to:

- Reduce incidence of littering at specific regional hot spots
- Provide guidance to councils to manage and measure litter in a proactive and cost effective way
- Encourage the integration of litter prevention into councils' operations drawing on leading practice from across the region and beyond.

Section One of the Plan provides background on the SSROC waste policy context and Section Two outlines the NSW Government litter policy

framework and target of reducing the volume of litter by 40%. Section Two also references currently available litter data for NSW from the National Litter Index and Clean Up Australia annual reports.

Sections Three and Four address the challenges facing councils in reducing litter, (both internal and external) and provide a summary

of councils' litter prevention approaches. While some councils conduct litter audits, the data is collected in different ways and within different timeframes and is unsuitable to form a regional dataset. The summaries do however contribute to forming a picture of the top littered items in sports and recreation areas, and town centres and retail centres.

Section Five builds on those findings and outlines the aims, principles and objectives of the Plan and includes specific litter reduction targets. Section Six lists the priority projects for implementation over a five-year period, with a focus on reducing litter in town centres and recreational areas. Priority projects also include data capture, capacity building and guidance for regionally consistent approaches.

Section Seven outlines evaluation measures and Section Eight recommends a timeframe for the review of the Plan and for revisiting the additional projects listed in Section 6.4. The Plan concludes with a list of resources and tools to assist councils in developing litter plans, actions and projects.

**'Responsible
Citizenship'**



1. Introduction

This Litter Prevention Plan (the Plan) was developed in conjunction with the then 16 SSROC member councils.

In 2016, the names of some councils were changed due to Local Government reforms. As of June 2016 the SSROC member councils are:

- City of Botany Bay • Burwood • City of Canada Bay • City of Canterbury-Bankstown •
- Georges River • Inner West • Randwick City
- Rockdale City • City of Sydney • Sutherland Shire • Waverley • Woollahra Municipal.

A Working Group was established to contribute to the preparation of this Plan on behalf of the SSROC councils and developed with the assistance of the company Blue Sky Green. The development of the Plan involved extensive interaction with councils from January to April 2016 to obtain available litter data and information on council litter policies and activities and on the challenges facing councils in regard to litter and litter prevention. The consultation to develop the Plan included the following workshops:

- 9th February 2016: Workshop with the NSW EPA
- 2nd March 2016: SSROC Regional Workshop with member council representatives.

Note: Map does not reflect local government amalgamations of 2016.

1.1 The Southern Sydney region

The SSROC region covers 604 square kilometres of Sydney. The population of the region covered by this strategy is 1.6 million people, which represents 25% of the population of Sydney and 6% of the population of Australia¹.

The NSW Government has proposed amalgamations of NSW councils. During the development of this Plan from February to April 2016, the NSW Government proposed amalgamations of NSW councils, which stood to impact at least 6 SSROC councils. As of July 2016, the number of member councils is under review. Despite changes to the structural makeup of the SSROC membership, the objectives and approaches remain intact. Any implications will be reflected in future revisions of this Plan.



1.6m
PEOPLE

25%
OF THE
POPULATION
OF SYDNEY

6%
OF THE
POPULATION
OF AUSTRALIA

1.2 SSROC policy context

This Plan builds on the SSROC Waste Avoidance & Resource Recovery (WARR) Strategy, which covers the period 2014 - 2021². The vision as articulated in the WARR Strategy for illegal dumping and littering is to work with key stakeholders to reduce litter in order to increase the visual amenity of neighbourhoods, minimise the potential for human and environmental harm and promote responsible citizenship.

The **Responsible Citizen** theme captures the clear intent of the Strategy in relation to litter. Responsible citizens follow the waste hierarchy of avoiding and reusing first before recycling or disposal. The reduction in littering and illegal dumping is further evidence of responsible citizenship.

The aims of the Responsible Citizen component of the WARR Strategy are to:

- Reduce the incidence of illegal dumping
- Reduce incidence of littering at specific regional hot spots
- Increase diversion of public place waste.

In keeping with the WARR Strategy, this Plan aims to reduce litter at regional hotspots (see Section 4.3 Regional litter hotspots and litter types). Litter related actions in the WARR Strategy are incorporated into the list of potential projects. The Plan represents a shift from a reactive to a strategic approach where the priority is prevention rather than clean up. Strategies and approaches that result in sustained behaviour change are the focus.

Littering is generally a habitual or careless activity whereas illegal dumping is a premeditated action to intentionally dump material. As a result different approaches are required to prevent and manage littering and illegal dumping. NSW litter laws provide a legal definition of litter and depositing³.

‘Responsible citizens follow the waste hierarchy of avoiding and reusing first before recycling or disposal. And they do it right.’

¹ www.ssroc.nsw.gov.au viewed March 2016

² Available at <http://ssroc.nsw.gov.au/wp-content/uploads/2015/05/RWS-140630-SSROC-Final-Public-Strategy-.pdf>

³ Visit <http://www.epa.nsw.gov.au/litter/laws.htm> for legal definitions of litter and depositing litter

2. The NSW context for tackling litter



2.1 NSW Government litter reduction target and strategy

The NSW Government has set the following litter reduction target through the Premier's Priority for litter announced in September 2015: reduce the volume of litter in NSW by 40% by 2020.

The NSW Environment Protection Authority (EPA) is currently developing a Litter Prevention Strategy for NSW. The strategy will provide key facts about litter in NSW and set out actions and timeframes to achieve the litter reduction target for NSW, reflecting the shift to a volume based target.

Funding has been allocated by the NSW Government to assist government and community stakeholders achieve this aim. The NSW EPA developed the Litter-Regional Implementation Program (L-RIP) to help groups of councils⁴, including SSROC, to develop regional litter plans. L-RIP promotes an integrated approach to litter that includes community education and engagement, regulation and enforcement, infrastructure and clean sites, and measuring and evaluation.

While seeking alignment with this volume-based target, SSROC councils are also committed to reducing specific litter types. Of particular concern are the high-frequency litter items such as cigarette butts, plastics and other items that cause environmental harm.

⁴ Regional organisations of councils and voluntary regional waste groups

**COMMUNITY EDUCATION
AND ENGAGEMENT**

**REGULATION AND
ENFORCEMENT**

**INFRASTRUCTURE AND
CLEAN SITES**

**MEASURING AND
EVALUATION.**



2.2 National Litter Index for NSW

The Keep Australia Beautiful (KAB) National Litter Index is Australia’s only national, quantitative measure of littering⁵. It is measured annually and provides a consistent measure of the types of litter, where it occurs and in what volume.

Sites surveyed by KAB were sampled primarily from urban and near-urban areas (i.e. generally within 50km of the urban areas surrounding each state capital). These areas covered a total of 983 sites, and the average site size was 1,526m². Generalisations of the data need to be made with caution. Nonetheless, the findings provide a benchmark for the SSROC region in the absence of locally generated litter data. It is noted that waterways are not included as a site type.

Litter Items and Volume PER 1000 SQUARE METRES BY SITE TYPE - NSW - 2014/15

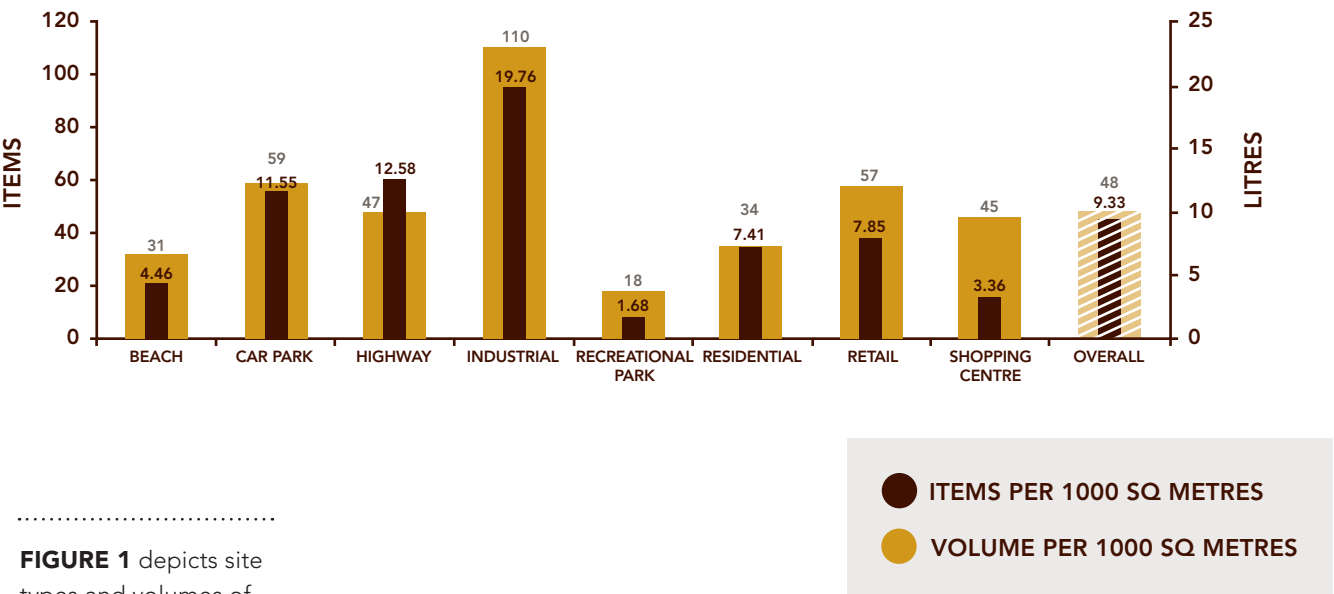


FIGURE 1 depicts site types and volumes of litter for those sites.



⁵ <http://kab.org.au/litter-research/national-litter-index> viewed March 2016

Main Litter Types

VOLUME PER 1000 SQUARE METRES BY MAIN MATERIAL TYPE
- ANNUAL AVERAGES – NSW

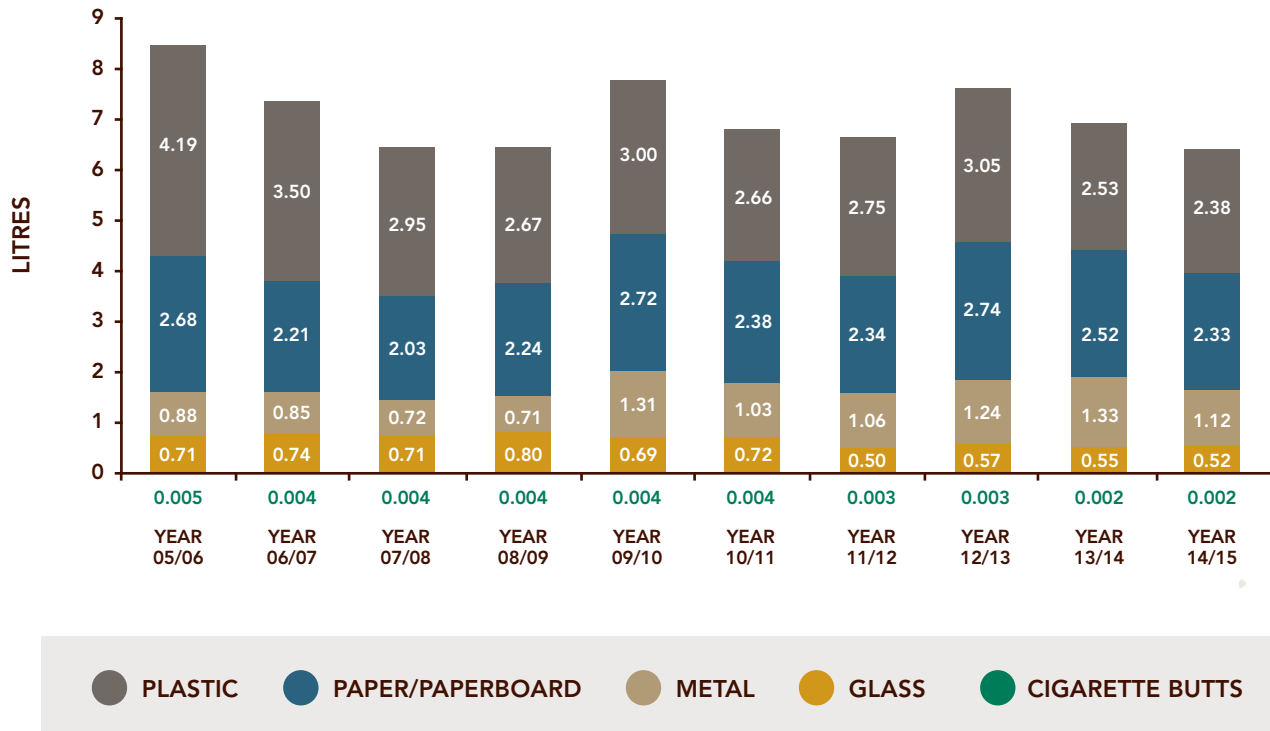


FIGURE 2 depicts the annual averages of the main litter types by volume from 2005/06 to 2014/15.

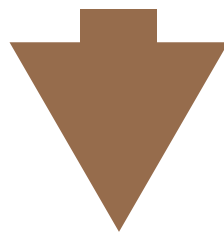


FIGURE 2 shows a reduction in all litter types except for metal over the ten year period.

Cigarette butts, while associated with only a very small proportion of the overall litter volume (0.002 litres per 1,000 square metres), were the most frequently identified item with 15 butts per 1,000 square metres. Paper/paperboard and plastic objects contributed the second and third highest number of litter items in the litter stream.



2.3 Clean Up Australia (CUA) data for NSW

The organisation Clean Up Australia (CUA) supports a range of activities aimed at cleaning up litter, including the annual Clean Up Australia (CUA) week. CUA produces an annual summary of quantities and types of rubbish collected and a number of volunteer hours on a state and territory basis⁶. While it is difficult to establish trends from CUA data, it does provide a useful snapshot of the types of litter that aren't placed in bins or cleaned up by councils.

These results for 2015 show that beverage containers and beverage related rubbish account for 35.9% of rubbish items. It is noted that cigarette butts and other small items, which are a high percentage of litter in SSROC hotspots areas, are not included because it is based on community collected litter.

Many SSROC councils support Clean Up Australia Day, by assisting volunteers to remove litter from local sites. Some councils record data on tonnages collected and reported. These litter reports demonstrate community effort and commitment to cleaning up litter but it is hard to draw conclusions about trends because of the lack of consistency in collection and reporting methods.

1

Beverage containers
25%

2

Food Packaging
21.3%

3

Non-food Packaging
20.5%

4

Beverage related rubbish
10.9%

5

Chips and confectionary wrappers
6.2%

6

Plastic bags
5.4%

7

Other non-identified items
3.5%

8

Household items
2%

9

Construction materials
1.9%

10

Sanitary items
1.8%

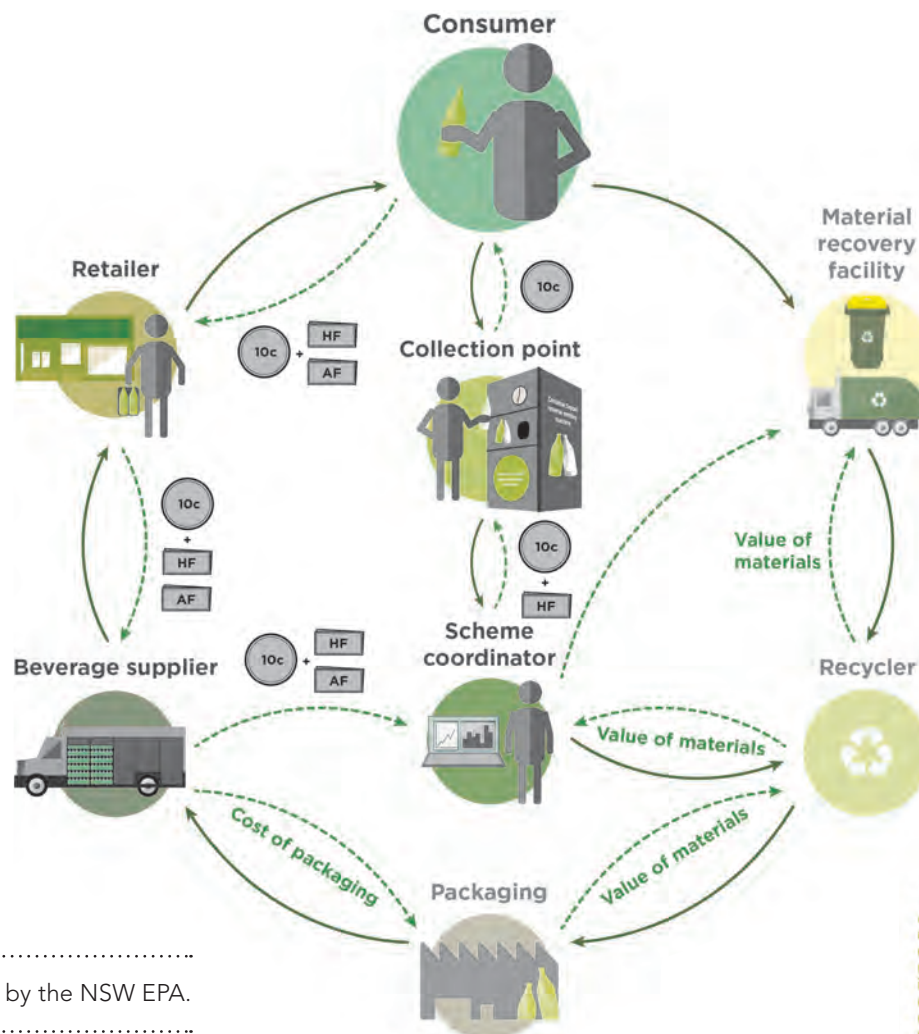
TABLE 1 Top 10 found items as a percentage of the total reported by CUA, Australia-wide in 2015

⁶ <http://www.cleanup.org.au/au/RubbishReports.html>
viewed March 2016

2.4 Proposed Container Deposit Scheme for NSW

The NSW EPA is proposing an incentive based container deposit scheme (CDS) for NSW from July 2017. The scheme aims to reduce litter and improve recycling rates by targeting beverage containers. The exact nature of the scheme is being considered following the close of public comment in February 2016. The EPA has announced that most drink containers between 150mL and 3L will be included in the scheme. The CDS will also target beverage containers most commonly in litter, and exclude drinks such as milk, wine and spirits. Collection depots and collection points will be located within communities, and consumers can choose their preferred method of drop-off and 10-cent refund.

It is estimated that beverage containers comprise 40 - 45% of litter volume and that a CDS would remove 20% out of the litter stream by 2020. This however still leaves 20 - 25% of litter that requires strategic plans for reduction in order to meet the EPA's target of 40% reduction by volume, along with methods to address high-frequency littered items for example cigarette butts⁷.



Graphic supplied by the NSW EPA.

⁷ Based on information provided at the EPA workshop held 9/2/16

3. Regional litter context and challenges

This section provides an overview of the internal and external challenges facing councils in addressing litter. These findings inform the aims and objectives of this Plan.

3.1 Cost of litter management

In 2015-16, a number of SSROC councils prepared estimates of their current costs associated with managing litter. The research attempts to quantify the 'whole cost of litter' to councils, accounting for the costs of labour for cleansing and disposal, prevention education and infrastructure, while taking into account enforcement costs and any revenue. The costs for the participating SSROC councils were averaged and extrapolated to provide a per capita amount and then estimates were developed for each council based on their respective populations.

► Implications for Our Plan

While only estimates, these figures indicate an outsized cost of response-based litter management approaches. The money and staff resources tied up in litter clean up in particular represents a significant opportunity cost to ratepayers and local communities. The importance of a whole-of-council approach to litter with prevention as an overriding objective is reflected in the agreed aims for this Plan, outlined in Section 5.1.



3.2 Internal management systems

Councils commonly reported the following internal barriers to litter prevention:

- Clean up is seen as business as usual and litter prevention is not a priority.
- Poor litter governance; while there are multiple stakeholders, no one within council owns the problem of how to prevent litter in a coordinated and strategic way.
- Even within councils that are committed to reducing litter, the challenge remains that prevention is not a quick fix. Litter prevention is hard to measure and it is hard to demonstrate results. Many councils have undertaken litter education activities but litter remains a problem.
- Infrastructure design associated with town centres and parks can occur without consultation from environmental or waste staff.
- Reluctance to issue fines for litter due to lack of community acceptance and the preference for 'the carrot rather than the stick' approach by elected representatives.

► Implications for Our Plan

Stronger evidence of the benefits of litter prevention as well as the benefits of 'doing things differently', will assist in overcoming these barriers. Councils that support internal engagement and a commitment to integrated management approaches across council divisions produce positive results. Councils that apply a place based approach⁸ to service delivery, demonstrate better coordination across functional areas, which can also assist with litter prevention.

It is recognised by the councils that establishing sound litter governance and building capacity within councils to address litter in a holistic way, is likely to be a long-term process. This challenge is reflected in the aims for this Plan outlined in Section 5.1.



IMAGE COURTESY OF CITY OF SYDNEY

⁸ Place management is a multidisciplinary approach to the planning, design and management of public spaces.

3.3 The types and volume of litter being collected by councils

Public place litter bin audits across the Southern Sydney region

Anne Prince Consulting (APC) was commissioned by the NSW EPA to undertake targeted audits of materials implicated in the container deposit scheme planning. This involved nine SSROC councils. Separate audits of public place litter bins were undertaken in three SSROC councils and storm water pits in City of Sydney.

Findings from Council litter collection and GPT data

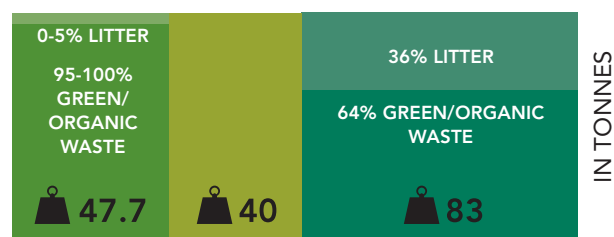
Councils collect data on quantities of overall litter collected however the amounts and types of litter collected from parks, streets and other public places are not reported separately from litter placed in bins.

A number of councils provided data from Gross Pollutant Traps (GPTs) and other collection devices. Examples are provided here where the percentage of litter content compared to sediment and organics is estimated.

Note: Data is open to interpretation because GPT's vary in effectiveness at collecting litter and/or releasing green waste.

Quantity of Litter Collected in GPT's

- and other collection devices



● FROM 21 GPT's - CITY OF CANANDA BAY GPT DATA FOR 2013/2014

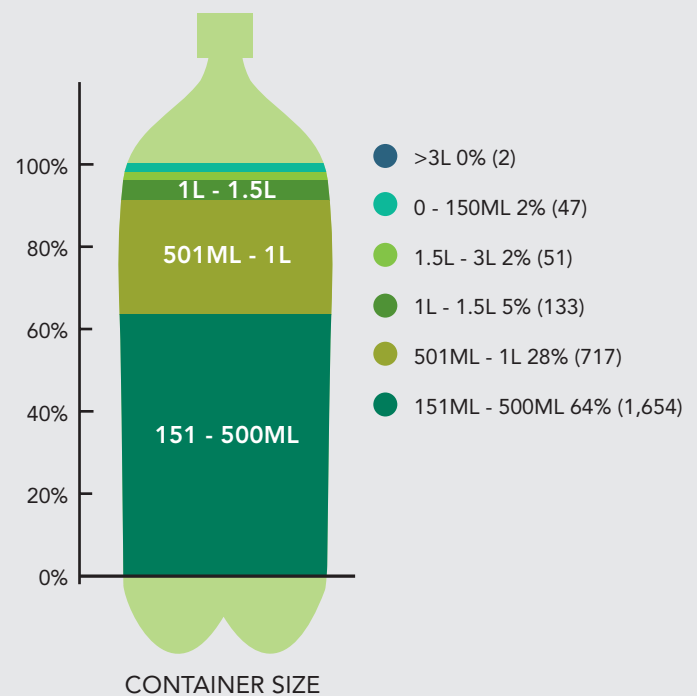
● FROM 10 GPT's - FORMER CITY OF CANTERBURY GPT DATA ANNUAL AVERAGES

● FROM 53 GPT's - FORMER BANKSTOWN CITY COUNCIL GPT DATA FOR 2015

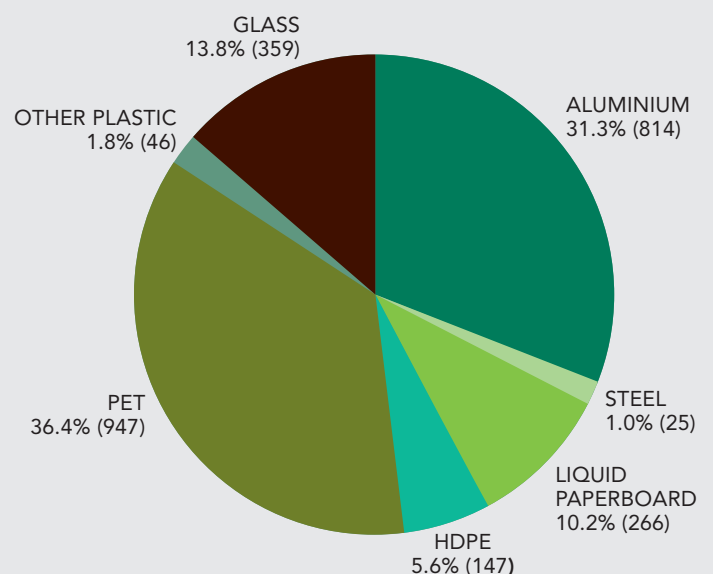
WITH A MORE RELIABLE MEASURE OF THE PERCENTAGE OF LITTER IN GPTS, THERE IS THE POTENTIAL FOR INDIVIDUAL COUNCILS TO USE THIS DATA AS AN INDICATOR OF THE EFFECTIVENESS OF LITTER CLEAN UP AND PREVENTION.

Distribution of Containers in Litter Bins

- by size



- by material type



BOTH GRAPHS ABOVE TOTAL 2,604 CONTAINERS FROM 239 LITTER BINS.

DATA COMBINED FROM 3 LGA'S IN SSROC COUNCILS.

DATA FROM THE UNPUBLISHED REPORT NSW EPA BY A.PRINCE CONSULTING.

Findings from litter audits

A number of councils provided data on types and volume of litter being collected by their council based on litter audits, litter checks and observation (see Section 7, Measuring outcomes, for an explanation of these methods). In some cases it was based on a whole local government area (LGA) basis, for example City of Canada Bay. In others it was based on audits of particular hotspots, such as parks in an LGA or an area with high visitor numbers such as Bondi Beach. As this data is collected in different types of public places, in different ways and within different timeframes it cannot be aggregated to form a regional picture of litter volumes and types. It does however contribute to forming a picture of the main littered items in different hotspots types.

Top littered items reported from some of these council reports are provided as examples below.

Top Littered Items in our Region

LITTER AND PUBLIC PLACE AUDIT BASED ON LITTER COUNTS, SUMMER 2015

CITY OF CANADA BAY



CIGARETTE BUTTS
39% OF ALL LITTERED ITEMS

PARKS LITTER AUDIT, 2013

FORMER BANKSTOWN CITY COUNCIL



PAPER
47%



BEVERAGE CONTAINERS
18%



CIGARETTE BUTTS 14%



ORGANICS
21%

JUNE 2015

FORMER BANKSTOWN CITY COUNCIL – GREENACRE SMALL VILLAGE CENTRE



CIGARETTE BUTTS 33%



PAPER WRAPPER/ SERVIETTES 24%



BEVERAGE CONTAINERS 11%

LITTER AUDIT, SUMMER 2015

BONDI BEACH



CIGARETTE BUTTS
39.1%



PLASTIC
18.2%



PAPER
14.2%



BEVERAGE CONTAINERS
11.7%



CONFECTIONARY
8.2%

Most councils in the region are still to develop a clear picture of the volumes of litter generated and the trends in litter generation. More work is also needed on the costs associated with litter clean up and disposal versus litter prevention.

► Implications for Our Plan

The value of collecting litter data in a consistent way is that it can provide a benchmark in setting objectives and targets for reduction and in measuring progress. This Plan includes objectives relating to filling data gaps and undertaking consistent data collection methods, with a particular focus on the priority hotspots types. In the absence of regional litter datasets, the National Litter Index for NSW provides a useful benchmark for regional and local litter efforts.

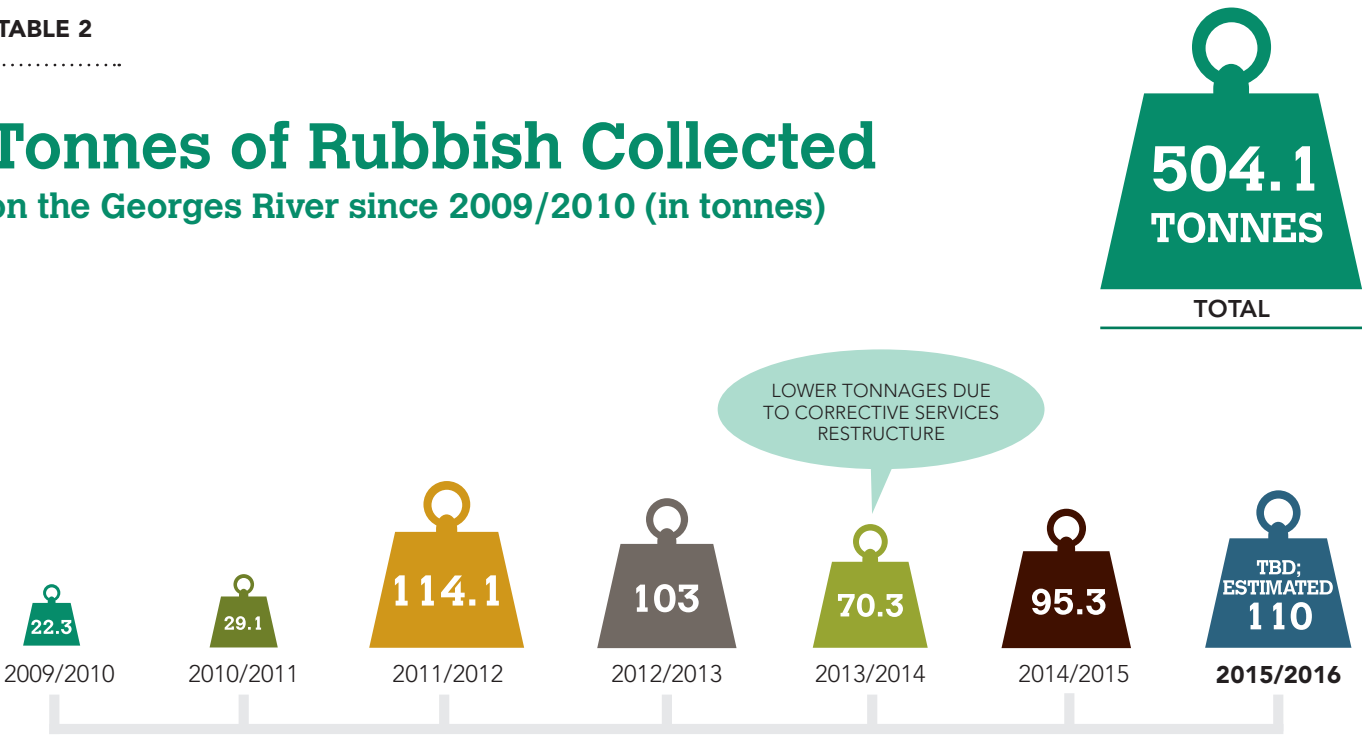
3.4 Litter in regional waterways

A range of partnerships between SSROC councils and other stakeholders have been formed over past decades to improve the health of regional catchments and waterways of the Georges River, Cooks River and Parramatta River. Information provided by council groups with waterway catchments as their focus demonstrate the dedicated strategic and persistent effort needed to clean up litter on and near these waterways. It also demonstrates that large quantities of litter still remain, despite the resources allocated to litter clean up by councils and other public and private land managers.

While the information cannot be used to indicate trends in volumes of data entering the regional waterways (whether litter volumes are increasing or decreasing overall) because of the many variables, it demonstrates the scale of the regional litter challenge. The organisations involved in the partnerships are also significant stakeholders in this Plan in light of their long term commitment to reducing litter and the environmental impacts of litter.

TABLE 2

Tonnes of Rubbish Collected on the Georges River since 2009/2010 (in tonnes)



Rubbish that ends up on foreshores is indeed unsightly and can be hazardous, such as sharps or glass. However it is difficult to quantify how much of it is considered litter, where it came from, and to whom it belongs. Southern Sydney’s impervious ‘channelising’ of the stormwater drainage system and the densely urbanised nature of residential areas means street litter often ends up in metro-area catchments.

⁹ <http://www.georgesriver.org.au/GRCCC.html> viewed March 2016

Georges River

The Georges River Combined Councils Committee (GRCCC) Riverkeepers Program removes a large amount of litter entering the Georges River each year. This significant clean up work is achieved through a GRCCC partnership with Corrective Services NSW where work teams comprised of individuals on Intensive Correction Orders, carry out community service with the support of the GRCCC⁹. The clean up efforts were complemented by Riverkeeper volunteers as well as the GRCCC Green Army Teams that worked in the field and collected litter. The GRCCC programs are active on the advocacy and educational fronts to encourage litter prevention and educate the community about the risks associated with litter to the Georges River ecosystem.

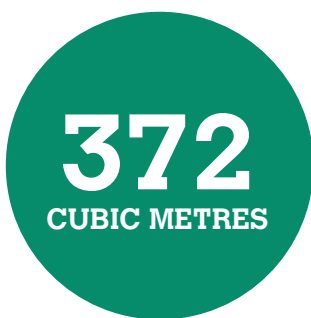
Member councils were City of Canterbury-Bankstown Council, Campbelltown City, Fairfield City, Georges River Council, Liverpool City, Rockdale City, Sutherland Shire and Wollondilly Shire Councils.

Cooks River

The Cooks River Alliance (CRA) is a membership of the following councils – City of Canterbury-Bankstown Council, Georges River Council, Inner West Council, Rockdale City Council and Strathfield Municipal Council, as of June 2016 – who are working together with communities for a healthy catchment. The CRA reports many initiatives and improvements in their annual plan¹⁰ however the litter problem continues to be a challenge. The former City of Canterbury Council for example removes an average of 372 cubic metres of litter annually from the Boat Harbour litter boom.

Councils and the CRA also support the efforts of community groups to undertake clean up efforts. The community group 'Mud Crabs' report collecting 10,000 containers each year for the past 10 years and the Cooks River Valley Association estimate that 90% of collected litter (by volume) is beverage containers.

ANNUAL LITTER



FROM THE COOKS
RIVER LITTER BOOM
AT BOAT HARBOUR

COOKS RIVER VALLEY ASSOCIATION ESTIMATE



(BY VOLUME)
IS BEVERAGE
CONTAINERS

'MUD CRABS' COLLECT



**EVERY
YEAR**

FOR THE PAST 10 YEARS



¹⁰ http://cooksriver.org.au/wp-content/uploads/CRA_Annual-Report-2014-2015_Draft3_lower-res.pdf

Parramatta River Catchment Group

The Parramatta River Catchment Group (PRCG) is a regional organisation of local councils, state agencies and community representatives whose aim is to work together to improve the health of the Parramatta River catchment.

As of July 2016, council members included: Blacktown City, Burwood, City of Canada Bay, Cumberland, Hunters Hill, Inner West, City of Parramatta, City of Ryde and Strathfield Municipal councils.

Eastern Suburbs beaches

Waverley and Randwick councils support a range of community groups in clean up activities. One example is the "Responsible Runners", an eastern suburbs beaches community group that pick up litter every Sunday on the beaches across the eastern suburbs.



► Implications for Our Plan

While there is no direct correlation between the litter collected from these sites and the priority litter hotspots outlined in this Plan, the waterways data is important to include in general educational messages about where rubbish ultimately ends up.

The fourth objective of this Plan, which targets litter in foreshore parks and beaches, identifies that organisations involved in clean up activities are stakeholders with an important role to play.

3.5 Identification of gaps in services

Through the consultation process a number of service gaps and other challenges were identified that were seen to exacerbate the litter problem. Locational and geographical difficulties include:

- Sites that are not serviced by council (e.g. industrial sites)
- Not all litter hotspots are clearly visible e.g. bushland adjacent to waterways where litter can accumulate out of sight
- Densely populated and heavily urbanised areas
- Sites that are serviced by other agencies and for which there is a community perception that council is responsible for clean up. Examples include roads managed by RMS and river catchment foreshores owned by RMS or the Commonwealth.
- Sites where management of facilities is shared with other agencies and different requirements apply. For example, smoking is banned at all public transport stops and stations in NSW including taxi ranks, which means butt bins cannot be installed where butt littering frequently occurs.

► Implications for Our Plan

Coordinated efforts on a statewide basis are needed to address many of these issues. For regional litter hotspots for which there are a number of agencies or organisations responsible such as town centres and associated transport hubs, the Plan includes voluntary agreements and contractual arrangements, depending on the context. See Section 5.1 Objective 2.

4. Our litter prevention approaches

Evidence from evaluated litter projects¹¹ suggest that if litter reduction interventions exhibiting components of the four pillars for litter reduction are applied in an integrated way, sustained litter reduction outcomes are more likely. The four pillars are:

Regulation and enforcement

1

Community education and engagement

2

Infrastructure and clean sites

3

Measurement and evaluation

4

“...feedback from staff suggests that the strong emphasis within their councils is still on litter clean up.”

Councils' activities across these four approaches are summarised below.

4.1 What are we doing now?

The following summary is based on data provided by SSROC member councils. It provides an indication of where regional litter reduction efforts might be directed and lists the projects which address identified opportunities for improvement.

Council litter strategies

Several councils have stand-alone litter strategies that in some cases are combined with strategies for illegal dumping. While this suggests a move towards integrated approaches to litter management, feedback from staff suggests that the strong emphasis within their councils is still complaint-based responses and litter clean up.

Infrastructure and bin siting

The lack of appropriate infrastructure was identified as a significant contributor to litter hotspots in a number of council areas. The absence of butt bins was specifically highlighted for a number of hotspots.

Only a few councils have formal guidelines for bin selection and placement that prioritise litter prevention. It was commonly reported that design and aesthetic considerations were favoured over functionality and maintenance and that comprehensive guidelines were needed. The litter prevention projects funded by the NSW EPA provide evidence about what works in terms of bin design and placement.

Priority projects 2, 3, 4 and 5 listed in this Plan (see Section 6.3) address the deficit in infrastructure in key locations and the need for a strategic approach to placement.


¹¹ Advice provided at the EPA workshop held 09/02/16

Education and engagement

Councils in the region have a long history of trialling and implementing litter prevention projects, often in the context of state government litter campaigns and available funding. Stormwater catchment projects for example reinforce litter prevention through 'the drain is just for rain' and related messages. Councils also have a long history of providing support to volunteer community groups who are involved in regular local clean up events. While not usually quantified, their activities are felt to play an important role in educating other members of the community and shaping values about litter based on pride in the places where they live and where they go for recreation.

Several councils have taken advantage of the recent rounds of NSW EPA litter funding to develop award winning litter programs and have continued to roll out programs based on their own resources resulting in reductions in both litter and staff hours at those sites. The former Bankstown City Council used a variety of approaches in their project, We Like Our Parks Litter Free, with a strong emphasis on community engagement. Clean Park Educators were trained to make observations and to engage with park users to collect commitments and to hand out garbage bag prompts to reduce litter. Community group "Westies Joggers" who are regular users of the foreshore parks, had 40 members sign their commitment to ensuring the parks stayed clean and litter free.


The lessons learned from the community engagement and education approaches already in use in the region are reflected in the methods chosen to implement priority projects. See Section 6.3.



Be RiverWise

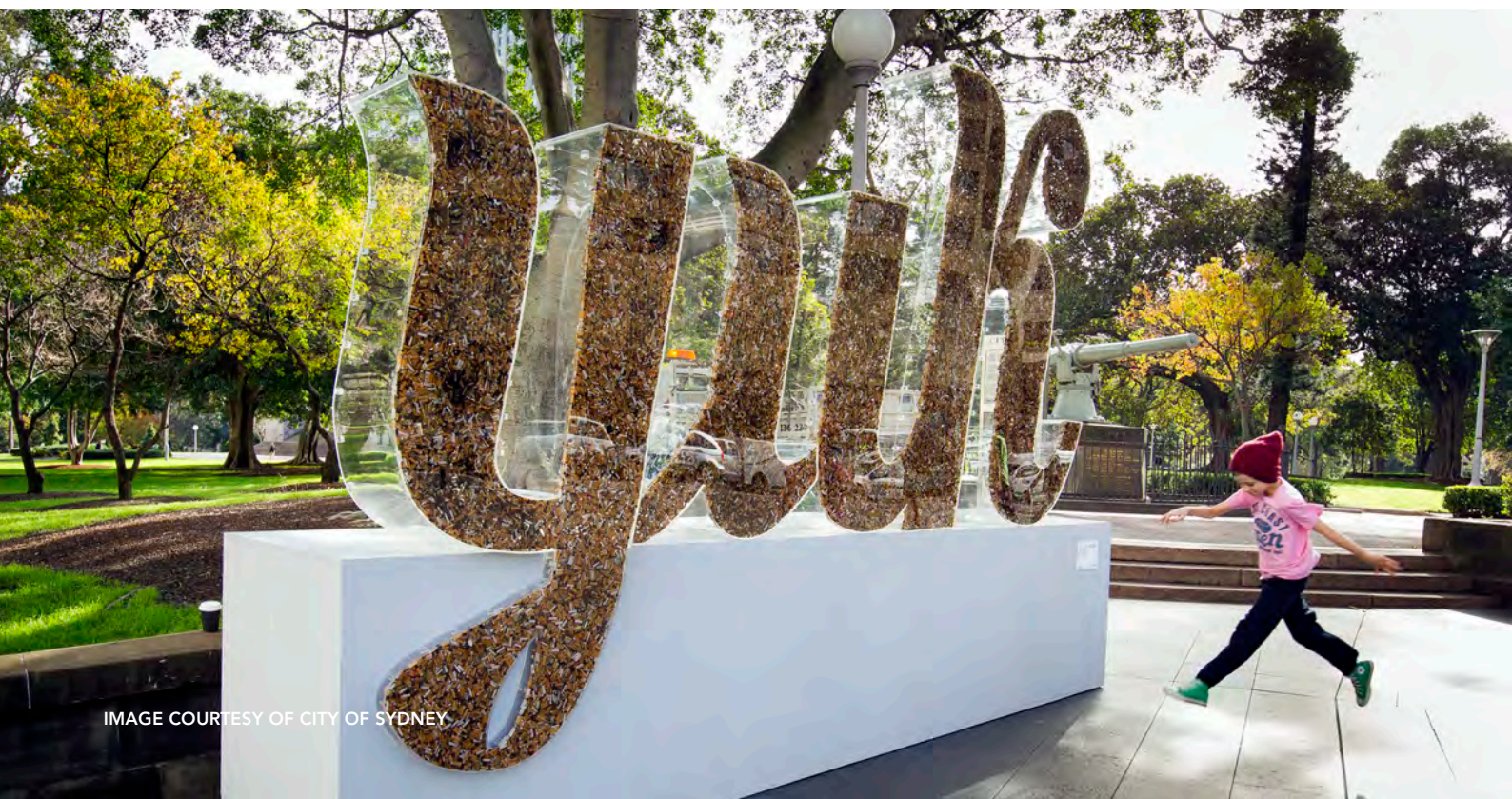
10 things you can do for the Cooks River

1. **Visit the Cooks River**, explore the parks and creeks. Imagine what it could become in the future.
2. **Sign up** to lobby to make recycling normal, and get a 10c back every time you deposit a bottle or can. It will reduce litter everywhere. Join the campaign at www.boomerangalliance.org.au or Facebook.com/CashforContainers
3. **Take 3 pieces of rubbish** with you when you leave the River, the beach or anywhere – you'll have made a difference! take3.org.au
4. **Pick up** after pets, so their waste doesn't end up in the river.
5. **Keep** your gutters free of leaves, and safely dispose of oils and chemicals. Rain carries pollution to the River.
5. **Get involved** in a local community group. Join one of the [bushcare](#) groups working with ***your*** Council.
7. **Become a friend** of the Cooks River Alliance. Get in touch at cooksriver.org.au or Facebook.com/CooksRiverAlliance
3. **Plant** locally native species in your garden to increase habitat for species, connecting your backyard to the River.
3. **Install** a rainwater tank to catch rainwater and reduce the amount of stormwater that runs off your property into the River.
10. **Build** a raingarden to filter rainwater before it gets to the River. Visit: www.melbournewater.com.au/raingardens



Ashfield Bankstown Canterbury
City of Sydney Hurstville Marrickville
Rockdale Strathfield

COOKS RIVER 'BE RIVERWISE' POSTER



EXAMPLES OF LITTER PREVENTION CAMPAIGNS RUN BY CITY OF CANADA BAY

Stop Litter in the Bay



Mosaic art installed at Cabarita Park and project launch



Mosaic tiles



Mosaic art installed



Hey Tosser launch in Cabarita Park with local students and volunteers



Chalk art along the Bay



Chalk art



Local students mosaic art class



Chalk art in Cabarita Park



Hot coal litter signage on site



Ashtray bins installed at Cabarita Park



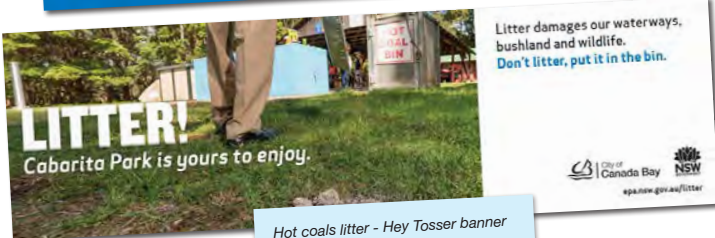
Hey Tosser sticker



Stop Litter in the Bay, promotional attire



Hey Tosser signage for the Bay



Hot coals litter - Hey Tosser banner

Litterer behaviour profiling

Observation of littering behaviour is being used by some councils in conjunction with litter checks. It is based on extensive littering behaviour studies that show that there is no such thing as a typical litterer and that many people exhibit a range of behaviours that may vary according to the context¹².

Evaluation methods of projects in this Plan, which have an on-ground component, include behaviour profiling. See Section Seven, Measuring outcomes.



RESPONSIBLE RUNNERS. IMAGE COURTESY OF WAVERLEY COUNCIL



IMAGE COURTESY OF CITY OF SYDNEY

Enforcement

Littering is subject to a tiered range of fines under the Protection of the Environment Operations Act 1997. A review of the penalty notices issued in the region from 2012 to 2015 shows that over half of notice issued by Southern Sydney councils were issued by the City of Sydney. The fines issues by other SSROC councils ranged from 9 to 235 notices per council over the four-year period¹³. This finding reinforces the need already identified that enforcement needs to be given a higher priority.

Councils however are educating their communities about litter fines in different ways. Leichhardt Council for example undertook the "Play your Part or Pay your Fine" project with the NSW EPA, which included giveaways of portable ashtrays and car litter bags promoting littering fines. The outcome of this project was a 72% reduction in cigarette butts on Leichhardt Council streets. Educational approaches that include information about fines and how to report littering offences are reflected in several of the identified priority projects.



THE BEACH RAKE COLLECTS LITTER FROM THE SAND
IMAGE COURTESY OF WAVERLEY COUNCIL

¹² Littering Behaviour Study III, Measuring Environmentally Desirable Change in Australia (2001) report prepared by Community Change Pty Ltd with funding from the Beverage Industry Environment Council.

¹³ EPA Litter Infringement Data as of 07 December 2015 provided to SSROC

4.2 NSW EPA litter grants summary

The NSW EPA has provided two rounds of competitive funding for litter prevention works under the Waste Less Recycle More initiative. In March 2016, the EPA advertised a third round to both councils and community groups.

Councils who received Round One and Round Two litter grants reported that litter reduction was achieved by the projects. The overall outcomes are very impressive with quite dramatic improvements recorded. See Section 10, Resources, for a list of documented case studies.

The two EPA funded regional projects are briefly outlined here to indicate the potential for the joint projects that are listed for consideration in this plan.

- As part of the NSW EPA Cutting the Litter grant project, the Cooks River Alliance ran a comprehensive litter workshop program, in partnership with the Ethnic Communities Council and Cooks River Valley Association, to target a range of CALD communities. For each language group (Arabic, Cantonese & Mandarin, Vietnamese and Nepalese communities), there was a series of two workshops (146 participants) and a field trip (99 attendees). EPA messaging on litter was translated into relevant languages, and advertisements were placed in local ethnic media.



NEW COAL BIN - PART OF THE TRASH YOUR ASH PROJECT

- The Trash your Ash project, delivered by SSROC with former Bankstown City Council, Rockdale City Council and City of Canada Bay, aimed to reduce the incidence of charcoal from portable barbecues being disposed of incorrectly or left on the ground. Researchers conducted in-field behavioural and engagement survey of charcoal barbeque users, combined with Litter Check data to get a sense of what was happening in parks. Data was used to inform and select sites for new, fit for purpose charcoal disposal bins in targeted locations. The project rollout coincided with community engagement on weekends undertaken by enforcement officers, and resulted in reduced incidence of incorrect charcoal disposal.



COOKS RIVER - IMAGE COURTESY OF STEPHEN SUMMERHAYES, COOKS RIVER ALLIANCE PROJECT MANAGER.

4.3 Regional litter hotspots and litter types

The litter hotspot types addressed in this Plan were selected because they are regularly serviced by councils, and maintained by vested community groups. They are common to all councils, yet have unique characteristics that require place-based approaches. These hotspot types are sports and recreation areas and town centres. Each council identified the specific hotspots in their areas that fit each of these categories. The Plan is designed to assist councils in identifying common strategies and approaches to hotspots of a similar type. Any available regional data on the main litter types will be added when the Plan is reviewed. Until that time the National Litter Index data will be used.

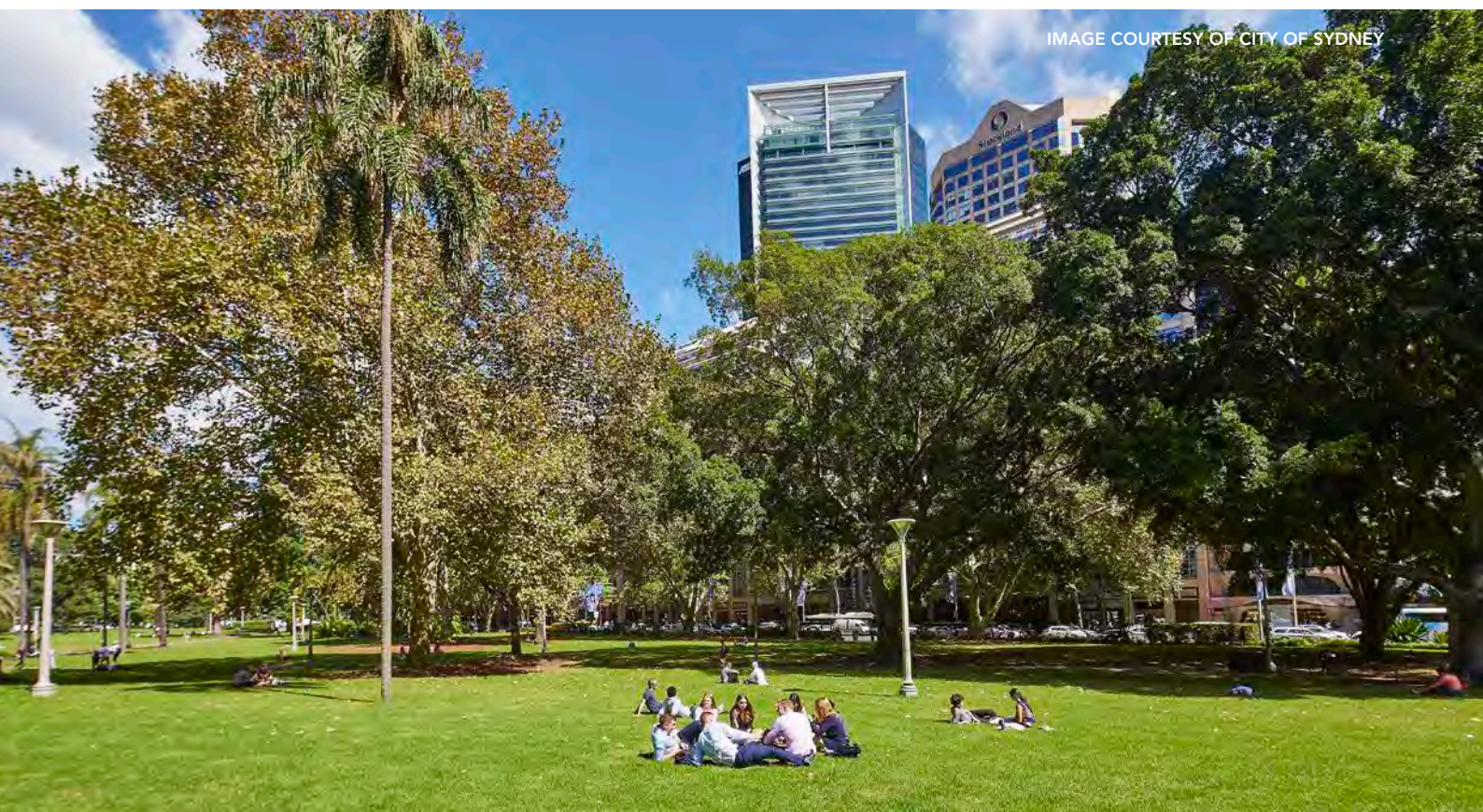


TABLE 4

Priority hotspots types, litter sites and main litter types

Priority site type	Litter sites	Main Litter types*
Town Centres	Transport interchanges	Cigarette butts
	Associated car parks	Plastics, food & drink related packaging and beverage containers, cigarette butts
	Pedestrian corridors	Plastics, food & drink related packaging and beverage containers, cigarette butts
	Shops and 'town square'	Plastics, food & drink related packaging and beverage containers, cigarette butts
Sports Fields, Parks and Waterway Recreation areas	Sporting fields	Plastics, food & drink related packaging and beverage containers, cigarette butts
	Foreshore areas and urban parks	Paper and plastic products, cigarette butts, polystyrene
	Beaches	Plastics, food & drink related packaging and beverage containers, cigarette butts

* Indicative data based on KAB data for NSW.



5. Aims, principles and objectives

5.1 Aims of the Regional Litter Prevention Plan

This Plan is aligned to the Responsible Citizen theme in the SSROC Regional Waste Strategy in relation to litter for the following objectives:

- Reduce incidence of littering at specific regional hot spots
- Provide guidance to councils to manage and measure litter in a proactive and cost effective way
- Encourage the integration of litter prevention into councils' operations drawing on leading practice from across the region and beyond.

An aspiration of this Plan is to align the following objectives and actions with the NSW State government target for litter reduction in NSW.

5.2 Guiding principles

The starting point for achieving progress with litter reduction is ownership of the litter problem. As one working group member explains it, 'If we want residents to care, we have to care'. Capacity building within councils is the foundation for effective action. The required internal changes involve a shift from a reactive to strategic approach and a genuine understanding that litter is not just an operational issue. Education needs to be internal as well as external and councils need to take a fresh look at their infrastructure and operations, to determine whether it supports litter prevention.

It is acknowledged that while the integration of litter prevention into councils' operations is a long-term aim, capacity-building activities can be included in the short and medium term. The Plan seeks to balance incremental capacity building within councils while providing new infrastructure, education and personal responsibility mechanisms to the public.

A further principle underpinning this Plan is to incorporate research and evidence about litter behaviour when designing litter prevention approaches.

The starting point for achieving progress with litter reduction is ownership of the litter problem. As one working group member explains it, 'If we want residents to care, we have to care'.



5.3 Objectives

These objectives are based on the WARR Strategy with additions drawn from the analysis of data gaps and challenges outlined in Sections Three and Four, and from the priorities identified by the participating councils. See Section 6.3 for indicative timeframes for achieving these objectives.

TABLE 5

OBJECTIVES	TARGETS
<p>1 Baseline litter data sets developed progressively for each hotspot type funded under this Plan, leading to the preparation of a regional litter data set</p>	<p>Baseline data collected for all funded priority projects</p> <p>Litter volume profile developed for the SSROC region</p> <p>Common data gathering procedures established for all councils</p>
<p>2 Reduced littered cigarette butts, plastics and takeaway food and drink containers at transport hubs and pedestrian corridors associated with regional town centres through fit for purpose infrastructure and associated education, engagement and enforcement</p>	<p>30% reduction in litter at project sites against benchmarks developed through project implementation</p> <p>Agreements developed with relevant authorities on cost and maintenance of infrastructure at project sites</p>
<p>3 High volume litter items reduced through leveraging litter prevention outcomes with lessees of sports fields, parks and public facilities by providing appropriate infrastructure, and incentivising litter prevention through contractual agreements and obligations</p>	<p>20% reduction in volumes of litter, measured against control sites</p> <p>Number of agreements with lessees</p>
<p>4 Reduction in most frequently littered items at river foreshore, parks and beaches hotspots, through fit for purpose infrastructure and associated education, engagement and enforcement, and through partnerships with river catchment groups, community groups and other agencies with responsibility for agreed sites</p>	<p>20% reduction in litter at nominated foreshore parks and beaches, against benchmarks developed as part of the project</p>

OBJECTIVES

5

Improved services, reduced litter and increased efficiencies for councils through regional guidelines for public place bin allocation and placement, and the **trialling of technology based bins** across the region.

6

Reduction of litter resulting from illegal overfilling and misuse of both **private and public bins in laneways, car parks and main streets** of town centres and measurable improvement in bin management by businesses over the long term

7

Reduce plastic bags and takeaway food and drink containers littered in retail areas through **business product stewardship**

TARGETS

Number of councils applying the guidelines

Number of councils participating in technology based bin trials and evaluation

30% reduction in litter and inappropriately placed waste in project sites

20% reduction in plastic bag and take away food and drink container litter from participating retail areas



IMAGE COURTESY OF CITY OF SYDNEY

6. Regional litter priority projects

6.1 Resourcing

SSROC as an organisation does not have funds for litter prevention, therefore the implementation of the Plan is based on anticipated funding from the State government for priority projects, partnership projects initiated by member councils, and on resources that can be leveraged from other stakeholders, including building managers, lessees of public land and local businesses.

Approaches being taken by councils to allocate resources to litter prevention include:

- Building a case for officers to be employed to focus on litter prevention
- Producing evidence that not only are the litter measures working, they are reducing litter management costs
- Understanding the real costs of litter and whether resources could be better utilised (for example staff moved to higher problem areas)
- Clarifying the costs and operational arrangements of the cleansing teams in order to have measurable data for evaluation
- Taking into account that even if the need for litter clean up is reduced, cleansing services will still be needed to maintain the clean appearance of public places and infrastructure.

Aside from funding rounds for litter prevention projects at a local and regional level, the NSW Government offers assistance in the form of advocacy with other government agencies.

6.2 Considerations in identifying projects

The following considerations were taken into account in identifying projects for inclusion in this Plan.

Litter outcomes can be measured

Some educational projects, for example novel communication approaches, while worthy, are difficult to evaluate in isolation. EPA funded projects will be measured on their contribution towards the NSW Government litter reduction target.

Multiple benefits through leveraging litter prevention by other stakeholders

A number of identified projects have the potential to leverage greater results through inter-departmental and external stakeholder involvement.

Projects with social, environmental and financial benefits

While the availability of up front funds is clearly a factor in selecting projects, there is an interest by some councils to taking a 'triple bottom line' approach to assessing projects, and taking into account the cost of inaction.

Willingness and ability of councils and other stakeholders to take the lead on a project

Councils with leading practice litter prevention approaches and monitoring and evaluation measures are in a position to take a lead on identified regional projects.

6.3 Potential projects to be undertaken from 2016 to 2021

The following projects, identified by member councils for potential inclusion over the five year period 2016 – 2021 were assessed and by a Technical Advisory Committee. Projects listed in 6.4 that aren’t currently assessed as urgent and important will be re-assessed when the plan as a whole is reviewed. The results of individual council pilot projects, and other evidence that comes to light, may result in the project being given a higher priority in the future.

TABLE 6 Priority projects for 2016 to 2021

YEAR ONE – 2016/2017

Project One: Town Centre Bus Stop Litter Profile

Quantify the extent and types of litter discarded in town centres specifically at transport interchanges and bus stops

Objective	Target	Indicative Budget
To establish a baseline litter data set for town centres for bus stops and transport interchanges that can be applied across the SSROC region	Litter data collected for a range of bus stop types in participating councils’ LGAs.	\$30,000 funding request (\$45,000 project total)



YEAR ONE – 2016/2017 (CONTINUED)**Project Two: STOP bus stop litter**

Draw on expertise within SSROC councils and the findings from Project One to design and deliver a litter reduction program incorporating infrastructure, education and enforcement to reduce litter at bus transport interchanges associated with town centres. Project officers will use Local Litter Checks and other assessment tools to conduct before, during and post-project monitoring of litter. An appropriate education

and engagement plan will be designed to respond to the key issues identified and will include rangers and waste enforcement officers in helping to educate transport users about the impact and penalties associated with litter. The outcomes of the evaluation will be shared with other SSROC councils to encourage targeted, place-based approaches to litter prevention. A component of this project is to identify and engage

the relevant NSW Government agency or transport authority, such as Roads and Maritime Services or Transport NSW, and negotiate a shared management approach to ongoing litter prevention that extends beyond the scope and duration of this project.

Quantify the extent and types of litter discarded in town centres specifically at transport interchanges and bus stops.

Objectives

1. Reduce littered cigarette butts, plastics and takeaway food and drink containers at bus stops associated with town centres targeted by the project.

Target

30% reduction in targeted litter items at project sites

Number of councils adopting the findings and providing rationale for similar approaches to litter prevention at bus stops and transport interchanges

Indicative Budget

2. Bus stop litter reduction measures and targets supported by relevant State agency or transport authority.

Agreements established for shared management and maintenance of litter infrastructure and promotional materials

\$110,000 funding request
(\$290,000 project total)

3. Create resources and project learnings for use by other councils.

YEARS TWO TO FIVE – 2017/2020

Project Three: Regional partnerships with sporting clubs for litter reduction

Enable stewardship for playing fields and spectator grounds by sporting clubs through new clauses in lease agreements that request that they care for the grounds. To support this, councils provide new funded bins and locked cages or stands, whereby bins can be wheeled out for weekends and locked up in the evenings. The project will use litter checks and other assessment tools to conduct either control site or before, during and after monitoring of litter. Evaluation outcomes and project learnings (including model contract clauses) to be shared with local councils.

Objectives	Targets	Indicative Budget
1. Litter associated with sporting events at recreation areas is reduced	20% reduction in volumes of litter, measured against control sites Agreements established for shared management and maintenance of litter infrastructure and promotional materials	\$180,000 - \$220,000 funding request (for up to 3 participating councils)
2. New litter infrastructure is installed at sporting fields	Number installed (budget dependent)	
3. New partnerships are established with sporting clubs	% of clubs involved and number of agreements	

Project Four: Litter reduction program at regional foreshore parks and beaches

Draw on expertise within SSROC councils (including learnings from Project Two) to design and deliver a litter reduction program incorporating fit for purpose infrastructure, education and enforcement to reduce litter at regional foreshore, parks and beaches hotspots throughout the region. Use litter checks and other assessment tools to conduct before, during and after monitoring of litter and/or use of controls sites for evaluation. Evaluation outcomes and project learnings to be shared with local councils.

Objectives	Targets	Indicative Budget
1. Reduction in most frequently littered items at regional foreshore parks and beaches, through fit for purpose infrastructure and associated education, engagement and enforcement.	20% reduction in most frequently littered items	\$1.1 million funding request (based on \$60k per park for up to 16 parks across the region plus in kind contributions)
2. Partnerships with river catchment groups, community groups and other agencies with responsibility for agreed sites	Number of partnerships established	

Project Five: Technology based bin research

Undertake desktop research and on-ground trials to determine the most appropriate technology based bins on the market at this time. Leverage off evaluation results of councils that have recently adopted or trialled alternative technologies for new bins to determine priorities for and design of trials.

Objective

Improved services, reduced litter and increased efficiencies for councils through implementation of technology based bins

Target

Number of councils participating in trials and evaluation

Indicative Budget

\$1.5 million funding request

(Estimate only as the budget for the trials can only be determined closer to application due to anticipated changes in technology and market conditions)

Project Six: Regional guidelines for bin selection and placement

Based on the outcomes of Projects 2, 3 and 4, develop guidelines for bin selection, placement and signage to maximise litter prevention for use by all councils addressing: ease of collection and access for servicing, marketing and signage (based on Hey Tosser material) and taking into account council's work health and safety requirements, the need to 'vandal proof' bins and service maintenance requirements.

Objectives

1. Development of guidelines for public bin placement. May be targeted to general use or special events.

Targets

Relevance of guidelines to the diverse range of applications required across the region

Indicative Budget

\$25,000 to \$35,000 funding request

2. Councils adopt guidelines to ensure bin type selection and placement is optimised for litter reduction.

% take up of guidelines by councils



Project Seven: Public and private bin use by Town Centre SME's

Build on current small-medium enterprise (SME) education programs being conducted by individual SSROC councils to address illegal overfilling and misuse of both private and public bins in laneways, car parks and main streets of town centres. Train enforcement officers in approaches to litter non-compliance and integrate education and enforcement approaches.

Objectives

1. Reduce inappropriate placement of commercial waste

Targets

30% reduction in inappropriately placed waste in areas targeted by the project

Indicative Budget

\$150,000 funding request
(for up to 3 participating councils)

2. Measurable improvement in bin management by businesses over the long term and outside the target area through shared project outcomes

% reduction of litter/poor SME bin management

Project Eight: Product stewardship guidelines for local business

Reduce numbers of littered plastic bags and takeaway food containers in retail areas through projects that support businesses to take responsibility for product lifecycle and provide alternatives. Draw on findings from business partnership projects including Waverley Council Blue Bondi Green Plastic Bag Campaign while providing alternative resources for businesses to support the transition.

Objective

Reduction in plastic bags and takeaway food and drink containers littered in vicinity of participating businesses/ retail areas

Targets

20% reduction in littered plastic bags and take away food containers in surrounding area

Indicative Budget

\$120,000 - \$200,000 funding request



IMAGE COURTESY OF CITY OF SYDNEY

Project Nine: Regional litter datasets and overall evaluation

In the final year of the project develop a litter volume profile for the SSROC region (or combined Sydney regions) and trends in litter generation by developing cost effective data collection methods and consistent data sets utilising the outcomes of the previous years' projects. Overall evaluation of the previous years' projects (including those conducted outside the SSROC area) to update and share current thinking on best practice in litter prevention.

Objectives

1. Baseline litter data developed for the region to inform local and regional strategies

Targets

Litter datasets available for all priority hotspots types

Indicative Budget

\$50,000 funding request

2. Through partnership with organisations such as the KAB Network investigate opportunities for regional litter reporting in coordination with state based reporting

Continuity of data collection and consistency of reporting over the long term

6.4 Other potential projects

The following projects were identified for future consideration and potential inclusion in the Plan. Elements of these projects may also be incorporated into priority projects identified in 6.3 above.

Approaches to data collection and measurement

- i. Investigate options for equipping council officers with mobile reporting devices to report on litter separately from street sweeping and illegal dumping and develop a litter profile for identified hotspots on an ongoing basis.
- ii. Work closely with other councils to assemble costings associated to litter cleanup as a means for data reporting and monitoring, while using this information in education campaigns.

Guidance for businesses

- iii. Signage and litter prevention infrastructure guidelines for local events developed for all councils and guidelines to minimise packaging.

- iv. Develop and share model clauses for waste management companies that have litter collection contracts with councils to enable consistent reporting data across the region.
- v. Adapt and apply guidelines for businesses taking part in events, including night markets.

Regional and sub-regional litter prevention campaigns

- vi. Include messages in educational campaigns about where rubbish ultimately ends up and the impact on our waterways, and on marine life.
- vii. Promote the EPA litter reporting app in a coordinated way across the region.
- viii. Develop an educational campaign branding specific to a particular catchment to create pride of place, for example the Bay catchment area (covering City of Canada Bay and Ashfield and Leichhardt Councils) incorporating iconic elements such as the Bay Run.



- ix. Develop a litter prevention campaign template for application on a sub-regional basis based on evaluation of the successful elements of previously funded litter prevention projects in the SSROC region, including litter audits, and the integration of engagement, education and enforcement.

Enforcement approaches and officer training

- x. Identify various approaches to issuing litter fines that could be shared between councils and adopted by those interested in an enforcement approach.
- xi. Develop a program that supports and trains law enforcement officers in educating and enforcing litter laws while reinforcing positive litter behaviours. Integrate a cost benefit analysis to support employing officers specific to litter.



7. Measuring outcomes

Measurement of the outcomes of the Plan will have both an internal and external focus. For each endorsed project, the Plan will address what information is to be collected and when to measure progress against objectives. Progress with capacity building will also be included.

7.1 Changes to internal systems

Measures for evaluating internal changes include:

- Whether there is an increase in the number of councils with litter strategies and policies
- The specific reference to litter reduction in council strategic documents and newsletters
- Number of councils having one or more staff with litter prevention in the job title or as part of their position description.

7.2 Project evaluation

Local Litter checks

The litter check methodology developed by the NSW EPA is designed to assist groups plan and evaluate their projects. It contains three steps: a location inspection, doing a litter count and talking to some location users. See Section 10, Resources for links to the litter check form, how to guides and video for further details. A structured approach to litter checks will be integrated with projects submitted for NSW EPA funding and all councils are encouraged to integrate the use of litter checks into their projects.

While local litter checks have proved a valuable tool for many councils and their use will continue, a range of associated factors including bin placement, enforcement, behaviour monitoring, and whether visitor or residents are the primary users of the site, make up the evaluation of a program for a particular litter hotspot. Councils are seeking to build a more holistic picture of the impact of a particular project by using a variety of approaches as outlined below.

Clean Communities Assessment Tool

Some councils are including observations of disposal behaviour and community perceptions at the project sites into the overall measure of performance of project approaches. The former Bankstown City Council for example applied The Clean Communities Assessment Tool (CCAT) to establish a detailed understanding of community characteristics associated with local littering behaviour in litter hotspots areas. The CCAT provides a high or low score based on the features of public places that influence littering behaviour and on public perceptions and established a benchmark for future actions associated with the site(s).

Engagement and community reach

Councils are also reporting on the number and diversity of groups who are engaged in a particular project. In the Railway Parade Litter Prevention Program undertaken over 2014/2015, the former Canterbury City Council assessed the success of the program in a variety of ways, including the extent of engagement. The project team engaged the local community centre, the Environment@Lakemba Litter Group and local mosques and businesses, and reported on the increase in community good will and awareness about litter and the importance of clean and vibrant public places.

Cost benefit analysis

While a specific cost benefit analysis tool or checklist is yet to be determined, it is felt that a tool like this will assist council decision making process about the merits on a project by project basis using social, environmental and financial criteria.

7.3 Community satisfaction surveys

An area for future work is the review of indicators for measuring the outcomes of projects from a community perspective. The response of local communities also needs to be included, for example through use of litter perception surveys or reviewing complaints data. Revising questions in council customer satisfaction surveys to specifically reference perceptions of litter is one suggestion that will be further explored.



IMAGE COURTESY OF CITY OF SYDNEY

8. Future development of the Litter Prevention Plan

8.1 Development and review of this Plan

At the time of writing, the NSW EPA's final Litter Prevention Strategy had not been released. When it is publicly available the SSROC Working Group will update this Plan to reflect State government undertakings across the four pillars. Updates may also be required depending on the outcomes of the amalgamation process.

This Plan will be evaluated at the mid-way point. This is expected to be within 2-3 years into the implementation phase when CDS is up and running. Evaluation at this point will provide the opportunity to reflect on the progress made in implementing prioritised projects and make any needed amendments to the plan for the period ahead. Other identified projects listed in Section 6.4 can be assessed for potential implementation in the remaining period of the Strategy. It could also be the point where the Plan is integrated into the SSROC WARR Strategy.

8.2 Support for staff responsible for project implementation

In the meantime, staff (including on ground staff and enforcement officers) ought to share experiences and expertise in litter prevention field training and workshops that bring cleansing, enforcement and education staff together to share learnings and cross-reference with international best practice.

Support for staff to network and share learnings will be important in maintaining the current momentum for a proactive approach to litter and to delivering on agreed projects.



9. Resources in litter prevention

EPA guides and research

A range of guides and resources are available on the EPA website at www.epa.nsw.gov.au/litter. These include:

- Things you should know about litter and litterers: NSW Litter Prevention Kit – Things you should know about litter and litterers
- Run an effective litter prevention project: NSW Litter Prevention Kit – Run an effective litter prevention project
- The Local Litter Check (Introduction and how to manual): NSW Litter Prevention Kit – The Local Litter Check
- The 'How to' videos: Understanding your litter problem
- The Local Litter Check forms: Understanding your litter problem
- Waste wise events guide and flowchart
- Industrial sites research
- 'Report to EPA' App for handheld devices

You can also contact litter.prevention@epa.nsw.gov.au for a copy of the Hey Tosser! creative material and style guidelines.

SSROC region case studies

- We Like Our Park Litter Free, Bankstown City Council, unpublished case study
- Stop Litter in the Bay, City of Canada Bay Council
- Bin your Butts, Helping to Prevent Litter in NSW City of Canada Bay
- Railway Parade Lakemba, Litter Prevention Program, City of Canterbury Council
- 'Trash Your Ash' – Applying Resident Research to Charcoal Disposal Bin Solutions, SSROC, unpublished case study
- Cooks River – Cutting the Litter, Cooks River Alliance, unpublished case study
- Greenacre Small Village Centre litter research summary, prepared by Bankstown City Council

EPA Course: Litter Prevention for Authorised Officers

To register your interest in completing this course email litter.prevention@epa.nsw.gov.au with your details.

Other Australian sites with litter prevention case studies and resources

- Keep Australia Beautiful (KAB) Network <http://kab.org.au>
- Litterology <http://litterology.com/resources>





This project is a NSW EPA Waste Less, Recycle More initiative funded from the waste levy