SALE AND OWNERSHIP ARRANGEMENTS

When a Council enters into a contract with a service provider for the collection of waste materials, a decision is made whether the Council or the contractor will accept ownership of the material. Where a Council collects the material, it will own the material, and where a contractor collects the material, the council or the contractor may own the material.

CHANGE OF OWNERSHIP

Councils or their contractors deliver material to a waste management facility which consists of a landfill, transfer station, composting facility, MRF or other waste processing plant. In general each collection vehicle is weighed inwards and outwards to determine the net weight of each load and Councils are then issued an invoice for payment to the owners of the facility.

The gate fee is based on a cost per tonne ($/t) paid by Council to the facility owner to cover costs associated with the handling, sorting and processing (or disposal). Where waste is disposed to landfill the operator of the facility must pay a levy to the state government based on the number of tonnes received at the gate.

When material is delivered to a waste management facility ownership changes at the point of delivery to the owner/operator, usually at the time the load is weighed at the gate. When recyclable material is delivered direct to market from kerbside, ownership changes to the receiver of the material, for example Amcor, Visy or ACI. Councils that process garden organics at their own facility own the material for a short period prior to returning the garden organics to residents in the form of low quality mulch.

RESOURCE RECOVERY

In the case of DRM the material is sorted in a MRF and sold to end users at a price per tonne ($/t) which is determined by the material type, quality of the product, reliability of supply and other features. Composted garden organics are generally screened and mixed with other recycled or mined raw materials like sand to produce a soil product designed for a variety of customers and uses. The soil product is predominantly sold in bulk ($/t), however it may be bagged and sold as specialty potting mix or mulch through outlets like nurseries.

The cost to recover resources from the waste stream is generally greater than their value, therefore Councils pay the processor and marketer rather than receiving payment for the waste materials delivered.

Residual waste may either be landfilled or fed into some form of AWT. In the first case the landfilled waste continues to be owned by owner/operator of the receiving facility, as does the liability for the ongoing maintenance and rehabilitation of the landfill. In the second case the recovered resources are sold, in a similar way to DRM and composted organics, to end users at a price per tonne ($/t).

RENEWABLE ENERGY

Organic material recovered through AWT may be composted for use in a soil product, or used to create a fuel and then generate energy. Composts from existing AWT in NSW are of such poor quality that they are generally used as alternative daily cover in landfills. In future, improved processing technology may allow these composts to be used in soil products and sold in the same way as composted garden organics. Energy may be sold to the grid or used internally by the waste management facility. Government environmental agencies often consider energy derived from waste as a 'green' energy source.

SUPPLY AND DEMAND

A guaranteed supply of a critical mass of material can significantly affect the cost of processing and marketing. Under the proposed arrangement the successful contractor can have some level of confidence in knowing how much material will be received over the period of the contract and is therefore able to provide a higher level of sorting and processing capability (investment) and secure the long term markets which will deliver the economic stability that the Councils are seeking.

Councils can obtain payment for recovered resources delivered direct to market that meet the end users quality specifications. This is only achieved when they manually sort and remove contaminants from the material as they collect it from the kerbside. For example, a contractor may pay a council $45/tonne for mixed paper delivered directly from kerbside, however this price may be marked down to $30/tonne if the load contained contaminants (materials that end users don't want in their recycling processes). Under these arrangements individual councils are directly exposed to fluctuations in the price of materials, making annual budgeting difficult.

REGIONAL CONTRACT

Under the Regional Contract it is proposed that all material supplied to the Head Contractor will become the property of the Head Contractor. Once the material has been processed, the Head Contractor will sell the range of commodities into the marketplace to end users. The Head Contractor will enter into an agreement with each Council for the receival of waste materials based upon a range of factors, including:

- The system of collection used by each council;
- Material streams presented to the contractor for processing;
- Quantity of waste material supplied; and
- Quality of waste material supplied.

The success of the tender process will be measured, in part, by the capability of proponents to demonstrate that Councils will benefit financially under the regional arrangement. This may mean that, in relation to the supply of material, Councils would either benefit with an improved rate in $/tonne or a reduced distance to receival facilities.

Resource NSW has a preference for long-term secure market arrangements in order that Councils have financial and budgetary certainty. This will ensure that collection programs will continue uninterrupted for the duration of the arrangement. However, it is recognised that a Head Contractor has the right to have a mix of long-term and spot markets to secure the most favourable financial outcome. Vertically integrated companies such as Visy, who operate MRF's and also process a portion of the DRM into manufactured cardboard and plastic products, may present a different set of circumstances (as Head Contractor) because of their ability to process the material, leaving a residual quantity for on-sale into other markets.

MARKET DEFINITION

There are three separate markets for kerbside collected waste materials, one for each stream commonly collected at the kerbside (DRM, garden organics and residual waste). In all cases the 'service' is the provision of receiving, handling, processing and disposal (by sale or otherwise) of waste materials.

Markets for kerbside collected waste materials are currently in transition. Historically there were no competitive markets for disposal of waste to landfill. In most cases local government was given the responsibility for collecting and disposing of waste to minimise impact on public health. In Sydney a state government organisation was established to manage the numerous landfills accepting Sydney's waste. This organisation eventually became Waste Service NSW, now a wholly owned state government corporation.

DRY RECYCLABLE MATERIAL

During the 1990's all metropolitan councils and many other councils in Australia introduced kerbside collections for DRM. The development of a market for DRM was initially subsidised by the State Government. MRF's were constructed by Waste Service NSW, which was still a state government authority at that time, and by several private sector waste companies. It was soon realised that the value of sorted product (without government subsidy) would not cover the entire cost of sorting. Many contracts had been signed allowing Councils to deliver DRM free of charge. The result was that a number of organisations lost money, closed or went out of business. Those with more flexible contracts started charging councils a gate fee to receive DRM.

For councils the cost of collecting DRM separately, coupled with the gate fee at the MRF, is usually greater than sending all waste material to landfill (although this is slowly changing with the increased cost of landfilling and the landfill levy). In theory, after the initial market failure caused by the subsidy, landfill disposal of DRM should have out-competed resource recovery using a MRF. In practice a community desire to recycle had been created, and indeed heavily supported by Councils, through a decade of kerbside recycling and environmental education. In addition the NSW government set a series of municipal waste diversion targets, culminating in 2003 with a target of 66% resource recovery by 2014.

Disposal of DRM to landfill is not now an option for councils with established DRM collections. For this reasons it is more realistic to consider the market for DRM as totally independent of the market for residual waste and garden organic materials.

RESIDUAL WASTE

Waste Service NSW controls all Class 1 landfills receiving residual waste in the SMA. All of these landfills are nearing their licensed capacity (within approximately 10 years). As the capacity of landfills servicing the SMA has dwindled there have been repeated efforts by the large market players to develop 'mega' tips outside the SMA, but within a reasonable transport distance from Sydney. For example, efforts to locate a new Class 1 solid waste landfill for Sydney's waste in the Hunter Valley have

repeatedly been blocked by concerned residents and the local viticulture industry. In response Waste Service NSW, and all of its competitors, are moving away from traditional (dry tomb) landfill and are proposing the development of large scale AWT, usually adjacent to existing landfills.

With the corporatisation of Waste Service NSW and changes to laws licensing landfills the market for the disposal of municipal residual waste has been opened up to the private sector. Competition has further increased since waste treatment technologies capable of recovering resources from the residual waste stream (AWT) became a cost effective option to landfill. Councils are now presented with a 'market' for residual waste disposal rather than a public service provided by government. Given the right conditions there is potential for waste disposal service providers to compete for guaranteed supply of residual waste from Councils. This competition is already evident in the industry.

Although there is potential for a competitive market for provision of residual waste disposal services, Waste Service NSW still has a monopoly in the SMA. It is only some regional areas, where the waste disposed is managed by councils rather than Waste Service NSW, that have provided an entry point for Waste Service NSW competitors. These competitors have entered the market by responding to council tenders with proposals for AWT, which have then been accepted by councils eager to divert waste from landfills and avoid construction of new landfills in their LGA. The two early examples of this market trend in NSW are Bedminster at Raymond Terrace (Port Stephens Council) and the SWERF at Kembla Grange (Wollongong City Council).

GARDEN ORGANICS

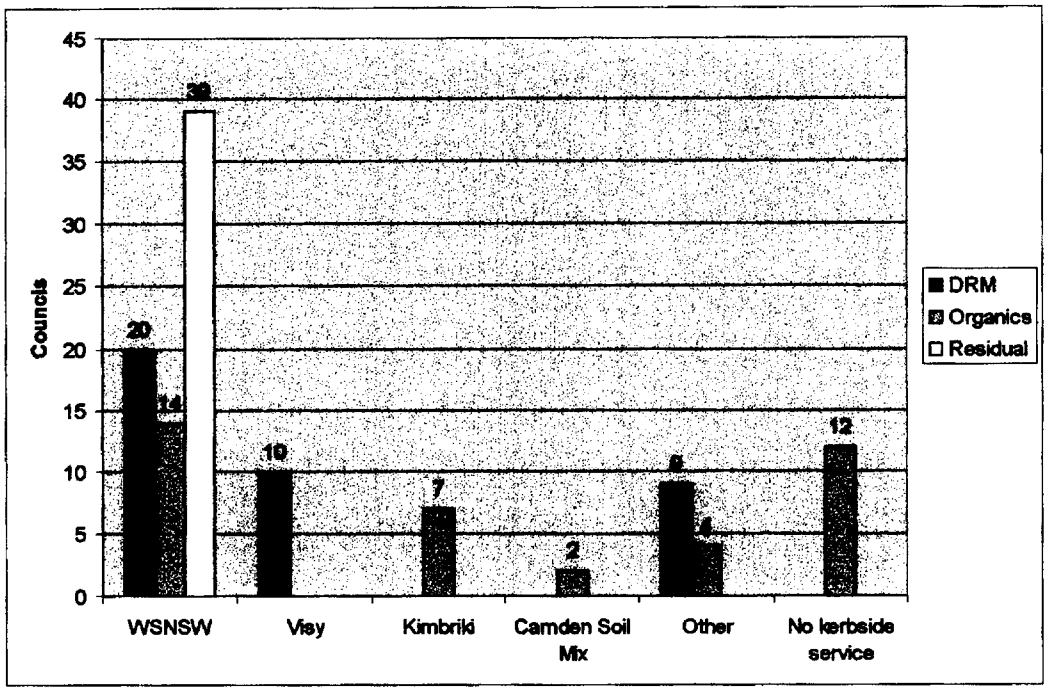
The market for processing of kerbside collected garden organics, like the market for DRM, has grown out of the need to divert waste from landfill and recover useful resources. Not all councils provide a kerbside collection service, preferring to offer drop-off services to residents either at their own waste management facilities or at Waste Service NSW landfills. Some councils encourage residents to maintain their own compost heaps or buy specially designed home composting kits rather than introduce a MGB based collection system.

Councils that choose to offer a kerbside collection service for garden organics collect it in such large quantities that the use of a contractor specializing in composting and marketing the organic product becomes viable and even desirable. Unless the material is composted under carefully controlled conditions there is a risk that the organic product will spread plant pathogens and active weed seeds wherever it is used. This creates a potential liability for any council that distributes chipped, mulched and/or poorly composted organic materials.

Waste Service NSW receives the kerbside collected garden organic material from 14 of the 27 Councils in the SMA that provide such a service. A further 7 councils deliver their material to Kimbriki, a privately owned waste management facility in the northern suburbs of Sydney. Both Waste Service NSW and Kimbriki pass on (under contract) kerbside collected material and garden organics dropped off at their waste management centres to Australian Native Landscapes. Camden Soil Mix, who accept organic waste

from Camden and Campbelltown Councils, is the next largest processor of municipal garden organics in the SMA.

Figure 6 Market for waste materials in the SMA, by service provider



Source: Resource NSW internal database

SEPARATION OF MARKETS

Established and proposed AWT are capable of processing a mixed residual and garden organics stream. In some cases AWT providers prefer garden organics to be mixed with residual wastes, both because of the additional gate fees and because their technologies are designed with the combined waste stream in mind. This means that, at least where garden organics are being processed through an AWT, the market for residual waste competes with the market for garden organics. In the same way enclosed composting facilities can receive a mixed garden organics and food organics (the putrescible component of residual waste) stream, competing with residual waste disposal markets.

GEOGRAPHICAL BOUNDARIES

The geographical boundaries of the markets are defined mainly by limitations on transport distance. Processing infrastructure outside the SMA and Illawarra cannot compete for DRM and garden organics from the Councils because these materials are too bulky to transport over long distances in an unprocessed form. The same is largely true for residual waste. A notable exception is Collex's wet bioreactor facility at Woodlawn, which has been located to take advantage of rail infrastructure. Inter-modal facilities (transfer from truck to train) would need to be developed to take advantage of such distant infrastructure.

WASTE MANAGEMENT INDUSTRY OVERVIEW

Half of the national and NSW waste industry turnover is controlled by five major corporations. These players include: Cleanaway; Collex; SITA; Thiess and Waste Service NSW. Waste Service NSW has a significantly different service base because it does not currently have a collection or transport arm, despite controlling all the transfer stations and solid waste landfills (other than those owned by councils) in the Sydney Region.

Nationally approximately 95% of businesses in the waste management industry have a turnover of less than $500,000, with the top five corporations accounting for 42% of the total market. Approximately 1,195 businesses account for 58% of industry turnover.[1]

Government, principally councils, controls approximately 30% of the total tonnages handled by the Private Waste Sector. On this basis local government has considerable influence on the services and behaviour of the Private Waste Sector. In contrast, 70% of the tonnages handled by the private waste sector are sourced from businesses (C&I + C&D). Strong competition and the willingness of business to pay effectively determine the mode of collection, consolidation, transport, and processing services provided by the Private Waste Sector.

Historically services within the waste management industry involved the collection, haul and disposal of refuse to publicly owned facilities. Differentiation of services was difficult except on the basis of price and the industry was characterised by high levels of competition exacerbated by low barriers to entry and low prices. Some parts of the waste management industry continue to operate in this manner.

More recently, larger players have developed their own facilities to vertically integrate services and obtain strategic advantages not available to smaller players. The introduction of collection and sorting technology has been used to improve efficiencies and compete with other service providers. Facilities have included landfills, transfer stations and sorting facilities. These recent developments represent considerable barriers to new entrants. Additional barriers include :

- Market share of existing operators
- Length of existing service contracts (particularly for LGAs).
- Costs of compliance with regulatory requirements.

Some resource recovery markets have provided new financial and strategic opportunities in the waste industry. Manufacturing companies (for example Visy) have entered collection markets which have previously been the domain of waste carriers in order to establish collection systems to secure feedstock for paper and cardboard plants. A company called Earthpower has captured high quality food wastes from the

[1] Figures are only available for national turnover which does not detail NSW turnover, however in NSW the concentration of turnover in the top five corporations will be higher than 42% given Waste Service NSW's domination in the Sydney region.

commercial sector which are being processed at their recently commissioned anaerobic digestion plant (the commercial viability of the plant is yet to be proven).

Both of these activities can be seen as "picking lower hanging fruit" and they are not indicative of a trend that is likely to have a significant impact in the medium term on increasing the resources recovered from the waste stream. In regard to commercial and industrial generators, there is currently no real driver for businesses to seek recycling/reprocessing services. C&D sector recovery rates have been attributed, in part, to the success of the Section 88 levy, which provides strong price incentives to divert heavy materials from landfill.

EFFECT ON COMPETITION

The applicants understand that there is some potential argument that the arrangements set out above may cause the councils to infringe section 45(2)(a)(ii) of the *Trade Practices Act*.

It is submitted that there is no question of the proposed arrangements having the purpose of substantially lessening competition. The only question for consideration is whether they would have the likely effect of substantially lessening competition.

TIMING

Waste Service NSW is the only service provider that can provide residual waste disposal services to the Councils immediately. All potential competitors to Waste Service NSW would take between one and three years to secure land, gain planning approval and construct transfer stations and/or a processing facility. This means that in the existing market for residual waste disposal services the Councils are 'price takers', if only because there are so few immediately available options and therefore very little competition.

In order to attract a larger number of potential service providers (competitors to Waste Service NSW) the Councils must give them sufficient time to prepare a tender, sign the contract and develop the necessary infrastructure. For residual waste processing, the most infrastructure intensive service, it is estimated that a service provider will require a minimum of 2 years from the date the contract is signed until they start accepting waste. This assumes that either they own land, hold an option on appropriate land or have established a partnership with an existing land-holder. It also assumes that the approval process is not unduly delayed.

If competing service providers are not given sufficient time they will be disadvantaged in the tender process compared to Waste Service NSW who has existing land, infrastructure and supply agreements. The necessary timetable of tasks is detailed in the following table. By undertaking such a timetable the Councils are specifically working towards greater competition for the processing and marketing of kerbside collected material.

Table 6 Timetable for the proposed tender process

Task	Duration	Timing	Responsibility
Application to ACCC	6 months	October 2003 - March 2004	Councils
Prepare tender documents	3 months	October 2003 - December 2003	Councils
Advertise tender and prepare response	4 months	January - April 2004	Councils
Close tender		April 2004	Councils
Assess tender	2 months	May 2004 - June 2004	Councils
Award contract		July 2004	Councils
Develop MRF	12 months	July 2004 - July 2005	Contractor
Develop organics processing facilities	12 months	July 2004 - July 2005	Contractor

Develop AWT based facility	24 months	July 2004 - July 2006	Contractor
Start to receive DRM and garden organics		September 2005 (as existing agreements end)	Contractor & Councils
Start to receive residual waste		Prior to end 2006	Contractor & Councils

The Councils recognise that advertising the tender may precede notification of authorisation by the ACCC. This is necessary given the time required to complete the other steps in the process. Awarding of the contract will be subject to ACCC authorisation. This allows up to eight months (under this timetable) for the ACCC to make their decision.

GUARANTEED SUPPLY AND CRITICAL MASS

In addition to the lack of competition in the residual waste market, there is the related issue of supplying a critical mass of waste material to an AWT. A supply of 50,000 tonnes per year is considered the minimum to justify construction of the AWT available at this time. In many cases it is not until a facility can obtain greater than 100,000 tonnes per year over a ten or more years that it can offer a gate fee comparable with today's landfill gate fee.[2]

Without a critical mass of material, individual councils must seek residual waste disposal services from service providers with established AWT or landfills. The only two possible service providers in this position are Waste Service NSW and Collex. Collex have yet to confirm their transport arrangements from Sydney to Woodlawn and therefore cannot yet process waste from the SMA at their Bioreactor.

Like Collex, an alternative service provider may be able to fund the development of AWT without a guaranteed supply of material. This will occur only where finance can be secured against other significant assets within the proponent's company. Other than Woodlawn, there is no evidence of such developments occurring in NSW at this time.

Supplying a critical mass of material is also an issue for the DRM and garden organics streams. In both cases the processing infrastructure is less costly for these partially sorted waste streams, making establishment costs lower and reducing the critical mass of material required. However, there is also less of this material generated per resident (and therefore per council). This means that a council with a population of 100,000 will only produce around 10,000 tonnes per year of each waste stream.

Highly automated sorting for fully commingled DRM is said to require a minimum of 25,000 tonnes per year over ten years in order to obtain the best price from a service provider.[3] Processing of garden organics into quality composts suitable for sale becomes progressively cheaper on a per tonne basis up to a scale where major equipment (screens and windrow turners) are fully utilised. This is also around the 20,000 to 25,000 tonnes per year level in an open windrow facility.

[2] Even relatively large urban councils such as Liverpool generate less than 50,000 tonnes per annum of residual waste, insufficient material to justify construction of an appropriate facility.
[3] This figure was obtained from prospective service providers during and Expression of Interest process run by Macarthur Waste Board (2001).

Less infrastructure intense solutions are possible but they deliver lower quality and quantity of recovered resources (for the same processing cost per tonne) or rely on greater separation of material at the source (at kerbside).

Again, without a critical mass of material, individual councils can only attract service providers with established facilities to process their kerbside collected DRM. In addition the best price for processing and marketing DRM and garden organics cannot be obtained with the supply from a single council. With sufficient quantities of material processors can invest in more efficient equipment and amortise that equipment over greater quantities of material (translating to less $/tonne gate fee).

It is clear from the description of the markets provided in this application that Waste Service NSW currently dominates the DRM and garden organics markets. It also has a monopoly on the residual waste disposal market within the SMA.

By collaboratively tendering the Councils will provide sufficient waste material for organizations without established infrastructure, or lacking a guaranteed supply of materials from other sources, to submit a competitive proposal. Therefore it is submitted that a likely effect of the proposed collaborative tendering process is to increase competition relative to existing market arrangements.

EFFECT ON SUPPLY

By collaboratively tendering the Councils reduce the number of potential suppliers of kerbside collected waste materials. It is submitted that the Councils represent only a small proportion of the overall supply of DRM, garden organics and residual waste.[4] Of the estimated 1.8 million tonnes per annum of waste collected by councils in Sydney the Councils represent 156 000 tonnes or less than 9% of the total.

In addition to kerbside collected material there are also many private generators (and therefore suppliers) of waste and recycled materials.. Using the estimates from Table 7 the Councils waste material represents only 2.2% of the 7.2 million tonnes processed and disposed within the combined Sydney resource recovery and disposal markets.

Table 7 Estimated waste flows in the SMA, by sector

	Municipal Sector m.tpa	C&I Sector m.tpa	C&D Sector m.tpa	Total m.tpa
Waste Generated	1.8	2.9	2.5	7.2
Recycled/Reprocessed	0.4	1.3	1.5	3.2
Inert Landfill	0	1.0	1.0	2.0
Putrescible Landfill	1.4	0.6	0	2.0

Source: Wright Corporate Strategy Market Intelligence (2001) *Australian Waste Industry: Industry and Market Report*

Whether the Councils tender individually or collaboratively it is likely that, at least in terms of material supply, the same result will be achieved. The need for critical mass of material guaranteed over an extended period (discussed earlier) forces service providers to obtain supply from multiple Councils over extended contracts. Service providers

[4] The Councils are five local governments amongst the 44 councils in the SMA and Illawarra.

Whether the Councils tender individually or collaboratively it is likely that, at least in terms of material supply, the same result will be achieved. The need for critical mass of material guaranteed over an extended period (discussed earlier) forces service providers to obtain supply from multiple Councils over extended contracts. Service providers must therefore attract regional groups of councils, preferably from the same geographical area, rather than individual councils. In either case this means that kerbside collected waste materials from the SMA will be supplied to somewhere between five and ten major waste processing facilities.

COMPETITION IN DOWNSTREAM MARKETS

The downstream markets for recovered inert materials, soil products and energy are all substitutable with virgin supplies of the same or similar material and therefore compete with those materials. Markets for recovered DRM are well established but are dominated by a limited number of buyers, often specialising in a particular material type. Markets for composts include a much larger range of buyers and depend greatly on supply of quality product designed to the specific needs of customers. Anecdotal evidence indicates that this market, particularly for low quality mulches or contaminated organics, is over-supplied at this time. In particular there are no markets for the low grade compost materials produced from AWT processing residual waste (mixed solid waste).

The market for energy is very large relative to the potential supply from an AWT processing the Council's waste. An energy product from waste is entirely substitutable with energy from traditional sources such as coal. Waste management solutions that include energy from waste have been encouraged over recent years in an effort both to reduce greenhouse emissions and produce energy from 'green' sources. This is despite the fact that waste to energy is not strictly a renewable source of energy. As a result government agencies have distributed grants to some technology and service providers to assist waste to energy projects.

It is submitted that the successful processor(s) and marketer(s) of waste materials from the Councils will have insufficient market power to negatively influence any of the downstream markets. The only possible exception is the market for soil products, which may be influenced by the increased diversion of garden organics predicted under the contract. In this case it is more likely that organic waste will be used to generate fuels and energy.

PUBLIC BENEFITS

The proposed contract(s) will bring about numerous benefits to the general public. In summary they are:

- Increased competition in markets currently dominated by one company;
- Improved coordination of recycling services between the Councils; leading to an,
- Increased efficiency of service provision and minimisation of costs to Councils and therefore to the community through a reduced domestic waste management charge;
- Improved resource recovery infrastructure available for both domestic and commercially generated waste materials;
- Increased transportation and materials handling efficiencies; and
- Increased resource recovery; leading to,
- Environmental benefits.

INCREASED COMPETITION

As discussed in the previous section, it is likely that the proposed arrangements will increase competition for the waste materials collected by the Councils. The existing market is one in which a single (government owned) company has market dominance and must be regulated by both the ACCC and the NSW State Government in order to control the cost of disposal. The proposed arrangements allow the waste management industry to get one step closer to an open and competitive market where councils and private waste generators can seek the most efficient solution from a range of potential service providers.

EFFICIENT SERVICE DELIVERY

The proposed contract(s) will provide a formal mechanism for coordination between five councils and up to three processors and marketers of waste materials. Without such an agreement between the parties individual councils would establish and maintain individual contracts with each service provider, each one of them constructed and managed in different ways. Apart from the obvious advantages of having a fifth of the contracts to write, agree upon and manage, there is the potential for improved coordination of the collection and disposal services across the five councils.

For example, consistency in the type of DRM collection bin means a consistent mix of DRM is delivered to a sorting facility, requiring only one configuration of sorters and equipment. Consistent messages to the public using the same promotional material can also assist in reducing contamination and increasing DRM yield. Such consistency can reduce the necessary infrastructure and therefore increase the processing efficiency.

Centralised processing and handling of materials in bulk is likely to increase transportation and materials handling efficiencies. As pointed out in earlier discussions regarding supply of a critical mass of material, fully utilising key infrastructure and equipment allows service providers to charge a lower gate fee per tonne of material delivered. This is particularly advantageous for the smaller councils who, on an

individual basis, either have to be satisfied with less efficient infrastructure or must transport their material in an unprocessed form over long distances.

APPROPRIATE INFRASTRUCTURE

It is extremely unlikely that any service provider will be able to dispose of residual waste to a new or expanded landfill within or nearby the LGA of the Councils. This is mainly due to the difficulty in gaining planning approval for construction of landfills within the Hunter, SMA and Illawarra. Collex may be able to provide residual waste disposal services at their Woodlawn bioreactor, however this would require at least one rail head and inter-modal facility be constructed within the LGA of the Councils.

Given these factors the three most likely outcomes for residual waste are:

- Construction of an AWT within the Council's LGA;
- Aggregation and transfer to Collex's Woodlawn Bioreactor;
- Aggregation and transfer to an AWT located in another part of the SMA or the Illawarra.

Waste Service NSW have stated that their landfill at Jacks Gully will close in 2006. This is partially due to the lack of available landfill space, however it is also influenced by the need to develop surrounding land for housing. Existing development had already encroached on the buffer around Jacks Gully and Landcom, a government development corporation, has shown a strong interest in further developing the area to meet Sydney's growing housing needs. Waste Service NSW intend to construct an AWT on the site in order to decrease the local environmental impacts and ensure the buffer between the site and residential development is sufficient to avoid resident complaint.

Alternatives to the construction of an AWT at Jacks Gully do exist, however unless the Councils undertake a competitive tender for residual waste processing Waste Service NSW will simply construct their waste management solution as planned. More appropriate, efficient and cost effective infrastructure options may be available. Without testing the market the Councils will not have the opportunity to explore these alternatives and may not receive the most appropriate solution for their region.

Should the proposed tender process proceed Waste Service NSW will be required to compete for the waste materials it currently receives. Although councils generate only 30% (approximately) of the total waste going to landfill, they are the only source of material that can be guaranteed over long periods. Unlike the other major corporations involved in waste management, Waste Service NSW is not involved in the collection of solid waste. This means that, apart from councils, they do not have a supply of waste even over short terms (12 months). Should another service provider win the contract WSNSW may wish to reconsider the construction of and AWT at Jacks Gully. It is likely that the successful service provider(s) will be in the best position to provide waste management services to the private sector.

Waste Service NSW owns the only existing infrastructure for processing of DRM in the region, the Jacks Gully MRF. This facility is designed to accept up to 30 000 tonnes per annum of DRM in two material streams, paper/cardboard and containers. Significant

changes will be required to this MRF before it can process a fully commingled recycling stream.

There is currently no MRF to service the south of the region and limited capacity throughout the region for processing additional mixed recyclables from domestic or commercial sources. The proposed arrangement will increase public and commercial access to recycling infrastructure throughout the region. It will also increase the convenience of recycling services to the public by allowing the introduction of fully commingled recycling services by the Councils. The result will be an increase in resource recovery, a recognised goal of the NSW Government under the *Waste Avoidance and Resource Recovery Act* (2001) and the subsequent *Waste Avoidance and Resource Recovery Strategy* (2003).

Wingecarribee Shire Council, forming the southern portion of the region, has adopted a commingled system of recyclables collection (with glass separately collected) in anticipation of a regional facility being available for processing this material. In the interim Wingecarribee is paying an additional cost to transport material approximately 100 kilometers to a MRF at Chullora (just north of Bankstown). The short term nature of the agreement with Waste Service NSW and the lack of an appropriate receival point in the south of the region are incurring an increased cost to Wingecarribee Shire. The proposed arrangement will ensure appropriate receival point for Wingecarribee and Wollondilly Councils. This may be a MRF, however it is more likely to be a purpose designed DRM transfer station.

Garden organics generated in Camden, Campbelltown and Liverpool are likely to be collected on a source separated basis. The infrastructure required to process this material exists at Camden Soil Mix and could very easily be arranged at Waste Service NSW facilities. Unfortunately odour issues limit the ongoing application of open windrow technology to kerbside collected garden organics, particularly in the vicinity of residential areas. It is likely that future processing of organic waste in the region will require enclosed composting systems, and therefore higher levels of investment. An alternative is to include garden organics in the residual waste bin and recover the resources through an AWT.

Prospective processors of garden organics will require longer contracts and greater quantities of material to justify investment in enclosed composting systems. If the Councils are to obtain organics processing infrastructure near the source of the waste (residential areas) they will need to utilise these systems. Collaborative tendering is an effective mechanism for gathering sufficient material to justify the required infrastructure.

RESOURCE RECOVERY AND ENVIRONMENTAL BENEFITS

The stated aim of the proposed arrangements is to divert waste materials from landfill and convert them, at a cost, into a resource of some economic value. This aim is partially driven by the lack of landfill space in the SMA and the difficulty in siting new landfills. State Government resource recovery targets, the latest municipal sector target being 66%, have also provided an incentive. However, a key motivation for the Councils is resource recovery leading to reduced resource use and lower environmental impact.

The Councils diverted 44.5% of the waste materials they collected away from landfill in 2002/2003 financial years. This is significantly better than the state average, which was quoted at 26% in the NSW *Waste Avoidance and Resource Recovery Strategy*. Unfortunately existing municipal resource recovery systems in the region are operating near their theoretical limits (see earlier comments on the best performing DRM collection systems). To reach the 66% resource recovery target within the next 5 years systems and technologies that divert the majority of putrescible organic waste from landfill will be required. The proposed arrangements are a key mechanism for achieving this resource recovery target.

The infrastructure that will be developed under the proposed arrangement replaces or improves upon landfilling, an inherently environmentally damaging activity. Landfills produce, greenhouse gases, offensive odours and leachate with the potential to pollute surface and groundwater. Increasing the recovery of DRM and organic material and converting it into a resource input to the economy reduces the need to extract virgin materials and returns valuable nutrients to public parks and gardens and intensive agriculture. Developed countries world-wide have recognised the public benefit of recycling and, more recently, have moved towards technologies for recovering resources (including energy) from mixed solid waste.

It is likely that AWT will be introduced whether or not the Councils collaboratively tender. Waste Service NSW is under pressure to discontinue landfilling at Jacks Gully in order to reduce local environmental impacts and therefore must move to AWT if they are to continue their business in the area.

It is submitted that the proposed tender is more likely to obtain a waste management solution focused on resource recovery and environmental responsibility. The Councils have a responsibility to the community and a commitment to Ecologically Sustainable Development (ESD) rather than the focus on financial return that a business such as Waste Service NSW must pursue. It is appropriate that they set the environmental, social and financial framework and allow the market to deliver the most efficient solution.

GLOSSARY OF KEY TERMS

Alternative Waste Technology (AWT)	Waste processing technologies that provide and alternative to landfill disposal. Automated systems for the separation of mixed solid waste into its components streams, with the objective of producing higher value material and energy products. AWT can also refer to technologies that process organic wastes only.
Dry Recyclable Material (DRM)	Paper, cardboard and containers separated from organic and other mixed waste at the kerbside and having some value when processed to market specifications.
Garden Organics	Putrescible garden waste (grass clippings); non-woody garden waste; woody garden organics; trees and limbs; and stumps and rootballs separated from inorganic and non-biodegradable materials at the kerbside.
Residual Waste	Any materials that cannot be separated into the DRM or garden organics streams or materials are mixed together in such a way as to be impractical to separate by residents.
Resource Recovery	Recovery of resources from waste by recycling, composting or generating energy from waste. AWT could be defined as a combination of resource recovery systems.
Solid Waste	Encompasses all municipal residual waste, commercial and hazardous wastes that are suitable for disposal in sanitary landfill as defined by the NSW Environmental Protection Authority. NB: Liquid wastes are not suitable for disposal in landfill.
Source Separation	The sorting of waste by material type at the point of generation, for example, the sorting of household recyclables into the kerbside recycling bin.
Waste Materials	Collective term for all three streams of kerbside collected materials (dry recyclable material, garden organics and residual waste).

Attachment B: Location of Waste Management Facilities and Local Government Boundaries, South West Sydney