PRODUCTIVITY COMMISSION

INQUIRY INTO WASTE GENERATION AND RESOURCE EFFICIENCY

Submission by
Southern Sydney Regional Organisation of Councils (SSROC)


## SUMMARY

This submission responds to the terms of reference of this Inquiry by identifying opportunities for change at a local and regional level, and commenting on current State and National actions which are also seeking to implement behavioural change in resource recovery behaviour. SSROC is a local government entity, and as such, this submission focuses on the activities and responsibilities of local government in the area of waste management.

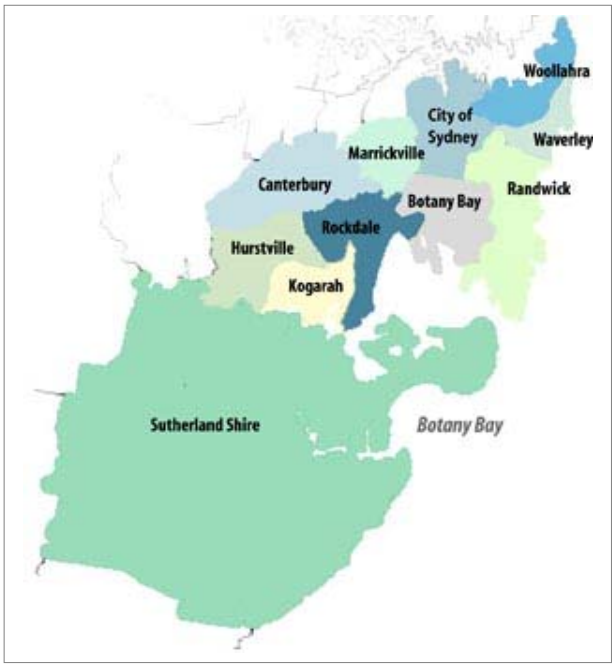
The structure of our response reflects the more direct actions and activities that can be carried out at a local and regional level, compared to the more policy–driven approaches that are being undertaken at the State and Federal levels.


# 1. INTRODUCTION

## 1.1 Introduction to SSROC

The Southern Sydney Regional Organisation of Councils (SSROC) is an association of eleven local councils located in the southern Sydney region. The councils represented by SSROC are:

- Botany Bay
- Canterbury
- City of Sydney
- Hurstville
- Kogarah
- Marrickville
- Randwick
- Rockdale
- Sutherland Shire
- Waverley
- Woollahra



SSROC provides a forum for the councils to develop common policies and approaches to the challenges facing the southern Sydney region through resource sharing, shared policy development and advocacy.

## 1.2 Status of this Submission

This submission should be viewed as a preliminary document, which provides comment on the issues raised by the Productivity Commission's Inquiry into Waste Generation and Resource Efficiency. The submission will be put forward for endorsement by SSROC at its meeting on 16 March 2006.

## 1.3 The Role of Local Government in Resource Recovery

In Australia, local government has been the traditional custodian of public health, cleansing, prevention of disease, supply of clean water and the systematic removal of waste and used product from the public realm.

As a result, local councils in NSW have the legal responsibility, under the Local Government Act 1993, to collect and dispose of waste material from residential households in their local government areas. Some councils also operate commercial waste services where it is the interest of their communities to do so.

Local councils in NSW also have indirect responsibilities for waste management, primarily under the provisions of the Waste Avoidance and Resource Recovery Act 2001, and the Protection of the Environment Operations Act 1997.

Up until the 1970's, many urban councils in Sydney owned and operated their own landfills for the disposal of household waste – such landfills in NSW have the regulatory status as a Class 1 category facility. However, the responsibility of Class 1 landfill ownership and operations in Sydney reverted to State Government control and subsequent management by the State owned corporation of WSN Environmental Solutions.

## 1.4 The Types of Domestic Waste Services operated by SSROC Member Councils

Attachment 1 outlines the range, type and size of service provision which member Councils undertake in southern Sydney. The total value of business turnover is in excess of $26 million per annum.

In addition to the services which are provided to their residents, Member Councils also manage waste product from other council services, such as their road repair and parks / gardens operations, and generate waste through accommodation of administrative buildings and community facilities such as libraries and swimming pools. However this report focuses on the waste services provided by Member Councils, relating to the collection and recovery/disposal of solid waste product generated from residential households within each council area.

# 2. RESOURCE RECOVERY ISSUES IN SOUTHERN SYDNEY

This section describes a number of regional projects which have either been carried out or are currently in progress by Member Councils. Where projects have been completed, evidence has been put forward to identify the outcomes of the initiatives. Where projects are in progress, the objectives and intended outcomes of the activities have been identified.

## 2.1 Group procurement activities currently undertaken

### A Regional Approach to Resource Recovery

Since the abolition of the NSW Waste Boards in 2001, SSROC Member Councils have continued to work together in areas of waste management where a collective approach is seen to be in the interests of the communities of each Member Council.

At a strategic level, Member Councils have agreed to work together towards better economic, social and environmental outcomes by approaching long-term sustainable improvement in two steps, or stages.

**Stage 1**

In recent years, Member Councils have identified a group procurement approach to service delivery as providing significant benefit to their communities. These benefits have included improvements in standards of service, better value for money, and through economies of scale, where specific service specifications can more accurately deliver the outcomes required of that service. Member Councils are using this approach to adopt recovery/disposal arrangements for their domestic waste services.

Set out below, are examples of this approach:

- In 2004, three member councils contracted, through a group tender process, the processing of material collected in their separate kerbside recycling services;
- In 2005, nine Member Councils contracted, through a group tender process, the disposal of their material collected in their individual general waste kerbside service;
- In 2006, nine Member Councils are currently following a group tender process for the recovery of material collected in their council's kerbside clean up service. This is a service offered by each council to collect from residents' houses, either by arrangement or at specified times of the year, large and bulky household items which the residents want to discard.

The outcomes and subsequent benefits that have been identified from the group arrangements outlined above are set out in Attachment 2.

**Stage 2**

In the development of a municipal waste management system, Member Councils in SSROC and most local councils have established a standard service at a fixed charge to all residents of their community. This traditional approach has operated on the premise that most waste products need to be collected in the most efficient way for disposal to landfill at the lowest

operating cost, whilst ensuring that public health standards are not compromised.

In the last 20 years, there has been a shift in thinking towards the recycling of materials, and the need for local government to introduce management systems and service operations which acknowledge and work towards beneficial social and environmental – as well as financial/economic outcomes. As a result of this change, Member Councils are currently undertaking a systemic review of their waste management services to assess if new approaches to resource recovery can produce better triple bottom line outcomes for their communities. A summary of the results of these initial findings, are set out in Attachment 3.

After more detailed study, Member Councils may consider that there is merit in modifying municipal resource recovery (waste) services to:

- Operate new forms of service which provide better responses to the consumption habits and lifestyles which residents choose to live;
- Charge residents the resultant cost of the resource recovery service which residents use, by internalising the external (environmental and social) costs which currently are not calculated into the value of the service;
- Provide resource recovery collection arrangements which reflect the location, ease of access and type of residence which is being serviced.

## 2.2 The Regional Waste Audit

The ability to achieve beneficial resource recovery outcomes, and to be able to measure these outcomes, is dependent on the quality of information which is gathered to develop these future strategies.

The NSW Waste Boards realised the importance of data gathering to create benchmarks for progress in resource recovery activities. With the assistance of the Southern Sydney Waste Board, the SSROC Member Councils carried out a number of waste audits to identify the composition of the waste streams and ascertain how residents have use service and to understand what choices they have made in discarding waste material. The audits have focussed on the kerbside collection of the general waste stream and the kerbside collection of the recycling stream.

Through auditing processes, the Councils have observed the pattern of diversion[1] of product to the recycling system, on the one hand, and the pattern of contamination[2] on the other. In studying these patterns of behaviour, the Councils have used the data gathered to establish waste education programmes to help residents to correct and align their disposal habits in accordance with best practice recycling.

To obtain accurate data, the Councils have been guided, to date, by the 'The Waste Streams Data Collection Methodologies' drawn up by the NSW EPA in 1997. These guidelines describe the ways in which audit processes and procedures should be carried out.

In a regional audit undertaken last year, some Member Councils found that there was significant variance between the data being recorded through their

[1] Diversion being the act of placing the material able to be recycled, into the recycling bin

[2] Contamination being the act of placing material which is not able to be recycled in the recycling bin

waste contracts, and the extrapolated figures produced through the audit process. SSROC believes that there is a need for a review of the methods, sampling sizes, data gathering techniques and other aspects such as the representative nature of the communities being audited. This review should also include the ways in which the resultant data can and should be interpreted. The application of these evaluation methods could provide an more accurate reflection of the performance in the delivery of waste services in all sectors of the waste industry.

## 2.3 Organics Collection and Processing

Despite the uncertainty in the accuracy of waste audit data, there is sufficient anecdotal evidence to suggest that the largest single material type, by weight, in the general waste stream, is organically derived. This takes the form of food, food-related waste and garden, or green waste (where there is no separate garden waste disposal service).

Some Member Councils are exploring opportunities for using existing kerbside services of garden organics (green waste) to include food waste material, which could be diverted to organic reprocessing facilities for the conversion of the methane into renewable energy and the recovery and reuse of the organic fraction as compost and soil conditioner for agricultural and horticultural use.

If Trials of this service are carried out to test the capability of council services to recover this product, a modelling exercise will also be undertaken to identify the degree of social, environmental, and financial benefit which is derived from this approach.

## 2.4 Community Sharps Disposal

Needle stick injuries, through the unprotected disposal of needles, syringes and lancets (‘medical products’) into the domestic waste stream, are becoming an increasing health risk to waste management employees, and a growing liability to waste companies.

The NSW Department of Health and the NSW Local Government and Shires Association recognise this problem and have established a grant programme to assist local councils educate legitimate users of medical products and service providers (such as doctors and pharmacists) to apply safe disposal practices for these used items.

Member Councils have been successful in receiving a grant to set up such an initiative in the southern Sydney region. An education tool kit is being prepared to advise the medical profession and legitimate users on how to disposal of these medical products safely. This tool kit will be distributed to the prescribers, suppliers and users.

Member Councils will be encouraging users to return the medical products in sealed puncture proof containers (preferably Australian Standard containers) to the pharmacies where they purchase their regular supply of product, or to community health centres for safe disposal.

A procurement project is also being drawn up to select a licensed service provider specialising in the safe disposal of medical waste. The provider would carry out bin collections of used products from the pharmacies or

health centres participating in his take back scheme. The Member Councils would jointly fund the collection cost of such bins.

The management of medical waste produced in the household is problematic, with regard to jurisdictional authority. The NSW State Health Department is reluctant to take responsibility for this growing waste stream, and the default waste stream to date has been the municipal waste service. This is not satisfactory to local government.

Introduction of Extended Producer Responsibility with the pharmaceutical industry would share the burden of disposal fairly across the authorities responsible for safe use and disposal of such product.

## 2.5 Product Reuse at a Local Community Level

The Bower Reuse and Repair Centre is a non-government organization, based in Marrickville, an inner west suburb of Sydney. It specialises in the recovery from the waste stream of domestic household products for resale and reuse. It receives many calls from residents in the inner West and southern Sydney region who wish to donate or otherwise get rid of undamaged and serviceable household products which they no longer want. As a result, The Bower receives a significant over supply of products much of which it is unable to receive.

Member Councils and those councils of the inner west are assisting The Bower to set up a reuse referral service to address this problem of over supply and divert a greater proportion of donated product towards reuse. The service will be operated to give those residents who call up the service, contact details of other specialist providers who could accept the product/s offered, thus bypassing the Bower.

The operation of this service will assist local councils to reduce the amount of material being discarded into their kerbside cleanup services and thus reduce the costs of disposal for councils.

The objective of the service will be to introduce resource recovery of consumer products within the cycle of the local economy of the region and encourage an increasing pattern of product reuse.

# 3. RESOURCE RECOVERY ISSUES AT STATE LEVEL

This section sets out those issues or actions at State level that have or are influencing the direction of resource recovery at a local government level in southern Sydney.

## 3.1 The State Waste Strategy

The primary direction which local councils receive for carrying out council activities and the delivery of services, is from the body of councillors elected by the community to lead their respective council. However, local government also needs to be aware of, and to be guided by policies and initiatives enacted by the State Government, which are relevant to local government.

In the area of waste management, the NSW State Government has set out a strategy – The Waste Avoidance and Resource Recovery Strategy 2003 - to guide all producers and receivers of waste to improve resource recovery outcomes. It is this strategy which is assisting Member Councils to move forward in the area of resource recovery.

However, whilst the State Government has established a set of underlying principles for waste management and recovery of resources through this strategy, it has been reluctant to follow up this approach with a strong and coherent implementation plan to apply these principles in practice. In the absence of such a plan, SSROC Member Councils are looking to redefine the delivery of regional resource recovery services which can deliver better social, environmental and financial outcomes, at a local level - as outlined in Section 2 above.

## 3.2 Waste and Environmental Levy

The NSW Government has introduced a levy across the extended Sydney Metropolitan region, which is payable on any waste material which is landfilled and not recovered for reprocessing or reuse. This levy covers all waste streams. A recent policy change by the NSW Government has introduced a year-on-year increase, over the next five years, in the levy above the rate of inflation. This mechanism is intended to encourage an increased rate of diversion of waste for reuse/reprocessing.

The waste industry within NSW tends to operate as an oligopoly. As a result of this market condition, SSROC believes that the pricing for diversion of material away from landfill is likely to track the cost of disposal to landfill. There are likely to be few financial incentives for Member Councils, or other waste producers, in diverting material away from landfill. The main benefits, where diversion does take place, are likely to be social and environmental. However, the level of social and environmental improvement is likely to depend on how such initiatives, where undertaken for diversion, will be implemented.

## 3.3 Metropolitan Strategy

The NSW Government is planning for significant population growth, of perhaps up to 30% (although this is unclear) within the southern Sydney region in the next 25 years. If this predicted level of growth occurs, it is likely to result in:

- A significant increase in the consumption of goods and services;
- The rebalancing of population densities across the region, through higher density urban centres (or ‘hubs’) and urban corridors, as envisaged under this Strategy;
- Major changes to the demand for waste/resource recovery infrastructure.

These changes will have a direct impact on the type of policies required to respond to growth and the promotion and implementation of resource recovery initiatives, at least to maintain the current level of social and environmental wellbeing.

## 3.4 Sustainability

The NSW Government has introduced legislation which links new building requirements to the environmental footprint, which such construction creates. This legislation is known as 'BASIX'. This planning approach ensures that residential development takes into account the resource requirements which the users of the site and building will need in terms of energy inputs/outputs and water consumption levels. Unfortunately, this planning tool does not take into account the form or level of consumption of products and materials by the residents of the site, or how in multi unit dwellings the management of waste services will function.

In the years ahead, Member Councils will be looking to develop appropriate tools which will allow them to:

- Plan for progressive changes in the pattern and location of population growth;
- Anticipate the emerging consumption habits and lifestyle choices which existing and new residents will make during this forthcoming period of growth.

Section 2.1 above identifies how Member Councils could deal with some of these emerging challenges.

# 4. RESOURCE RECOVERY ISSUES AT A NATIONAL LEVEL

This section identifies current and emerging waste policies, at a national level, which have, or will have, direct and indirect effects on how local government deal with waste management issues now and in the future.

## 4.1 The National Packaging Covenant

The National Packaging Covenant is an agreement for attempting to manage effectively the life cycle of packaging product.

The Covenant does not accept that individual consumers of products and materials have a direct responsibility for the post consumer fate of such products and materials. The packaging industry and businesses who require packaging for their products are still very reliant on support from kerbside recycling services provided by local councils to manage this life cycle process. Such services are paid for by residents through a domestic waste charge, whether or not they are consumers of packaged product.

This practice of local communities supporting the packaging industry and their customers is not sustainable. It is an inequitable system. There needs to be shared responsibility between the manufacturers and consumers for the life cycle of packaging products.

## 4.2 Container Deposit Legislation

Container Deposit Legislation (CDL) creates an intrinsic monetary value for those types of containers that are included in a take back scheme operating under CDL. There is strong evidence from jurisdictions, such as the State of South Australia, where CDL operates, that this scheme can compliment existing recovery practices, like kerbside recycling.

CDL works particularly well where there is no clearly defined service for recovery, such as at major events or in public places. Member Councils have found that the high levels of contamination in public place recycling schemes, significantly increase the cost of disposal of such product. The expense of running such a service is an example of cost shifting where State Government and the packaging industry have transferred the responsibility of management of product recovery on to local councils.

# CONCLUDING REMARKS

There is strong evidence, in NSW, to suggest that local government is at the forefront of changes in waste management practices to make resource recovery sustainable and viable at a local level. Recovery rates in local government recycling services are continuing to improve. Groups of councils across Sydney and beyond are beginning to work collectively to generate economies of scale which will create the market conditions whereby used materials can be reprocessed and redirected back into new product.

The future for improving recovery practices in local government will be further enhanced if the State and Federal Governments provide more practical assistance to support the direction being taken by local government.

## ATTACHMENT 1. Domestic Waste Services Provided by SSROC Councils

| SERVICE | | | NO. OF COUNCILS[1] | NO. OF SERVICES | $ VALUE PA |
|---|---|---|---|---|---|
| ***General Waste:*** | Set-out (single dwellings) | - 80/120 L MGB<br>- 120/140 L MGB<br>- 240 L MGB | 1<br>8<br>2 | 411 739 | 15 573 326 |
| | Service Freq. (single dwellings) | - Weekly<br>- > Weekly | 10<br>1 | | |
| | Destination | - Transfer Station<br>- Landfill | 8<br>3 | | |
| | Provider | - Contract<br>- Day Labour | 5<br>6 | | |
| ***Recycling:*** | Set-out (single dwellings) | - Crate<br>- 240 L co-mingled | 4<br>7 | 411 823 | 4 266 780 |
| | Service Freq. (single dwellings) | - Weekly<br>- Fortnightly | 5<br>6 | | |
| | Destination | - Tarren Point<br>- Chullora<br>- Alexandria | 5<br>2<br>4 | | |
| | Provider | - Contract<br>- Day Labour | 7<br>4 | | |
| ***Green Waste:*** | Set-out (single dwellings) | - 115/120/140 L MGB<br>- 240 L MGB<br>- Bundled | 3<br>5<br>3 | 292 787 | 3 730 440 |
| | Service Freq. (single dwellings) | - Weekly<br>- Fortnightly<br>- On-call/Drop-off | 3<br>7<br>1 | | |
| | Destination[1] | - Randwick<br>- Lucas Heights<br>- Rockdale<br>- Botany | 3<br>4<br>2<br>1 | | |
| | Provider | - Contract<br>- Day Labour | 3<br>8 | | |
| ***Clean-Up:*** | Set-out (single dwellings) | - Kerbside piles | 11 | | 2 994 810 |
| | Service Freq.[2] (single dwellings) | - On-Call<br>- Fixed: 2 p.a.<br>- Fixed: 2 p.a. + OC<br>- Fixed: 3 p.a. + OC | 3<br>3<br>2<br>1 | | |
| | Destination[3] | - Lucas Heights<br>- Botany<br>- Greenacre<br>- Rockdale | 3<br>4<br>1<br>1 | | |
| | Provider | - Contract<br>- Day Labour | 2<br>9 | | |

**Note:** 1. Destination data from one Council was not provided.
2. Service data from two Councils was not provided.
3. Destination data from two Councils was not provided.

## ATTACHMENT 2. The Objectives and Benefits of Group Contracting

| The Objective | The Evidence | The Benefit |
|---|---|---|
| Councils have a regulatory requirement to act on behalf of the communities they represent for the collection and disposal of domestic waste | SSROC's regional initiative for implementing a set of contracts for disposal of residual waste is structured to act in the best interests of the community in delivering beneficial environmental, economic and social outcomes for the region | Review of SSROC's regional approach for Stage 1 should be measured in reference to this underlying objective |
| The fostering of business efficiency could be achieved by obtaining certainty through a collective pricing structure for waste product offered for recovery or disposal, trough a group procurement approach | The regional recycled product processing, and general waste contracts have:<br>• Produced a very competitive pricing structure for the disposal of product tendered;<br>• Introduced improved operational performance requirements through the conditions of contract | • Provision of a set of pricing levels for discarded materials and products;<br>• Protection for Member Councils from monopoly pricing;<br>• Provision of a level of price stability to allow councils to plan and budget for the Service/s over the contract term;<br>• To pass on these benefits to ratepayers -the 'Public' – eg through lower domestic waste charges |
| Industry rationalisation resulting in more efficient resource allocation and stable operating costs could be achieved by nominating receival points under contract | The regional recycled product processing contract has allowed at least one service provider to locate new processing facilities closer to the source of supply, resulting in transport savings to the Member Councils and the ability for the Service Provider to provide | • Protection for councils against un-negotiated changes in recovery/ disposal locations<br>• Ensuring sufficient quantity of product under contract to allow for rationalisation to occur<br>• Allowing the streamlining of logistical arrangements for recovery/disposal<br>• The arrangement has allowed SSROC councils to review the options available for longer term arrangements in light of emerging developments in value adding facilities coming on stream |
| Encouragement of employment | The implementation of the regional contracts has allowed:<br>• Service providers to aggregate product and encourage development of new value adding facilities promoting employment<br>• A new MRF facility to operate within the SSROC region | • Promotion of competition, with new entrants into the market and the provision of local employment opportunity<br>• Economies of scale have been achieved through a regional contract, securing the flow of waste product through the disposal route |
| Promotion of cost savings | • The implementation of the regional recycled product | • Service providers have received a predictable cash |

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| | processing contract has allowed operational cost savings in excess of $2.5m per annum to be achieved, flowing from:<br>- Significant transport savings<br>- Reduced gate fee costs<br>- Shared educational costs<br>- Wider range of product for disposal at lower cost<br>- Transaction cost sharing for procurement of services | flow stream generated from a regular material flow through their operations secured under agreed contractual arrangements.<br>• The form of contract used has been an outcomes focussed and performance based approach. |
| Promotion of economic development & capital investment | The regional recycled product processing contract has allowed the selected service provider to implement significant investment by establishing a large scale facility within the southern Sydney region | Aggregation of waste material under one group of common but individual contracts, has given financial and commercial security to the successful service provider and allowed it to make to make significant investment decisions for the development of infrastructure in the region |
| Beneficiaries from the group procurement approach and distribution of benefit | The regional recycled product processing contract has benefited:<br>• Communities through the provision of an extended education programme<br>• Participating councils with lower gate fees for material disposal<br>• The service provider with security to expand operations in the region<br><br>The form of contract for the regional recycling initiative has allowed all parties and stakeholders to derive financial and social benefit from this collective agreement | Aggregation of waste material under one collective contract has resulted in:<br>• Securing price benefit to participating councils<br>• Stabilising the domestic waste charge cost to users of the Council Service |
| Improvement in the quality of and safety of goods and services | The recent SSROC group procurement activities has put particular emphasis on best practice performance, standards of quality and compliance to introduce the latest industry practices and procedures for environmental and employee safety | Such improvement are intended to provide the industry with:<br>• The ability to implement a common set of standards to raise the quality of service/s across the region<br>• A management system of improvement across the region in terms of OH+S The economies of scale of a set of separate contracts and allow the service provider to introduce better environmental controls |

## ATTACHMENT 3. The Findings of a Review of Municipal Waste Services

Set out below, are six areas of service operation which could benefit from closer review and potential change to improve social, environmental and financial outcomes to communities across southern Sydney

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| **Fleet productivity:** | Each council currently operates a collection fleet, whether in-house or by external contract, which best suits the overall requirements of the community across the council area. This tends to result in the trading off of using a type of vehicle which can for example, negotiate different topographies – such as narrow congested streets and wide open avenues, and also operate a collection mode which can both collect single bins from single dwellings and multiple banks of bins from multi unit and high rise dwellings.<br><br>As a result of analysing the conflicting requirements of collection operations under varying conditions, a fleet capacity utilisation formula has been developed to explain what effect these variations have on fleet efficiency. The key results indicate that operational issues, such as congested streetscapes and work practices have a significant effect on the productivity of the collection service.<br><br>Further studies may be carried out to identify why fleet utilisation levels vary across the region and to develop metrics for measuring and monitoring fleet productivity against benchmark performance metrics. This approach could assist in improving work practices. |
| **Bulk systems in high-rise:** | Data gathered on high-rise households (multi dwelling units of more than three stories in height) identify pockets of intense service delivery within most member council services. For a group of councils within the northern sector of the region, this represents a significant proportion of services for each Council ranging from 41% to 69%. Restricted access to these sites and the presentation of a great number of bins on the kerbside present significant logistical and congestion problems.<br><br>Whilst not all of these dwellings would be either suitable or suitably located for a dedicated service, there could be scope to construct a “composite run” collection service that traverses LGA boundaries to achieve a scale that is both economic to operate and a sustainable alternative to the current services. Such a service could employ collection technologies specifically targeted to the needs and challenges presented by these buildings and their streetscape settings.<br><br>Further studies may be carried out to investigate suitable technologies and establish costs associated with installation and operation of a composite service. |
| **Mini systems in low-rise congested areas:** | There is anecdotal evidence to indicate a group of relatively large, definable areas in both the central and northern parts of southern Sydney, where congested streetscape environments in low-rise dwelling regions present major challenges in waste collection services.<br><br>In these circumstances Councils have moved to smaller vehicles, multi-member crews and rear load compaction vehicles to accommodate the demands of the streetscape. And in at least two Council areas multiple services for general waste are provided within a week.<br><br>This configuration and service demand could well be suited to mini-collection vehicles which could be ride-on or involve the operator walking beside the vehicle with remote control. The vehicles would most likely be battery powered, |

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| | quiet, and suitable for negotiating footpaths and small lanes and provide a high level of flexibility for the service operator.<br><br>To support these vehicles it would be necessary to have mobile transfer vehicles, similar to those envisaged by a Sydney equipment manufacturer for servicing Olympic facilities in 2000. Such a fleet, operating "fishing fleet style" may well produce improved service, cost and environmental outcomes relative to the services of today. |
| **Travel to drop-off locations:** | Throughout the region, the amount of travel by collection vehicles in transferring general waste from the LGA to the drop-off point for processing or disposal is relatively ranging from 33% to 39% of the total distance travelled per day.<br><br>The impact of this non-productive time is quite considerable given that a significant proportion of the vehicle fleet across the whole region, consist of rear load compactor vehicles with multi-member crews, thereby increasing the labour cost associated with this non-productive transfer activity.<br><br>This situation could raise opportunities for investigating types of facilities which could be suitable and appropriate for siting within the region. |
| **Shared services in low-rise areas:** | As with the high-rise dwelling situation, there may well be a case to introduce dedicated single dwelling services that cut across LGA boundaries and use plant and crews best suited for single dwellings – i.e. single operator, side loading vehicles in place of the current equipment. |
| **Communal systems in new developments:** | Planning guidelines could be developed to encourage, or compel, inclusion of communal waste management systems within new developments, involving multi-dwelling building configurations.<br><br>Several technologies are potentially suitable for these concentrated developments and they can be significant in reducing the burden on Councils involved in extending existing waste services into the new developments. Indeed, if a technology such as bulk bins or vacuum extraction systems were employed, the waste service demands of these new developments could be accommodated without impact on existing fleets and crews. |