

FINAL REPORT

Palerang Council Waste Management Strategy 2005-2025

Prepared for

Palerang Council

11 Farrer Place,
Queanbeyan, NSW, 2620

30 June 2005

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ADOPTED BY PALERANG COUNCIL ON 30TH JUNE 2005

The logo for URS, consisting of the letters 'URS' in a bold, blue, sans-serif font.

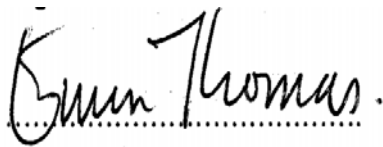
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Executive Summary -----	ES-1
1 Introduction -----	1-1
1.1 Palerang Council	1-1
1.2 Objectives of the Waste Strategy	1-1
1.3 Current Waste Management Practices	1-2
1.4 Structure of the Waste Strategy Report	1-2
2 Development of the Strategy -----	2-1
2.1 Review of information	2-1
2.2 Assessment of Current Landfills	2-1
2.3 Development and Comparison of Options	2-1
2.4 Development of Council-wide Strategy	2-2
2.5 Public Consultation	2-2
3 Key Planning Legislation and Guidelines in NSW -----	3-1
3.1 Waste Management related Legislation and Guidelines	3-1
3.1.1 Waste Avoidance and Resource Recovery (WARR) Strategy	3-1
3.1.2 Environmental Guidelines: Solid Waste Landfills	3-3
3.1.3 State Environmental Planning Policy (SEPP) 48 – Major Putrescible Landfill Sites	3-4
3.2 Local Government Act 1993	3-5
3.3 Environmental Planning Legislation	3-5
3.3.1 Environmental Planning and Assessment Act 1979	3-5
3.3.2 Heritage Act 1977	3-6
3.3.3 National Parks and Wildlife Act 1974	3-6
3.3.4 Protection of the Environment Operations Act 1993	3-7
3.3.5 Threatened Species Conservation Act 1995	3-7
3.3.6 Rivers and Foreshores Improvement Act 1948	3-7
3.3.7 Native Vegetation Conservation Act 1997	3-8
3.3.8 Roads Act 1993	3-8
3.3.9 Water Act 1912 and the Water Management Act 2000	3-8
3.3.10 State Environmental Planning Policy (SEPP) 55 – Remediation of Land	3-9
4 Existing Landfill Assessment -----	4-1
4.1 Introduction	4-1
4.2 Macs Reef Landfill	4-3
4.2.1 General	4-3
4.2.2 Estimated Landfill Life	4-3
4.2.3 Key Environmental and Engineering Issues	4-3
4.2.4 Future Options Macs Reef	4-5
4.3 Bungendore Landfill	4-6
4.3.1 General	4-6
4.3.2 Landfill Life	4-6
4.3.3 Key Environmental and Engineering Issues	4-6
4.3.4 Future Options Bungendore	4-8

Contents

4.4	Collector Landfill	4-9
4.4.1	General	4-9
4.4.2	Landfill Life	4-9
4.4.3	Key Environmental and Engineering Issues	4-9
4.4.4	Future Options Collector	4-11
4.5	Captains Flat Landfill	4-12
4.5.1	General	4-12
4.5.2	Landfill Life	4-12
4.5.3	Key Environmental and Engineering Issues	4-12
4.5.4	Future Options Captains Flat	4-16
4.6	Braidwood Landfill	4-17
4.6.1	General	4-17
4.6.2	Landfill Life	4-17
4.6.3	Key Environmental and Engineering Issues	4-17
4.6.4	Future Options Braidwood	4-19
4.7	Araluen Landfill	4-20
4.7.1	General	4-20
4.7.2	Landfill life	4-20
4.7.3	Key Environmental and Engineering Issues	4-20
4.7.4	Future Options Araluen	4-22
4.8	Majors Creek Landfill	4-23
4.8.1	General	4-23
4.8.2	Landfill Life	4-23
4.8.3	Key Environmental and Engineering Issues	4-23
4.8.4	Future Options Majors Creek	4-26
4.9	Nerriga Landfill	4-27
4.9.1	General	4-27
4.9.2	Landfill Life	4-27
4.9.3	Key Engineering and Environmental Issues	4-28
4.9.4	Future options Nerriga	4-29
4.10	Summary of Options	4-30
5	Council Wide Waste Strategy -----	5-1
5.1	Introduction	5-1
5.2	Year 1: 2005/2006	5-2
5.3	Year 2: 2006/2007	5-4
5.4	Year 3 (2007/2008)	5-5
5.5	Year 4 (2008/2009)	5-6
5.6	Years 5 (2009/2010) and Year 6 (2010/2011)	5-8
5.7	Years 7 (2011/2012) and Year 8 (2012/2013)	5-9
5.8	Years 9 (2013/2014) through to Year 16 (2020/2021)	5-10
5.9	Year 17 (2021/2022)	5-12
5.10	Year 18 (2022/2023) through to Year 20 (2024/2025)	5-13
5.11	Summary of Costing	5-14
5.11.1	New Capital and Operating Costs	5-14
5.11.2	Operating costs	5-15
6	Waste Strategy Funding -----	6-16
6.1	Council Wide Waste Charge	6-16
6.2	User Pays Model	6-17

Contents

7	Limitations	7-1
8	References	8-1

This report outlines a 20-year waste strategy (from 2005/06 to 2024/25) for Palerang Council, which provides Council with a clear vision on the key infrastructure elements it will need to provide the community to manage their waste in a sustainable manner. The strategy has been developed based on meeting the communities future waste management requirements taking into consideration status of current infrastructure, environmental, financial and social impacts.

The strategy was prepared by reviewing existing information provided by Council, assessing the individual existing waste management infrastructure in particular the landfills, and comparing options to develop a preferred Council wide integrated waste management strategy.

This strategy outlines measures such as extending kerbside recycling, to reduce the amount of waste currently going to landfill in the Palerang Council area in line with the aims of the NSW Waste Avoidance and Resource Recovery (WARR) strategy. A detailed Resource Recovery Strategy will be prepared by Council next year outlining further initiatives, inline with the framework provided in this report, to reduce waste going to landfill.

ES1.1 Assessment of Individual Landfills

Site visits were carried out in April to each of the landfills currently in operation with the Council area (Macs Reef, Bungendore, Collector, Captains Flat, Araluen, Majors Creek and Nerriga). The site visits were used to estimate the landfill life remaining in each of the landfills based on the number of properties within each landfill catchment and the estimated remaining landfill volume. The site visits were also used to identify key environmental and engineering issues associated with the operation of the landfills.

Key issues identified at several of the existing landfills included:

- Uncovered waste: Due to a shortage of cover material on the site, waste is kept uncovered for long periods (greater than 2 weeks). This results in several environmental issues including windblown litter, feral animals, odour and increased leachate production.
- Batter slopes are poorly covered and not rehabilitated resulting in high erosion of cover material and waste into drainage paths.
- Unlined landfill overlying sandy soils, with no leachate collection system or monitoring system in place to identify groundwater or surface water contamination;
- Poor signage on sites identifying where to place particular wastes and recyclables leading to waste being mixed with recyclables

It is recommended that Council implement a staged monitoring plan at all its landfill to identify any water pollution, which may be occurring. The monitoring will provide good information on key areas to be rehabilitated as part of the closure plans for the operating sites and identify any problems with closed sites. Also efforts should be made by the operators at each of the sites to minimise the size of the tipping face used, thereby reducing the area needed to be covered and consequently potential for windblown litter and other environmental issues such as feral animals, and increased leachate production, which were observed at all the landfills.

Executive Summary

Future options for management of waste in the individual catchments were compared based on the assessment carried out. A comparison of each of the options taking into consideration capital and operating costs, environmental and social criteria was carried out. These future options however only considered the individual landfill waste catchments and not the overall council wide waste management issues. Section 5 of the strategy draws upon the individual assessments carried out, to outline an integrated waste management strategy for the entire Council area. A summary of the preferred options for each of the individual landfill catchments is provided below.

Landfill Catchment	Preferred option from an individual catchment basis
Macs Reef	Option (2) Closure in approximately 2 years with residents using Bungendore landfill.
Bungendore	Option (3) Closure in approximately 3 years with construction of a transfer station
Collector	Option (3) Closure in approximately 12 years with construction of a transfer station
Captains Flat	Option (2) Immediate closure and rehabilitation with construction of a transfer station.
Braidwood	Option (3) Closure and rehabilitation in approximately 10 years with construction of a transfer station to take waste to a major landfill outside Council area such as Woodlawn.
Araluen	Option (3) Closure and rehabilitation in approximately 8 years with construction of a transfer station to take waste to a major landfill outside Council area.
Majors Creek	Option (3) Closure and rehabilitation in approximately 8 years with construction of a transfer station to take waste to a major landfill outside Council area.
Nerriga	Option (3) Closure and rehabilitation in approximately 20 years with construction of a transfer station to take waste to a major landfill outside Council area.

ES2.1 Integrated Council Wide Waste Management Strategy

Based upon consultation with Council, background research, site visits, and the analysis carried out for the individual waste catchments, a 20-year waste strategy was prepared outlining key actions to be implemented over the period. The actions provided in the strategy are based on best available information at the time of preparation, and as the strategy is a “living” document should be reviewed and updated annually as new information becomes available. Provided below is a summary of the key actions to be implemented under this waste strategy.

Executive Summary

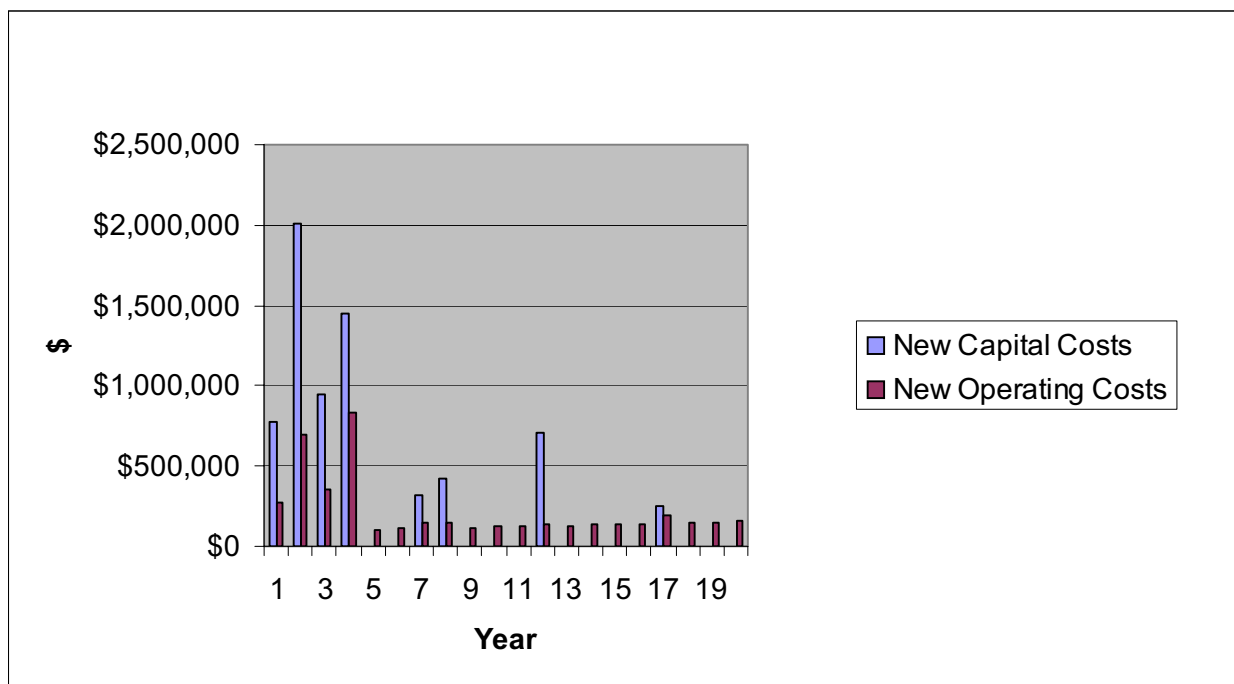
1	<ul style="list-style-type: none"> • Introduce fortnightly Kerbside Recycling Service for Bungendore • Introduce fortnightly Kerbside Recycling Service for Captains Flat • Closure Captains Flat Landfill and Construction of Transfer Station for Disposal to Bungendore • Development of Resource Recovery Strategy for Council • Begin Environmental Monitoring at landfills
2	<ul style="list-style-type: none"> • Closure Macs Reef Landfill • Closure Bungendore Landfill and Construction of Transfer Station • Transfer of Waste from Bungendore to Braidwood Landfill • Introduce weekly domestic waste collection service and fortnightly kerbside recycling collection service for rural residential areas at Burra, Urila, Carwoola, Royalla, Wamboin, Bywong, Sutton Acres and Buckingham.
3	<ul style="list-style-type: none"> • Construct Resource Recovery Centre at Bungendore to serve entire Council area.
4	<ul style="list-style-type: none"> • Closure Braidwood Landfill and Construct Transfer Station • Transfer of waste from Bungendore to Woodlawn Landfill or another major landfill outside Council area.
5 to 6	<ul style="list-style-type: none"> • No new activities planned
7	<ul style="list-style-type: none"> • Closure of Majors Creek Landfill and construction of Transfer station
8	<ul style="list-style-type: none"> • No new activities planned
10 to 11	<ul style="list-style-type: none"> • No new activities planned
12	<ul style="list-style-type: none"> • Closure of Collector landfill and construction of Transfer station
13 to 16	<ul style="list-style-type: none"> • No new activities planned
17	<ul style="list-style-type: none"> • Closure of Nerriga Landfill and construction of Transfer station
18 to 20	<ul style="list-style-type: none"> • No new activities planned

ES3.1 Cost Associated with 20-Year Waste Strategy

ES3.1.1 New Capital and Operating Costs

Provided in the figure below is a summary of the new capital and operating costs incurred over the 20-year period of the waste strategy. As expected the major capital works will be carried out in the first five years of the strategy due to the current condition of the landfills and the need to close and rehabilitate several within the first five years.

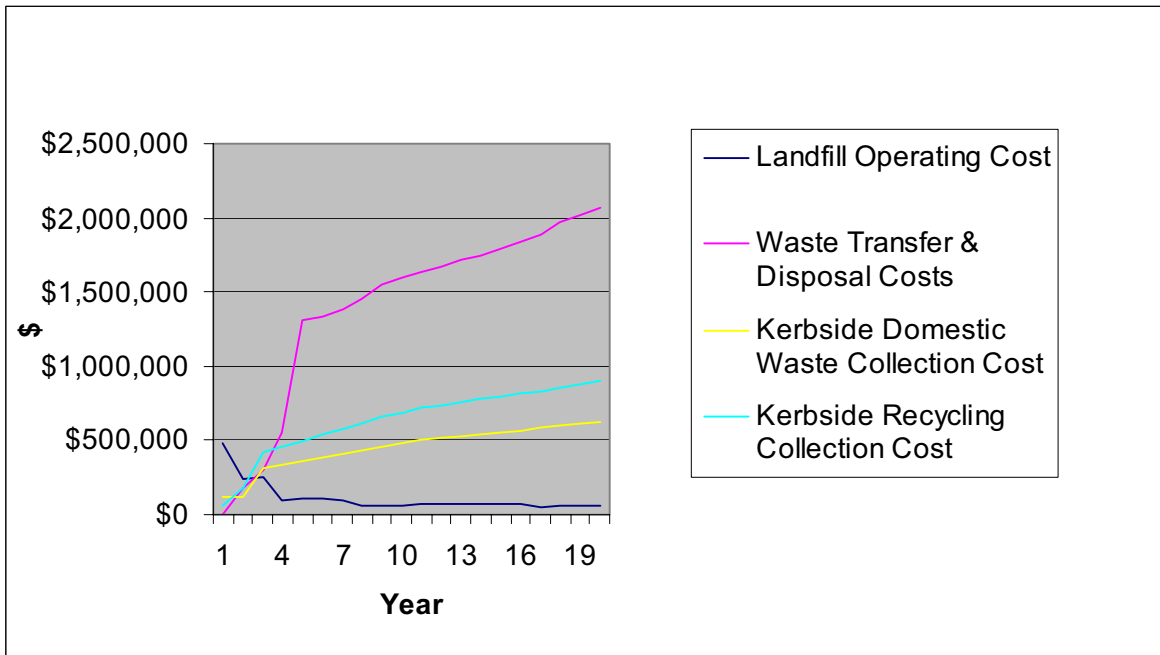
New Capital and Operating Costs



ES3.1.2 Operating Costs

The waste management operating costs for Palerang Council over the 20 year period of the waste strategy are illustrated in the figure below. As expected, it can be seen that as the landfills are closed the landfill operating costs significantly reduce, however the waste transfer and disposal costs increase, in particular in Year 4, when waste will be taken to Woodlawn or another major landfill located outside the Council areas such as Mugga Lane, ACT. Kerbside waste and recyclable collection costs increase sharply in Year 1 and 2, with the introduction of services in Bungendore and Captains Flat (kerbside recycling) and eastern rural residential areas (domestic and kerbside waste collection services).

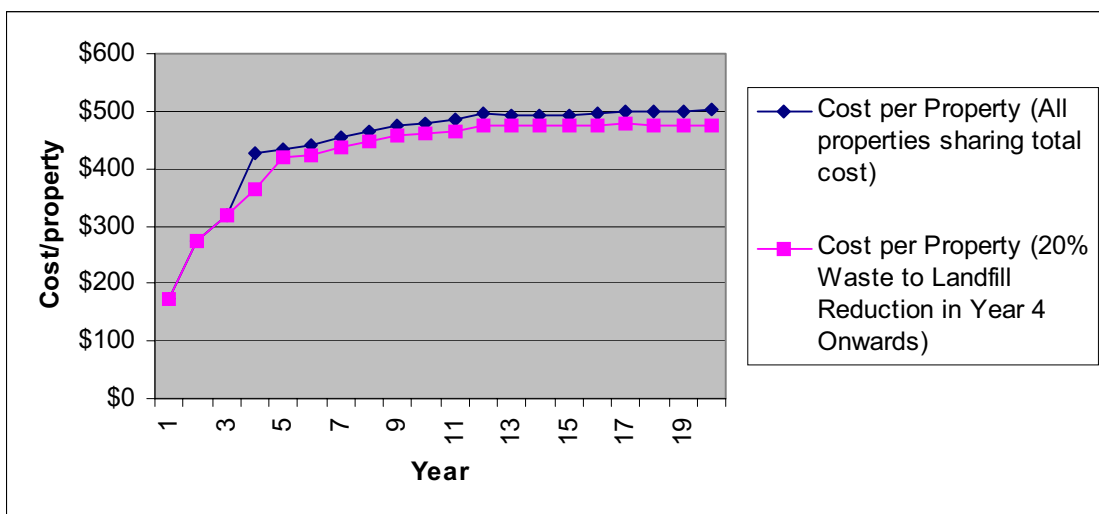
Total Operating Costs for 20 year Strategy



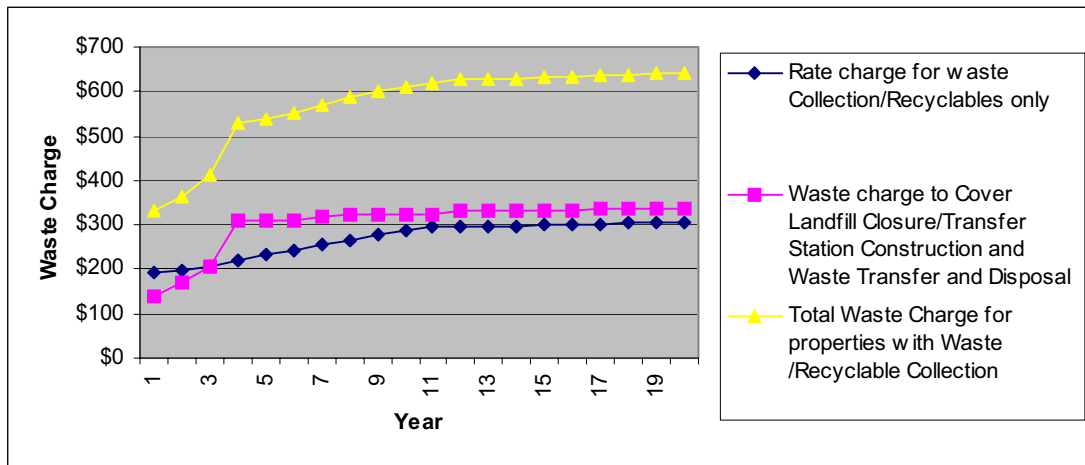
ES3.1.3 Cost to Rate Payers

Under the Local Government Act 1993, Council is able to place a separate charge to residents for the provision of domestic waste management services. Two models were examined in the waste strategy, introduction of a Council wide waste charge irrespective of whether a ratepayer had access to a service and a user pays model. Provided in the figure below is a summary of the indicative waste charge associated with the two models.

Council Wide Charge Model



User Pays Model



ES4.1 Public Consultation

Information Days were held in Bungendore, Captains Flat, Braidwood, Burra, Wamboin/Bywong, Carwoola and included copies of the draft waste strategy for perusal by the public and displays. Posters outlining the key findings of the strategy were displayed at the information days. Council and URS staff were present at the information days to answer questions on the waste strategy. An information pamphlet containing a summary of the strategy was prepared and posted to residents in the Council area, seeking their feedback on the draft Waste Strategy.

Following the Consultation period the waste strategy was finalised taking into consideration the comments received from the community.

URS Australia Pty Ltd (URS) was commissioned by Palerang Council (Council) to prepare a 20 year waste strategy to manage waste in the Council, taking into consideration ecological sustainability, financial viability and ratepayer equity. A need for the strategy has arisen as a result of increasing environmental risks associated with managing the Councils existing landfills and the shortage of landfill space within those landfills.

1.1 Palerang Council

The Council is a new local government area having been formed by proclamation on 11 February 2004. It has a total area of approximately 5200 sq kms and includes the old Tallaganda Shire Council and eastern areas of the old Yarrowlumla Shire Council and remnants of both Mulwaree and Gunning Shires. As shown in Figure 1.1, it is situated between the Australian Capital Territory and Queanbeyan to the west and the Eurobodalla Shire Council to the east.

Land use in the Council is a mix of village areas, rural/residential areas and rural areas. The Council consists of the villages of Bungendore (pop 2,000), Captains Flat (pop 450), Braidwood (pop 1,100), Araluen (pop 120), Majors Creek (pop 150), Nerriga (pop 50). Around 5,000 of the Councils population of 11,000 people live in rural residential zones consisting of 2 to 16 hectare lots on the western side of the Council adjacent to the ACT and Queanbeyan. The overall growth of the Council is expected to be approximately 2% per annum.

In the rural areas of the Council, sheep and cattle farming continues however there are few farmers in the Council who rely solely on their property as a source of income. There is a trend in the Council towards newer forms of Australian agriculture, such as growing grapes and olive and keeping alpacas. Other rural areas of the Council consist of forestry, National Park and Googong Dam (administered by the ACT Government). The eastern parts of the Council consist primarily of grazing properties, softwood plantations and National Park. Most industry in the Council is service, tourism or rural related. There are no large manufacturing industries or large scale livestock operations. Therefore the Waste Strategy is primarily designed to address the domestic waste management issues facing Council.

1.2 Objectives of the Waste Strategy

The strategy has been prepared to address the management of waste in the Council over the next 20 years in a sustainable manner. The key objectives of the waste strategy are:

- Provide an overview of the existing waste management practices and services in the Council;
- Assess the status and life remaining in each of the landfills in the Council and identify areas for improvement;
- Develop potential future waste management and resource recovery options for the Council over a 20-year timeframe;
- Provide cost estimates for implementation of the proposed waste strategy.

1.3 Current Waste Management Practices

Based on information provide by Council and our inspection of the study area, a summary of the existing waste and recyclables management practices in the Council is described below.

Council currently operates landfills at Bungendore, Macs Reef, Captains Flat, Braidwood, Araluen, Majors Creek and Nerriga. There is also a landfill site in the north of the Council, which is currently operated by Upper Lachlan Council on a lease arrangement with Palerang Council. The location of each of these landfills is shown in Figure 1.2. Based on advice from Council, none of the Council landfills currently require an EPA operating licence, due to the tonnages of waste they currently receive.

The Bungendore, Macs Reef and Braidwood landfills have a paid Council landfill supervisor on site during the hours of operation. For the Araluen, Majors Creek, Captains Flat and Nerriga landfills there are arrangements in place with local residents on a voluntary basis for the opening and closing of the gates in line with the operating hours. Landfill gate fees are only charged at Braidwood landfill. To varying levels, efforts are made at all Councils landfill sites to provide suitable facilities for collection of recyclable materials such as plastics, glass, ferrous and non-ferrous metals, and green waste, to reduce the amount of waste going to landfill. Further details on the operations of each of the landfills are given in Section 3.

Council currently owns two old garbage trucks and provides weekly domestic waste 140 litre wheelie-bin collections at Bungendore, Braidwood and Captains Flat. It also operates a weekly kerbside recycling service at Braidwood collecting 140 litre multi-mingled wheelie bins and transferring contents to the ACT's material recovery facility (MRF) at Hume for a fee. A new multi-functional garbage/recycling truck is currently being purchased for Council wide operations to replace the two old trucks.

1.4 Structure of the Waste Strategy Report

The waste strategy consists of the following sections.

Section 1: Introduction

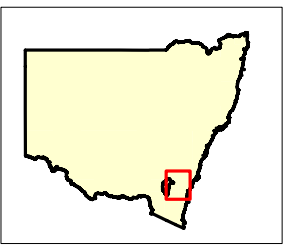
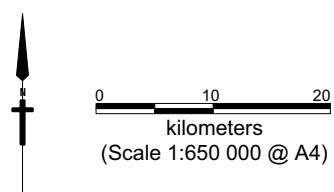
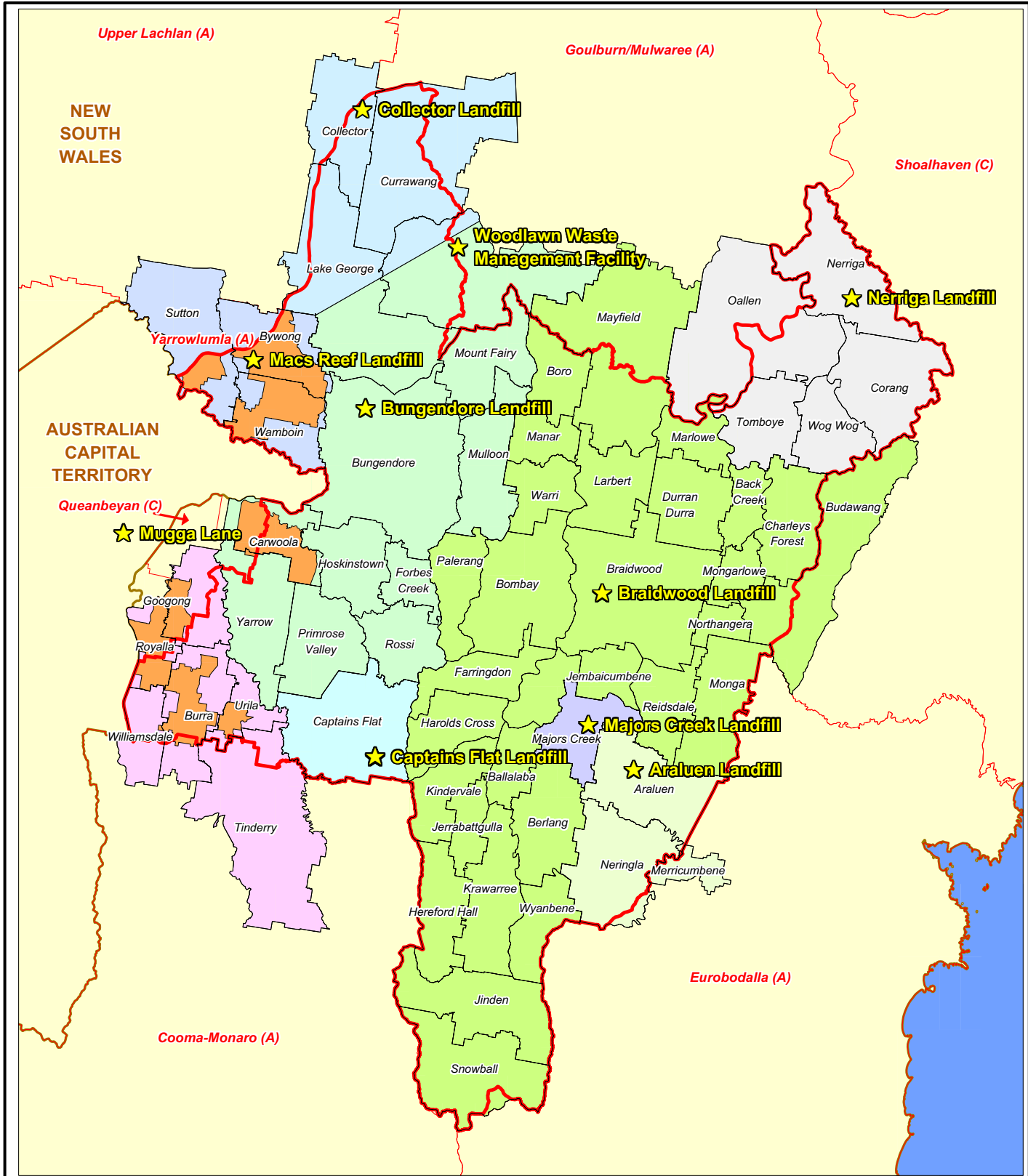
Section 2: Development of the Strategy: This section provides an outline of the key tasks undertaken in development of the strategy.

Section 3: Key Legislation and Guidelines: This part outlines some of the key waste management and environmental legislation currently in NSW and highlights the key trends and changes occurring in waste management in NSW and other parts of the country.

Section 4: Existing Landfill Assessment: This section highlights the key environmental and engineering issues associated with each o the landfills and an estimate of the landfill life remaining. A comparison of alternative future options for each of the catchments currently served by each landfill is also given in the section.

Section 5: Council Wide Waste Strategy: This section draws on the findings from the previous sections and incorporates an assessment of extending waste and recyclable collection services to rural-residential areas in the Council, to provide a sustainable waste strategy for the next 20 years.

Section 6: Waste Strategy Funding: This section examines methods of funding the waste strategy as outlined in Section 6 of the report.

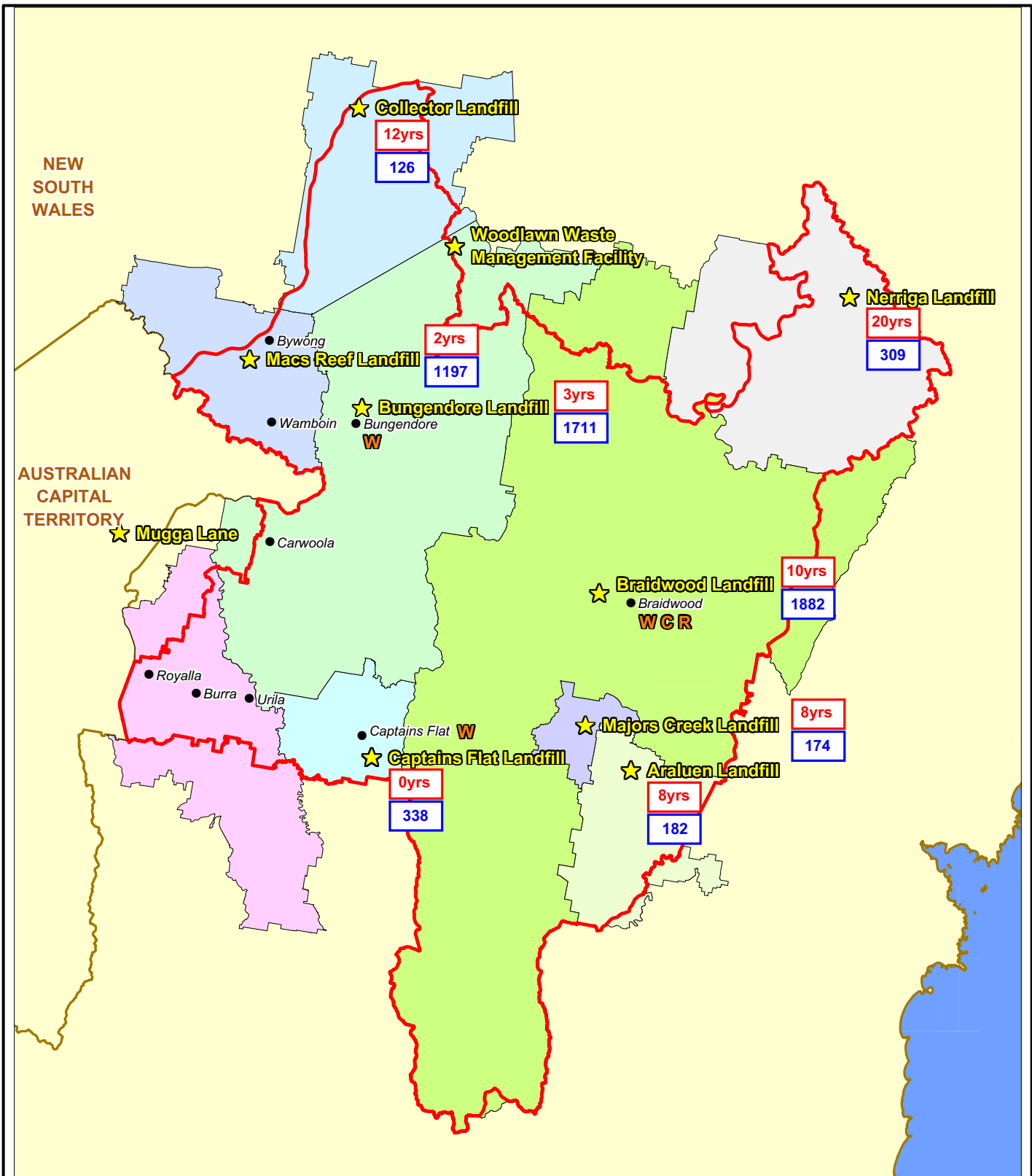


	Landfill Location		Collection Zone Araluen (278 sq km)
	Rural Residential Zoning		Braidwood (2649 sq km)
	Palerang LGA Boundary		Bungendore (1289 sq km)
	Locality Boundary		CaptainsFlat (167 sq km)
	Surrounding LGAs		Collector (509 sq km)
			MacsReef (331 sq km)
			Majors Creek (70 sq km)
			Mugga (547 sq km)

Source: Base data supplied by Palerang Council

Client PALERANG COUNCIL	Project PALERANG COUNCIL WASTE STRATEGY 2005-2025	Title PALERANG COUNCIL LOCAL GOVERNMENT AREA			
	Drawn: CDS	Approved: FINAL	Date: 30-06-2005	Figure: 1.1	Rev: A A4
	Job No: 43167240	File No: 43167240_002_Fig01.WOR			

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Scale 1:650 000 @ A4

0 10 20 kilometers

● Towns	Collection Zone
▭ Palerang LGA Boundary	■ Araluen (278 sq km)
★ Landfill Location	■ Braidwood (2649 sq km)
8yrs Landfill Life Remaining	■ Bungendore (1289 sq km)
182 Waste Tonnes/Year	■ Captains Flat (167 sq km)
Domestic Waste Collection Service	■ Collector (509 sq km)
W Charges at Landfill	■ MacsReef (331 sq km)
C Kerbside Recycling	■ Majors Creek (70 sq km)
R Collection	■ Mugga (547 sq km)

Source: Base data supplied by Palerang Council

Client PALERANG COUNCIL	Project PALERANG COUNCIL WASTE STRATEGY 2005-2025	Title WASTE MANAGEMENT CURRENT SITUATION 2005
	Drawn: CDS Approved: Final Date: 30-06-2005 Job No: 43167240 File No: 43167240_003_Fig01_2_WOR	Figure: 1.2
		Rev:A A4

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In preparing this waste strategy the following key tasks were carried out by the URS team:

2.1 Review of information

URS undertook a desktop research, review and summary of State Government regulatory and policy context, as well as relevant background review. Data reviewed included:

- Information from waste related reports, and studies provided by Council.
- Information on costs to Council of existing waste management services provided by Council.
- Population growth rate and number of rateable properties provided by Council.
- Waste characterisation (based on typical waste characteristics for similar areas in NSW, including identification of materials that maybe recoverable from the waste stream and future waste trends).
- Previously prepared draft waste strategies for the old Tallaganda and Yarrawlumla shire councils.

2.2 Assessment of Current Landfills

An assessment was carried out of each of the current landfill catchments in the Council, which includes the following tasks:

- An estimate was made of the life remaining for each of the landfills based on the landfill space assessed during the site inspections undertaken and the estimated filling rates based on the number of properties served by the landfill
- Identify key environmental and engineering issues associated with operation of each of the landfills.
- Comparison between current operations and recognised best practice. The NSW EPA Landfill Guidelines were used as a basis for this comparison, however it is important to note that these benchmark techniques are not applicable to all landfills and a performance based approach in meeting the environment goals is recommended based on the characteristics of each site.

2.3 Development and Comparison of Options

Based on the assessment of the landfills and existing waste management services in each landfill catchment area suitable options were developed for each catchment in the Council. Capital and operating cost estimates were prepared for each option, and a net present value analysis was carried out to compare the options. The comparison took into consideration the environmental and social impacts of each option as well as the capital and operating costs.

2.4 Development of Council-wide Strategy

The Council-wide strategy was developed taking into consideration the outcomes of the comparison of the individual catchment options and how they best fit into the overall waste management system. The strategy also analysed the costs associated with the current waste and recyclable collection services and potential areas for extending these services into rural residential areas of the Council. The total annual costs to ratepayers associated with implementing the proposed strategy for each year over the 20-year period were subsequently determined.

2.5 Public Consultation

Information Days were held in Bungendore, Captains Flat, Braidwood, Burra, Wamboin/Bywong, Carwoola and included copies of the draft waste strategy for perusal by the public and displays. Posters outlining the key findings of the strategy were displayed at the information days. Council and URS staff were present at the information days to answer questions on the waste strategy. An information pamphlet containing a summary of the strategy was prepared and posted to residents in the Council area. The pamphlet included a feedback form allowing residents to highlight their concerns and issues regarding the Draft Waste Management Strategy.

Key Planning Legislation and Guidelines SECTION 3 in NSW

This section gives a summary of the key waste management and environmental strategies, legislation and guidelines in NSW, which will impact on waste management in the Council and therefore the actions outlined in this strategy.

3.1 Waste Management related Legislation and Guidelines

3.1.1 Waste Avoidance and Resource Recovery (WARR) Strategy

The NSW Government's Waste Avoidance and Resource Recovery (WARR) Strategy provides the strategic direction for future waste management and resource recovery activities in the State. Released in 2003 the Strategy reflects the objectives and functions of the Waste Avoidance and Resource Recovery Act 2001 and builds on the earlier Waste Minimisation and Management Act 1995. The Sustainability Programs Division of the Department of Environment and Conservation (DEC) (previously Resource NSW) administer the WARR Strategy.

The Strategy enshrines the waste hierarchy that places the avoidance of unnecessary resource consumption as the highest priority, followed by resource recovery (including re-use, reprocessing, recycling and energy recovery) with disposal as the least preferred option. It also recognises that Regional NSW faces its own unique waste avoidance and resource recovery challenges related to population, distribution and distances to recovery markets (that have historically been in Sydney or other large urban centres). Whilst 6 million tonnes of waste was landfilled in NSW in 2002/2003 approximately 800,000 to 1 million tonnes was landfilled outside the Greater Sydney Region¹.

The Strategy also adopts aggressive resource recovery targets (as developed in the Independent Public Assessment – Landfill Capacity and Demand prepared by AG Wright in 2000) as shown in **Table 3-1** base lined from year 2000 data.

Table 3-1: Resource Recovery Targets (for the whole of NSW)

Stream	Current Resource Recovery	Aggressive Scenario Recovery (2014)
Municipal	26%	66%
Commercial & Industrial	28%	63%
Construction & Demolition	65%	76%

Source: Waste Avoidance and Resource Recovery (WARR) Strategy, 2003 p 4

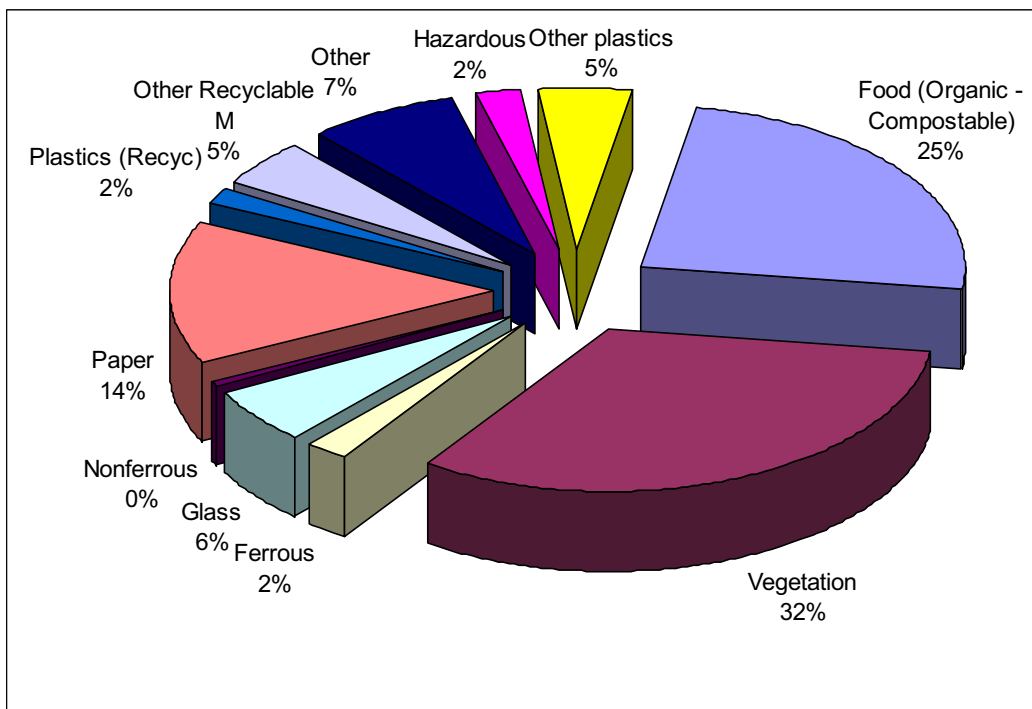
In its Progress Report 2004, DEC states that whilst inconsistent reporting of waste disposal occurs in Regional NSW the total waste to landfill, based on the Department of Local Government surveys, has remained constant.

¹ Includes Sydney, Hunter, Central Coast and Illawarra

Key Planning Legislation and Guidelines SECTION 3 in NSW

Presented below is the typical waste composition of domestic waste going to landfill in rural NSW, based on survey work carried out by NSW DEC (DEC, 2004). This figure has been presented to give an indication of the percentage of waste, which could be diverted, from waste currently going to landfill in the Palerang Council area. At present no detailed waste audits have been carried out on actual waste going to landfill in the Palerang Council area.

Figure 3-1: Characteristics Waste To Landfill NSW (DEC, 2004)



Food and vegetation make up a significant proportion of the total waste stream (57%) and reducing food waste (organic-compostable), for example by implementing better home composting systems and programs, could significantly reduce waste to landfill.

Whilst DEC has no direct jurisdictional control over Local Government in the area of resource recovery, the Sustainable Programs Division of DEC encourages compliance with the Strategy and provides assistance through funding² regional approaches to waste minimisation and resource recovery. Generally this is directly to regional organisations of Councils (ROC's) or larger regional bodies (such as NetWaste), or in some instances where two or more Councils cooperate (such as Eurobodalla and Bega Valley and in the instance of Cooma Monaro and Snowy River Shire Councils they have cooperated with the NSW National Parks and Wildlife Service).

² A portion of the levies paid for waste disposed to landfill are directed to the NSW Waste Fund to be allocated to projects and activities that assist the WARR Strategy

Key Planning Legislation and Guidelines SECTION 3 in NSW

South East Resource Recovery Group

The South East Resource Recovery Group (SERRG) is a voluntary regional organisation of Councils, consisting of representatives from several councils in South East NSW including Eurobodalla, Snowy River, Yass Valley, Bega Valley, Cooma Monaro, Queanbeyan, Greater Argyle, interested in working together to meet waste management and resource recovery goals. Palerang Council staff was involved in meetings of the group and have expressed an interest in working together with the other Councils in the region and sharing ideas on solving common issues faced in regional waste management. The group is similar to other waste voluntary groups of Councils formed in other parts of NSW, with similar aims such as Murray ROC. The group however is currently still in the initial formations stages and has not prepared a regional waste strategy for the area. It is believed that in the future the group may be able to secure funding to implement regional strategies to meet the goals of the WARR strategy.

This strategy outlines measures such as extending kerbside recycling, to reduce the amount of waste currently going to landfill in the Palerang Council area in line with the aims of the WARR strategy. A detailed Resource Recovery Strategy will be prepared by Council next year outlining further initiatives, inline with the framework provided in this report, to reduce waste going to landfill.

3.1.2 Environmental Guidelines: Solid Waste Landfills

The NSW EPA Environmental Guidelines: Solid Waste Landfills (1996) outline a performance-based approach to the management of landfills in NSW to meet certain Environmental Goals. The goals are related to the following key environmental issues as shown in Table 3-2:

Table 3-2: Environmental Goals

Environmental Issue	Environmental Goal
Water Pollution: Discharge of pollutants to ground and surface waters	<ul style="list-style-type: none">• Preventing pollution of water by leachate• Detecting water pollution• Remediating water pollution
Air Pollution: Emissions of pollutants to the atmosphere	<ul style="list-style-type: none">• Preventing landfill gas emissions• Detecting landfill gas emissions• Remediating landfill gas emissions

Key Planning Legislation and Guidelines **SECTION 3** in NSW

Environmental Issue	Environmental Goal
Land Management and Conservation	<ul style="list-style-type: none"> • Assuring quality of Design, Construction and Operation • Assuring quality of incoming waste • Recording of wastes received • Minimising landfill space used • Maximisation of recycling • Remediating landfill after closure
Hazards and loss of amenity	<ul style="list-style-type: none"> • Preventing unauthorised entry • Preventing degradation of local amenity • Preventing noise pollution • Adequate fire fighting capacity • Adequate staffing and training

The waste strategy proposes minimum standards to be implemented at the existing landfills and closure of certain landfills to meet the environmental goals described in Table 3.1 above.

3.1.3 State Environmental Planning Policy (SEPP) 48 – Major Putrescible Landfill Sites

SEPP 48 applies to development comprising:

“(a) a landfill site that is to be used for the purposes of disposing of putrescible waste, or waste including putrescible waste, brought to the site from more than one local government area and that has a capacity to receive:

(i) more than 75,000 tonnes per annum of waste, or

(ii) more than 650,000 tonnes of waste over the life of the site, or

(b) the extension of, or addition of land to, a landfill site that is or is to be used for the purposes of disposing of putrescible waste, or waste including putrescible waste, brought to the site from more than one local government area and that will enable the site, as extended or added to, to have a capacity to receive:

(i) more than 75,000 tonnes per annum of waste, or

(ii) more than 650,000 tonnes of waste over the life of the site.”

Key Planning Legislation and Guidelines **SECTION 3** in NSW

None of the landfills in the Council area received these quantities of waste and the future projections of total waste generation over the next 20 year period, do not meet these quantities, and therefore SEPP 48 would not apply to the proposed waste strategy.

3.2 Local Government Act 1993

Section 504 of the Local Government Act 1993 provides for Council to make a charge outside the ordinary rate, for the provision of domestic waste management services. The Act states “Income to be applied by a council towards the cost of providing domestic waste management services must be obtained from the making and levying of annual charges or the imposition of charges for the actual use of the service, or both.” The Act also states “Income obtained from charges for domestic waste management must be calculated so as to not exceed the reasonable cost to the council of providing those services.”

This strategy outlines the reasonable costs of providing domestic the waste management services in Palerang Council over the next 20 years, based on existing costs provided by Council, and future cost forecasts.

3.3 Environmental Planning Legislation

This section briefly describes the key environmental planning legislation, which will need to be considered for any development s in the Council area, proposed under the waste strategy.

3.3.1 Environmental Planning and Assessment Act 1979

The Environmental Planning and Assessment Act 1979 is the primary piece of legislation governing development within NSW. Part 4 of the EP&A Act details the development process for development that requires consent. Section 76A(3) prescribes that there are two types of development which require development consent, these being:

- (a) local development (which includes complying development); and*
- (b) State significant development.*

Consent Authority

The Tallaganda Local Environmental Plan 1991 and Yarrowlumla LEP 2002 (Council is in the process of developing a new LEP for the Palerang Council) permit the waste management works subject to Council consent, therefore the proposed developments constitutes local development and should be assessed under the provisions of Part 4 of the EP&A Act.

Key Planning Legislation and Guidelines **SECTION 3** in NSW

State Significant Development

The NSW Minister for Planning may direct a council to refer a particular development application made to it for determination by the Minister if, having regard to matters that in the Minister's opinion are of state significance or regional environmental planning, the Minister considers it is expedient in the public interest to do so. This may include development of a regional resource recovery centre in Palerang.

Integrated Development

There are further provisions under the EP&A Act that are to be considered these being under Section 91 Integrated Development and Section 77A Designated Development.

An integrated development is one that requires the approval of one or more government agencies in addition to the consent granted by the assessing authority.

Designated Development

Designated development is development that is declared to be designated by an environmental planning instrument or the regulations. Schedule 3 of the *Environmental Planning and Assessment Regulation 2000* lists development that is considered to be designated development. It should be noted that development that is considered to be designated is required to have an environmental impact statement submitted for approval as a component of the development application.

3.3.2 Heritage Act 1977

The Heritage Act 1977 aims to protect and preserve items of non-indigenous Heritage significance. The Act provides for the protection of items of local, regional and State heritage significance. The Act makes the Heritage Council the consent authority for any works that will impact State significant heritage items.

3.3.3 National Parks and Wildlife Act 1974

The National Parks and Wildlife Act 1974 (NPW Act) governs the establishment, preservation and management of national parks, historic sites and certain other areas. The NPW Act also provides the basis for the legal protection and management of threatened native flora and fauna and Aboriginal sites within NSW. The implementation of the Aboriginal heritage provisions of the NPW Act is the responsibility of the Department of Environment and Conservation (DEC) (formally the NSW National Parks and Wildlife Service).

The following provisions of the NPW Act provide for the protection of flora, fauna and ecological communities and would be adhered to in the construction of the proposal.

- *Section 98* - A person shall not harm any protected fauna, or harm for sporting or recreational purposes game birds that are locally unprotected fauna, or use any substance, animal, firearm,

Key Planning Legislation and Guidelines **SECTION 3** in NSW

explosive, net, trap, hunting device or instrument or means whatever for the purpose of harming any protected fauna.

- *Section 99* - A person shall not harm any threatened interstate fauna, or use any substance, animal, firearm, explosive, net, trap, hunting device or instrument or means whatever for the purpose of harming any such fauna.
- *Section 118A* - A person must not harm any animal that is of, or is part of, a threatened species, an endangered population or an endangered ecological community, or use any substance, animal, firearm, explosive, net, trap, hunting device or instrument or means whatever for the purpose of harming any such animal.
- *Section 118C* - A person must not, by an act or an omission, do anything that causes damage to any critical habitat.
- *Section 118D* - A person must not, by an act or an omission, do anything that causes damage to any habitat (other than a critical habitat) of a threatened species, an endangered population or an endangered ecological community if the person knows that the land concerned is habitat of that kind.

3.3.4 Protection of the Environment Operations Act 1993

The *Protection of the Environment Operations Act 1997* (POEO Act) is the primary piece of legislation regulating pollution control and waste disposal in NSW. The POEO Act is administered by the NSW Department of Environment and Conservation (DEC). Key issues which will need to be considered under this legislation include any discharge of leachate from the landfill sites or landfill gas generation.

3.3.5 Threatened Species Conservation Act 1995

The Threatened Species Conservation Act 1995 (TSC Act) provides for the conservation of threatened species, populations and ecological communities of animals and plants. It provides a framework for the assessment of any action that may impact on threatened species.

Planning aspects of the TSC Act are implemented through the EP&A Act. Section 5A of the EP&A Act sets out an Eight Part test to determine whether a development proposal is likely to significantly affect threatened species, populations or ecological communities or their habitats. Where it is determined that a significant effect is likely, the TSC Act requires that a Species Impact Statement (SIS) be prepared to assess the impact.

3.3.6 Rivers and Foreshores Improvement Act 1948

Any proposed works carried out near a watercourse should be in compliance with the requirements of the Rivers and Foreshores Improvement Act 1948 (RFI Act). The following matters may be considered in this regard:

- Proposed works should not damage or interfere in any way with:
 - vegetation outside the area of works;
 - stability of adjacent or nearby watercourses' banks or beds; and
 - quality of water in any watercourse.
- Any displaced materials should be stabilised or relocated and made secure so that these materials will not detrimentally affect any watercourse or riparian zone.
- Erosion and sediment control measures should be provided for the duration of the works and until the site is stabilised/rehabilitated.
- Any stormwater discharge from the site should not result in any erosion or instability of the bank or bed.
- No materials should be used that may pollute any watercourse.
- Works should be designed and constructed such that there is no detrimental change in hydraulic behaviour, causing sedimentation, erosion, reduction in waterway or permanent diversion or pollution of any watercourse.

3.3.7 Native Vegetation Conservation Act 1997

In accordance with the principles of ecologically sustainable development, the *Native Vegetation Conservation Act 1997* (NVC Act) provides for the conservation of native vegetation through the prevention of inappropriate clearing and promotion of rehabilitation practices.

Under this Act, a vegetation survey is required to identify native species potentially affected by site disturbance, and the extent of that disturbance.

3.3.8 Roads Act 1993

Section 138 of the Roads Act 1993 prohibits a number of activities, such as conducting work in, on or over a public road, without gaining consent from the appropriate roads authority.

3.3.9 Water Act 1912 and the Water Management Act 2000

The *Water Management Act 2000* (WM Act) provides for the integrated and sustainable management of the State's waters. Among other matters, the WM Act details the framework for the development of water sharing provisions within defined management plans. Section 20 of the WM Act details the matters to be addressed within the water sharing provisions of management plans.

Key Planning Legislation and Guidelines SECTION 3 in NSW

3.3.10 State Environmental Planning Policy (SEPP) 55 – Remediation of Land

SEPP 55 identifies the approval procedure required for any proposed remediation works associated with the closure and rehabilitation of the landfills in the Council.