

**Great Southern Group of Councils
Shires of Cranbrook, Plantagenet and Denmark**

**Strategic Waste Minimisation Plan
2008-2013**



Waste Authority

WALGA

Prepared for

Shires of Cranbrook, Plantagenet and Denmark

IW Projects Pty Ltd

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EXECUTIVE SUMMARY

In response to the Waste Authority (previously the Waste Management Board) request for local governments to develop Strategic Waste Management Plans, the Shires of Cranbrook, Plantagenet and Denmark have combined to form the Great Southern Group of Councils to jointly develop a regional waste minimisation plan to strive "Towards Zero Waste".

The Plan consists of the following suite of activities to be carried out during the period of this Plan:

Activity	Timeframe
Financial Year 2008/2009	
Where possible, apply local solutions to local problems.	Jan 2009
Develop systems for the collection and recording of waste management data.	Jun 2009
Improve the management of landfill facilities.	Jun 2009
Implement a household hazardous waste collection system.	Jun 2009
Financial Year 2009/2010	
Implement regular community education/information communication.	Dec 2009
Implement sustainable purchasing policies.	Dec 2009
Improve internal communication and knowledge sharing.	Dec 2009
Develop links with neighbouring shires.	Dec 2009
Investigate and implement additional recycling activities.	Dec 2009
Investigate the development of organics/composting facilities.	Dec 2009
Financial Year 2010/2011	
Implement E-Waste collection systems.	Dec 2010
Lead by example - improve Shire internal recycling activities.	Dec 2010
Encourage elected members support in waste minimisation.	Dec 2010
Improve transport efficiencies in recycling management.	Dec 2011
Financial Year 2011/2012	
Improve materials handling of all existing recycling activities.	Dec 2011
Implemented planning solutions to force the developers to manage waste appropriately.	Dec 2011
Assess the need to employ a dedicated waste management officer.	Dec 2011
Continuous improvement.	Dec 2011
Financial Year 2012/2013	
Investigate implementation of C&I waste processing.	Dec 2012
Improve participation rate in existing recycling systems.	Dec 2012
Investigate the potential for increasing the range of products included in kerbside recycling.	Dec 2012
Investigate the potential for developing an "Earth Carers" group in the region.	Dec 2012
Financial Year 2013/2014	
Nil	

It is imperative that the Region obtain significant external funding for the proposed waste minimisation activities as without funding the Region will incur considerable additional expenditure over the next five years. The level of funding will be extremely difficult for the relatively small Shires. Without external funding, it is highly likely that the implementation of the Strategic Waste Minimisation Plan will be severely restricted.

FOREWORD

This Document represents Phase 2 of the development of a Strategic Waste Management Plan for the Great Southern Group of Councils (Shire of Cranbrook, Shire of Plantagenet and Shire of Denmark).

This plan has been developed in response to an initiative of the Western Australian Waste Management Board (subsequently renamed the Waste Authority) in 2007.

It will assume a legal status in accordance with the provisions of Division 3, Section 40-44 of the Waste Avoidance and Resource Recovery Act 2007, proclaimed 1 July 2008.

While this version represents the first version of a plan for the five-year period 2008-2013, **readers and custodians of this plan are reminded that the management of waste is an essential feature of life in our (local and global) community and will transcend the life of:**

- **The period of an elected member's tenure.**
- **The period of any employee career.**
- **The life of any person living within the region.**

Therefore the development and delivery of Zero Waste projects must reflect the needs and aspirations of future generations and not short-term goals.

To reflect the vision, the Great Southern Group of Councils has renamed this plan the "Strategic Waste Minimisation Plan" 2008-2013.

NB. Any reference to the term "Recycling" in this document can be interpreted to include the concepts of Reduce and Reuse as and when appropriate.

1 INTRODUCTION

In response to the Waste Authority (previously the Waste Management Board) request for local governments to develop Strategic Waste Management Plans, the Shires of Cranbrook, Plantagenet and Denmark have combined to form the Great Southern Group of Councils to jointly develop a regional waste minimisation plan to strive "Towards Zero Waste".

The topics and structure of the Strategic Waste Minimisation Plan have been prescribed by the Department of Environment and Conservation (DEC). The Plan distinct parts, Part 1 deals with existing waste services and infrastructure while Part 2 deals with identified issues and recommendations for the future.

2 VISION AND GUIDING PRINCIPALS

2.1 THE VISION

Towards Zero Waste

To recognise that in a climate of "Towards Zero waste" **all** waste is a target for reduction and recycling.

2.2 DEFINITION OF ZERO WASTE

Zero Waste is a philosophy and a goal that will drive people to redesign resource-use systems to emulate natural processes where no waste exists.

2.3 TARGETS

The Great Southern Group of Councils is yet to identify waste reduction targets for individual waste streams, but has adopted an overall vision of *Towards Zero Waste*.

Following the recent completion of Phase 1 - Data Submission, for the development of a Zero Waste Plan, the DEC has undertaken an assessment of the submitted data and provided guidance on those areas to concentrate on in order to achieve the vision of *Towards Zero Waste*. The DEC did not provide any specific targets with regards to recycling improvement.

In conjunction with the DEC recommendations and as more accurate data about individual waste streams is attained, the Shires will consider setting specific targets.

2.4 GOALS

To ensure a rigorous and consistent approach to developing Strategic Waste Minimisation Plans local governments have been requested by the DEC to use a common structure, all with common *Vision* and *Goals*.

With the financial and statutory support of Federal and State Government the Great Southern Group of the Councils will engage with its community to:

- Minimise the direct and indirect environmental impacts of waste and its management over the next five years.
- Minimise waste in a sustainable manner.

- Increase community awareness of the impact of waste issues on the environment.

The Groups overarching goals in achieving the vision of *Towards Zero Waste* are:

- To lower the health risks of waste management to society.
- To maximise efficiencies and hence reduce the overall cost of waste management to society.
- To create a *Towards Zero Waste* culture amongst the community.
- To reduce environmental damage and harm caused by waste generation and disposal.
- To increase economic benefit by using material resources more efficiently.
- Encourage the use of recycled materials, including leading by example.

The Group is acutely aware that the attainment of the stated goals can only be achieved by working closely with State Government agencies and identifying synergies amongst neighbouring shires.

The Great Southern Group of Councils is committed to leading by example. To this end, the Group is committed to actively reduce waste generation, optimised recycling and maximise the use of recycled products within its day-to-day operations.

2.5 PURPOSE AND OBJECTIVES

The purpose and objectives of this plan include:

- To confirm current waste infrastructure and levels of service.
- To identify, through the development of this Strategic Waste Minimisation Plan, priority actions and associated costs and timelines to incrementally improve waste management in the local government areas covered by this Plan.
- To form partnerships with other local governments, businesses and industry to achieve economies of scale where feasible.
- To increase community awareness, appreciation and responsiveness to waste related issues.
- To assigned actions, costs and timelines.
- To define a performance monitoring and review scheduled.

2.6 GUIDING PRINCIPALS

The Strategic Waste Minimisation Plan draws on several key principles to guide future actions:

- The Plan is based on the waste management hierarchy and strategic direction as determined by the Waste Authority.
- The Group supports the view of sustainability which recognises the integrated view of the environment and the relationship between things. It represents the obligation of current generations to sustain the capacity of the environment and support life for present and future generations.
- Within the guiding principles of sustainability, the Plan gives consideration to social, environmental and economic impacts of its decisions with respect to waste management.
- The Plan is integrated, meaning that it addresses legislative requirements, State Government direction and is aligned with Shires' policies and community outcomes.

- The Group strives to be a leader in the implementation and delivery of the vision of *Towards Zero Waste*.
- Wherever possible, the generator of waste should be responsible for paying the cost of managing the waste in such a way that discourages waste production.
- The Group places a strong emphasis on promoting waste reduction behaviour by engaging the community through direct engagement, education and social marketing programs.
- Future actions must be adequately resourced with respect to funding and staffing in order to implement the actions outlined with in the Plan.
- The Group will continue to work cooperatively with neighbouring local governments and seek partnerships that increase the efficiency and effectiveness of achieving the vision of *Towards Zero Waste*.
- The Plan will be subject to ongoing monitoring and evaluation, and will be reviewed on a regular basis.

2.7 CRITERIA FOR PRIORITISING ACTION

The criteria for prioritising actions, as adapted from the Waste Authority Strategic Direction are:

- Environmental harm.
- Volume reduction.
- Achievability.
- Public concern.
- Cost effectiveness.

2.8 PRIORITY AREAS

Priority areas have been established by the Waste Authority in its Strategic Direction and confirmed in its Annual Business Plans.

The priority areas (in order of priority) are:

- Organic products.
- Building products.
- Chemical products.
- Packaging products.
- Electrical products.
- Synthetic products.

3 PHASE 1 ANALYSIS – EXISTING WASTE SERVICES AND INFRASTRUCTURE

3.1 REGIONAL PROFILE

3.1.1 GROUP MEMBERSHIP

The Great Southern Group of Councils consists of the Local Governments of:

1. Shire of Cranbrook
2. Shire of Plantagenet
3. Shire of Denmark.

The Great Southern Group of Councils occupies an area of approximately 9,930km² in the southern portion of the Great Southern Region of Western Australia.

3.1.2 DEMOGRAPHICS

Table 4.1.2.1 Group Population, Growth and Development Nodes

Local Government	Population	Annual Population Growth	Development Nodes
Shire of Cranbrook	1,170	0.2%	Cranbrook; Frankland; Tenterden; Tunny
Shire of Plantagenet	4,775	1.5%	Mount Barker; Kendenup; Narrikup; Rocky Gully; Porongurup; Kamballup.
Shire of Denmark	5,540	3.6%	Denmark; Peaceful Bay; Nornalup.
Total	11,485		

3.2 MUNICIPAL WASTE GENERATION – BY LOCAL GOVERNMENT AREA

3.2.1 MAJOR WASTE SOURCES AND GENERATORS

Table 4.2.1.1 Major Waste Sources and Generators

Shire of Cranbrook	Shire of Plantagenet	Shire of Denmark
Local Government	Local Government	Local Government of be
Residential	Residential	Residential
Industrial	Industrial	Industrial
Commercial	Commercial	Commercial
Agricultural	Agricultural	Agricultural

3.2.2 ESTIMATED ANNUAL TONNAGE OF WASTE AND RECYCLABLES GENERATED

Table 4.2.2.1 Annual Tonnage of Waste and Recyclables Generated

Material Type	Shire of Cranbrook	Shire of Plantagenet	Shire of Denmark
Recyclables	X t	3,047 t	X t
Waste	Y t	7124 t	Y t
Total	z t	10,171 t	z t

3.2.3 TONNAGE PER CAPITA - WASTE AND RECYCLABLES

Table 4.2.3.1 Tonnage per Capita of Waste and Recyclables

Material Type	Shire of Cranbrook	Shire of Plantagenet	Shire of Denmark
Recyclables	X t	0,64 t	X t
Waste	Y t	1,49 t	Y t
Total	z t	2.13 t	z t

3.2.4 ESTIMATED PERCENTAGE COMPOSITION OF WASTE

Table 4.2.4.1 Estimated Percentage Composition of Waste

Waste Type	Shire of Cranbrook	Shire of Plantagenet	Shire of Denmark
Residential	X t	69.5%	X t
Construction and Demolition	Y t	2.5%	Y t
Commercial and Industrial	z t	28%	z t

3.2.5 PRIORITY WASTES

The Group has identified the following priority waste streams (in order of priority):

1. Packaging Waste (not currently being collected by existing recycling activities)
2. Organic Waste and Green Waste
3. Household Hazardous Waste
4. Electronic Waste
5. Construction and Demolition Waste

3.2.6 GOVERNMENT POLICY/REGULATORY IMPLICATIONS

The following Government policies and regulations have direct implications on waste management activities within the Group:

- Environmental Protection Act 1986 - governing environmental performance.
- Waste Avoidance and Resource Recovery Act 2007 - requirement for increased recycling activities.
- Environmental Protection (Rural Landfill) Regulations 2002 - management of landfill facilities.
- Code of Practice Rural Landfill Management November 2000 - management of landfill facilities.

- Best Practice Environmental Management, Siting, Design, Operation and Rehabilitation of Landfills November 2005 - location, design and management of landfill facilities.
- Contaminated Sites Act 2003 - management of contaminated sites (old landfill sites).

3.3 MATRICES OF INFRASTRUCTURE AND SERVICES PROVIDED

As part of the Zero Waste Plan, Phase 1, each Shire was required to complete an online waste and recycling survey.

The DEC subsequently assessed the online survey and produced a matrix of infrastructure and services in each Shire.

The matrices of infrastructure and services for the individual Shires within the Group are at:

- **Appendix A – Matrix of Infrastructure and Services Shire of Cranbrook**
- **Appendix B - Matrix of Infrastructure and Services Shire of Plantagenet**
- **Appendix C - Matrix of Infrastructure and Services Shire of Denmark**

3.4 INFRASTRUCTURE – BY LOCAL GOVERNMENT AREA

3.4.1 AREA MAPS

An area map for each shire showing population centres, waste management facilities and major transport routes is provided at:

- **Appendix D – Shire Map Shire of Cranbrook**
- **Appendix E - Shire Map Shire of Plantagenet**
- **Appendix F - Shire Map Shire of Denmark**

3.4.2 SUMMARY OF WASTE MANAGEMENT INFRASTRUCTURE

Class I Landfills

- McIntosh Road Waste Management Facility (WMF) (Shire of Denmark)
 - Fenced and manned facility
 - Limited airspace available, approximately 2 - 3 years

Class II Landfills

- Cranbrook Residential WMF (Shire of Cranbrook)
 - Unfenced and unmanned facility
 - In excess of 5 years airspace
 - Potential for site expansion
- Cranbrook Industrial WMF (Shire of Cranbrook)
 - Unfenced and unmanned facility
 - Limited airspace available, approximately 2 - 3 years
 - Potentially due to be closed soon
- Frankland WMF (Shire of Cranbrook)
 - Unfenced and unmanned facility
 - In excess of 5 years airspace

- Potential for site expansion
- Mount Barker, O'Neill Road WMF (Shire of Plantagenet)
 - Fenced and manned facility
 - In excess of 5 years airspace
 - Potential for site expansion
- Kamballup WMF (Shire of Plantagenet)
 - Fenced and manned facility
 - In excess of 5 years airspace
 - Small site < 500t/yr
- Peaceful Bay WMF (Shire of Denmark)
 - Fenced and manned facility
 - In excess of 5 years airspace
 - Small site < 500t/yr

Class III Landfills

- Nil

Transfer Stations

- Porongurup (Shire of Plantagenet)
 - Fenced and manned facility
 - 1 x 40m³ hook lift bin
- Kendenup (Shire of Plantagenet)
 - Fenced and manned facility
 - 2 x 40m³ hook lift bins
- Rocky Gully (Shire of Plantagenet)
 - Unfenced and unmanned facility
 - 1 x 40m³ hook lift bin
- McIntosh Road WMF (Shire of Denmark)
 - Fenced and manned facility
 - 4 x 30m³ hook lift bins
 - 1 x compactor bin

Recycling Drop-Off Facilities

- Cranbrook Residential WMF (Shire of Cranbrook)
 - Unfenced and unmanned facility
 - Mixed recycling
- Frankland WMF (Shire of Cranbrook)
 - Unfenced and unmanned facility
 - Limited mixed recycling
- Porongurup (Shire of Plantagenet)
 - Fenced and manned facility

- Limited mixed recycling
- Kendenup (Shire of Plantagenet)
 - Fenced and manned facility
 - Limited mixed recycling
- Rocky Gully (Shire of Plantagenet)
 - Unfenced and unmanned facility
 - Limited mixed recycling
- McIntosh Road WMF (Shire of Denmark)
 - Fenced and manned facility
 - Extensive mixed recycling
- Peaceful Bay WMF (Shire of Denmark)
 - Fenced and manned facility
 - Limited mixed recycling

Materials Recycling Facilities

- Nil

Alternative Waste Treatment

- Nil

Reused Facilities/Tip Shops

- McIntosh Road WMF (Shire of Denmark)
 - Fenced and manned facility
 - Managed by community group (Green Skins)
 - Extensive mixed reuse

Refer to the following Appendixes for additional information of the types of recycling activities occurring at the various sites:

- **Appendix G - Base Data Shire of Cranbrook**
- **Appendix H - Base Data Shire of Plantagenet**
- **Appendix I - Base Data Shire of Denmark**

3.5 DATA GAPS

Nil.

3.6 RESOURCE RECOVERY – BY LOCAL GOVERNMENT AREA

3.6.1 RESOURCE RECOVERY ACTIVITIES

Table 4.6.1.1 Provides Detail on Resource Recovery in the Region

Activity	Shire of Cranbrook		Shire of Plantagenet		Shire of Denmark	
	Y/N	Comment	Y/N	Comment	Y/N	Comment
Kerbside Recycling	Y	240L Fortnightly	Y	240L Fortnightly	Y	240L Fortnightly
Green Waste	Y	Burnt at Landfill	Y	Burnt at Landfill	Y	Burnt at Landfill
Vergeside Recycling	N	Nil	N	Nil	N	Nil
Drop-Off Recycling	Y	At Landfill	Y	At LF and T/S	Y	At Transfer Stat
Tip Shop Reuse	N	Nil	N	Nil	Y	At Landfill
C&D Recycling	N	Nil	N	Nil	N	Nil
C&I Recycling	N	Nil	N	Nil	N	Nil
Energy Recovery	N	Nil	N	Nil	N	Nil

3.6.2 RESOURCE RECOVERY COMPOSITION

For an analysis of the composition of the recyclable materials collected refer to the following:

- **Appendix G - Base Data Shire of Cranbrook**
- **Appendix H - Base Data Shire of Plantagenet**
- **Appendix I - Base Data Shire of Denmark**

3.6.3 CURRENT MARKETS

The philosophy used in the Region is that it is not the intention to simply collect as much recyclable material as possible. Recyclable materials will only be collected if there is a reliable and viable system in place for the removal, transport and delivery of the material to the appropriate processing facility or application.

Currently the vast majority of recycling is achieved via kerbside recycling. For this activity the collection contractor is responsible for the delivery and processing of recyclable materials.

There is limited recycling occurring at drop-off facilities. The material is either collected by an appropriate contractor and removed for processing or the "recycling" activity occurs as a result of reuse through a Tip Shop.

3.6.4 GOVERNMENT POLICY/REGULATOR IMPACTS

The lack of the Federal and State Government action with regards to the implementation of Extended Producer Responsibility (EPR) and Container Deposit Legislation (CDL) and other product stewardship initiatives results in the Local Governments having to bear the financial impact of recycling activities or the consequences of landfilling unnecessary quantities of waste.

State Government does not encourage/enforce the use of recyclable materials in place of the virgin materials. Consequently there is no significant demand for recyclable materials.

Increased Federal and State Government action will transfer the cost of recycling to the consumer and not ratepayers as well as increase the demand for recyclable materials.

Local Government is seen as an easy target for covering the cost of waste management. Ratepayers are ultimately the ones that have to cover the costs associated with recycling activities.

The "consumer pays" principle should apply. Not all ratepayers consume at the same level hence it is not equitable that ratepayers should contribute to the costs of recycling at equal levels.

3.6.5 DATA GAPS

Data gaps occur with regards to the accurate measurement of the quantity of recyclable materials extracted from the waste stream. This is more prevalent for drop-off recycling and tip shop reuse.

Although it is important to know how much material is recycled, it is more important to have accurate information about the residual waste stream in order to concentrate on diverting this portion away from landfill. The more that is known about the residual waste stream, the more chance there is of striving "Towards Zero Waste".

3.7 RESIDUAL WASTE DISPOSAL – BY LOCAL GOVERNMENT AREA

3.7.1 RESIDUAL WASTE DISPOSAL ACTIVITIES

Table 4.7.1.1 Provides Detail on Residual Waste Management in the Region

Activity	Shire of Cranbrook		Shire of Plantagenet		Shire of Denmark	
	Y/N	Comment	Y/N	Comment	Y/N	Comment
Kerbside Waste	Y	240L Weekly	Y	240L Weekly	Y	240L Weekly
Green Waste	Y	Burnt at Landfill	Y	Burnt at Landfill	Y	Burnt at Landfill
Vergeside Waste	N	Nil	N	Nil	N	Nil
Drop-Off Waste	Y	At Landfill	Y	At LF and T/S	Y	At Transfer Stat
C&D Waste	Y	At Landfill	Y	At LF and T/S	Y	At Transfer Stat
C&I Waste	Y	At Landfill	Y	At LF and T/S	Y	At Transfer Stat

3.7.2 RESIDUAL WASTE COMPOSITION

For data on residual waste refer to the following:

- **Appendix G - Base Data Shire of Cranbrook**
- **Appendix H - Base Data Shire of Plantagenet**
- **Appendix I - Base Data Shire of Denmark**

3.7.3 GOVERNMENT POLICY/REGULATOR IMPACTS

The following Government policies and regulations have direct implications on residual waste management activities within the Group:

- Environmental Protection Act 1986 - governing environmental performance.
- Waste Avoidance and Resource Recovery Act 2007 - requirement for increased recycling activities.
- Environmental Protection (Rural Landfill) Regulations 2002 - management of landfill facilities.

- Code of Practice Rural Landfill Management November 2000 - management of landfill facilities.
- Best Practice Environmental Management, Siting, Design, Operation and Rehabilitation of Landfills November 2005 - location, design and management of landfill facilities.
- Contaminated Sites Act 2003 - management of contaminated sites (old landfill sites).

3.7.4 DATA GAPS

Data gaps occur with regards to the accurate measurement of the quantity and type of residual waste sent to landfill. In to strive "Towards Zero Waste" it is imperative that as much information as possible can be gathered on the quantity and quality of residual waste. This will assist in determining the most appropriate recycling activities undertaken in order to reduce the quantity of residual waste ending up in landfill.

It is more important to gather accurate data on residual waste than on recyclable material. Recyclable material is already diverted from landfill; the greatest effort should be concentrated on that portion of waste that is still going to landfill.

4 PHASE 2 ANALYSIS – ISSUES AND RECOMMENDATIONS

4.1 DATA GAPS

4.1.1 ISSUES IDENTIFIED

The issues identified related to:

- The collection of accurate data on recyclable quantities.
- The collection of accurate data on residue waste quantities and quality.

It is important to more accurately define the quantity and quality of the various material types. This enables success to be measured in striving "Towards Zero Waste".

The ultimate success is in significantly reducing the quantity of residual waste ending up in landfill; hence, it is more important to concentrate on the quantity and quality of this product.

A review of the type and quantity of waste ending up in landfill should be undertaken on a regular basis. The object of the reviews are to identify those material types that are either harmful to the environment or are easily recyclable. Effort can then be directed towards removing these identified materials from landfill.

Future Action
1. Develop systems for the collection and recording of waste management data.
2. Emphasis to be on residual waste data, such as volume of air space consumed and type of materials landfilled.

4.1.2 DEC RECOMMENDATIONS – PROPOSED ACTIONS

DEC Recommendations

Conduct a waste audit of Local Government activities. An audit can then lead to the establishment of a suitable, waste and recycling data management system. Contact your DEC Regional Coordinator for advice on waste audits.

Regular waste audits can track progress and promote the efficient allocation of resources and actions for diverting waste from landfill and general waste management.

DEC is developing a set of waste and recycling audit protocols to ensure a consistent methodology is used for waste data collection across the State. Consider developing and implementing a schedule of periodic waste audits. Contact your DEC Regional Coordinator for advice regarding waste audits.

Proposed Actions

Waste audits will form an important part of compiling accurate data on residual waste and recycled materials.

4.2 MINIMISING DIRECT AND INDIRECT ENVIRONMENTAL IMPACTS

4.2.1 ISSUES IDENTIFIED

Landfill Management

The vast majority of the Region's waste stream ends up in landfills; hence, the priority should be to improve the management of landfill facilities. This will have an immediate and direct environmental improvement. Improvements include:

- Landfill future planning, including securing future landfill sites.
- Landfill management.
- Site monitoring.
- Progressive closure.
- Post closure management planning and implementation.

Local Solutions for Local Problems

To minimise the direct and indirect environmental impact of driving waste and/or recyclable material extended distances the Group has adopted the concept of "local solutions for local problems". Where possible waste and recyclables are to be managed and consumed locally. The concept being:

- Develop local recycling activities (organics and green waste composting, C&D crushing).
- Consumption of locally recycled products (glass, compost, mulch, C&D rubble).
- Localised landfill solutions (not one large regional landfill).
- Asset sharing.

Organics Processing

Investigate the potential for developing organics processing/composting facilities. Activities to include:

- Assess the quantity of green waste available.
- Assess the quantity of source separated organics available (including biosolids and septage waste).
- Liaise with industry to determine organics processing capabilities/knowledge sharing.
- Identify potential facility locations.
- Encourage community involvement including worm farms, home composters and source separation.

Household Hazardous Waste

Implement a hazardous household waste collection system. The focus is to be on products that have the potential to cause the most environmental harm if disposed of to landfill. Activities to include:

- Liaise with DEC about household hazardous waste program.
- Identify the type of products.
- Identify suitable drop-off locations.
- Develop appropriate facilities for the storage of the products.
- Develop appropriate community communication methodologies.
- Disposal of collected products in conjunction with State Government assistance.

Materials Handling

Concentrate on improving transport efficiencies of collected recyclable materials. Activities to include:

- Utilisation of maximum capacity bins.
- Increased material density (compaction, consolidation).

Electronic Waste

Implement a collection system for electronic waste (E-Waste). Activities to include:

- Investigate disposal options for collected material.
- Determine suitable collection points.
- Community education and marketing.

Construction and Demolition Waste

Investigate the implementation of construction and demolition (C&I) waste processing. Activities to include:

- Assess the quantity of C&I waste available.
- Liaise with industry to determine C&I processing capabilities/knowledge sharing.
- Identify potential facility locations.
- Encourage industry and community involvement in source separation.
- Utilise Shire planning process to enforce industry participation if necessary.

Increased Recycling Activities

Investigate and implement additional recycling activities to increase the range of materials being recycled. The target materials should be identified through audits of the residue waste ending up at landfill and also those materials that have the greatest potential of causing environmental harm (eg. Long life globes and neon tubes, mobile phones).

Future Action

1. Improve the management of landfill facilities.
2. Where possible, apply local solutions to local problems.
3. Investigate the development of organics/composting facilities.
4. Implement a household hazardous waste collection system.
5. Improve transport efficiencies in recycling management.
6. Implement E-Waste collection systems.
7. Investigate implementation of C&I waste processing.
8. Investigate and implement additional recycling activities.

4.2.2 DEC RECOMMENDATIONS – PROPOSED ACTIONS

As part of the assessment of the Phase 1 survey data the DEC proposed the following recommended actions:

Landfill Management

DEC Recommendation

DEC has a strong preference for fewer well run landfills that are serviced, where necessary, by transfer stations, rather than multiple loosely-managed landfills. Working with other local governments may assist in identifying options for rationalising the number of landfills in your region. Where rationalising the number of landfills is not possible in the short-term, consider requesting an inspection of your landfill operations by a DEC licensing officer or suitable consultant to help identify areas for immediate improvement and to ensure the basic regulatory requirements are appropriate for the site and are being met.

Proposed Action

Although the Region has a preference for "local solutions for local problems", which includes the concept of a landfill in each Shire (and not a single regional landfill), the Region has identified a major activity as improving landfill management. This is consistent with the intent of the DEC recommendation.

Local Solutions for Local Problems

Nil

Organics Processing

DEC Recommendation

Look at options to produce mulch or compost from green waste to enable the products to be used by Local Government or the community. The collected green waste might also be marketed to industry for processing.

Proposed Action

This has been identified in 4.2.1 above as a priority action.

Household Hazardous Waste

DEC Recommendation

Local governments are encouraged to participate in the joint DEC/MWAC household hazardous waste collection program proposed to commence in 2008.

Proposed Action

This has been identified in 4.2.1 above as a priority action.

The DEC only recommended that the Shire of Cranbrook participate in the joint DEC/MWAC Hazardous Household Waste collection program.

The Region believes that all member Shires should be involved in the collection of Hazardous Household Waste.

Materials Handling

Nil

Electronic Waste

Nil

Construction and Demolition Waste

DEC Recommendation

DEC has a preference for the reuse or recycling of construction and demolition wastes where possible, rather than direct disposal to landfill. Consider separating and reprocessing materials resulting from the activities of the commercial sectors and of Local Government's own public works activities, such as bricks, brick rubble and concrete and glass, for local use in pavements, road base, fillings and bedding material, foot and cycle paths and drainage. For guidance on opportunities for the reuse of this material contact your DEC Regional Coordinator.

Proposed Action

This has been identified in 4.2.1 above as a priority action.

The DEC only recommended that the Shire of Denmark implement C&D recycling.

The Region believes that all member Shires should at least investigate opportunities for possible recycling/reuse of C&D materials.

Increased Recycling Activities

DEC Recommendation

DEC would like to take this opportunity to alert local government to a number of waste related programs that you may like to participate in:

- *MobileMuster - is a national recycling program of the mobile phone industry in Australia. The program collects and recycles mobile phone handsets, batteries and accessories. Contact 1800 249 113. www.mobilemuster.com.au*
- *Waste Wise Schools - helps schools reduce the waste they send to landfill through encouraging attitudinal and behavioural change with respect to waste and the impact of waste on the environment. The program includes resources and support for teachers. Contact Vanessa Dow on (08) 6467 5141. The participation of school students in this program has broader positive implications for the education of student households.*
- *Tidy Towns - is a national program run by Keep Australia Beautiful. The program is designed to encourage the Australian community to protect and conserve the natural environment through individual actions. Contact Deborah Cork (08) 6476 5131 (WA contact).*
- *Recycle@Work - A Western Australian program provided by Amcor Recycling WA with the support of the State Government's Strategic Waste Initiative Scheme. Contact 1800 819 000. www.recycleatwork.com.au*
- *Cartridges for Planet Ark - is a national multi-vendor used ink cartridge recycling campaign with collection boxes in participating corporate and government organisations Australia wide. Register on-line at www.closestheoop.com.au*

- *GreenStamp – is an industry based program that assists small-to-medium-sized businesses to incorporate processes that avoid, reduce, reuse, recycle and dispose of waste in an environmentally friendly manner. The program is an initiative of the Motor Trade Association of Australia (MTA), the Printing Industries Association of Australia (PIAA) and Building Service Contractors Association of Australia (BSCAA) - WA Divisions respectively. Contact (08) 9361 4625 for more information.*
- *Swan Catchment Council (SCC) – SCC is developing a national model to improve sustainable performance in small to medium enterprises (SME) including waste management and recycling. Contact (08) 9374 3314.*
- *There are a number of web sites which provide details on companies which provide recycled/recyclable products. Visit - www.zerowastewa.com.au www.brba.com.au www.ecobuy.org.au.*

Proposed Action

The DEC only recommended that the Shire of Plantagenet consider the waste related programs.

The Region believes that all member Shires should consider the programs.

DEC Recommendation

Consider providing signs and bins that encourage the on-site separation of recyclables and waste at public places and events.

Encourage organisers of public events to include a budget item for recycling/reuse strategies.

Consider pooling regional resources (recycling bins) for event recycling programs (agricultural shows, demonstration days).

Canvass the view of local community/interest groups to determine their willingness to participate and assist with local event recycling programs.

Proposed Action

The DEC only recommended that the Shire of Denmark consider the waste related programs.

The Region believes that all member Shires should encourage public event recycling no matter the size of the event.

4.3 IMPROVING EXISTING SERVICE EFFICIENCIES

4.3.1 ISSUES IDENTIFIED

Participation Rates

Improving participation rates of all existing recycling activities is seen as the simplest way of increasing recycling in the region. With the recycling activities already in place, it is a matter of increasing participation in these various activities. Actions to include:

- Expansion of existing operations into new areas (kerbside recycling, additional drop-off point).
- Increased community participation through additional communication and education.

Materials Handling

Improve materials handling of all existing recycling activities. Actions to include:

- Size bins and equipment appropriately to reduce the amount of manpower needed to run the system.

- Where possible mechanised recycling activities.
- Improve materials throughput through existing systems.

Diversify Kerbside Recycling

Investigate increasing the range of products that can be placed into the existing kerbside recycling bin. In conjunction with the pin collection companies and the Materials Recovery Facility (MRF) operators, assess the potential for including additional types of recyclable materials into the existing kerbside recycling bin. Activities to include:

- From audits of the residual waste stream, identify the range of materials that are not being recycled.
- Discuss with the MRF operators what additional materials could be added to the recycling bin.
- Discuss with the collection companies the potential impact of including additional materials.
- Should there be agreement as to an increased range of materials that can be placed in the recycling bin; an extensive community education process will be required to ensure participation.

Future Action
<ol style="list-style-type: none">1. Improve participation rate in existing recycling systems.2. Improve materials handling of all existing recycling activities.3. Investigate the potential for increasing the range of products included in kerbside recycling.

4.3.2 DEC RECOMMENDATIONS – PROPOSED ACTIONS

As part of the assessment of the Phase 1 survey data the DEC proposed the following recommended actions:

Participation Rates

DEC Recommendation

Where no kerbside recycling service is provided within the local government area {specific to the Shire of Plantagenet} consider investigating the feasibility and value of providing such service.

Proposed Action

Identified in 4.3.1 above as a priority action.

There are different levels of kerbside recycling available in the Region. The Shires of Cranbrook and Denmark should look into increasing coverage/participation in the existing kerbside recycling program and the Shire of Plantagenet, which does not currently have a kerbside recycling program, should implement a program.

Materials Handling

Nil

Diversify Kerbside Recycling

Nil

4.4 RAISING COMMUNITY AWARENESS OF WASTE MANAGEMENT ISSUES

4.4.1 ISSUES IDENTIFIED

Regular Community Communication

Implement regular community education/information communication on the benefits of recycling and methods for improved recycling. Regular communication with the community is essential in order to ensure that the appropriate message is conveyed and the appropriate actions undertaken. As the Region strives "Towards Zero Waste" there will be a need to convey messages to the community on the various recycling activities and improvements that will be occurring from time to time. Community communication will be far more simple if regular communication channels have been set up well in advance of community behavioural changes needing to be implemented. Activities to include:

- Improve Shire web sites to include a dedicated page dealing with waste management and recycling activities including links to other appropriate web sites.
- Dedicate a portion of the Shires' regular community newsletters to waste management and recycling activities.
- Develop handouts dedicated to waste management and recycling activities.
- Have a regular column in local papers (if applicable).

Earth Carers

Investigate the potential for developing an "Earth Carers" community group in the Region.

Earth Carers is a mechanism by which interested members (volunteers) of the community are trained on specific waste management and recycling activities. These "Earth Carers" then go out into the community and educate neighbours and friends.

Future Action
1. Implement regular community education/information communication.
2. Investigate the potential for developing an "Earth Carers" group in the region.

4.4.2 DEC RECOMMENDATIONS – PROPOSED ACTIONS

As part of the assessment of the Phase 1 survey data the DEC proposed the following recommended actions:

Regular Community Communication

DEC Recommendations

A range of educational resources is available from www.zerowastewa.com.au. Local Governments are encouraged to access these.

Proposed Actions

These resources can be used as part of improving community communication and education.

Earth Carers

Nil

4.5 IMPROVING LOCAL GOVERNMENT WASTE MANAGEMENT PRACTICES

4.5.1 ISSUES IDENTIFIED

Lead by Example

The Region is to improve and/or implement comprehensive recycling activities within all Shire operations. Activities to include:

- Office recycling.
- Workshop recycling.
- Civil works recycling.
- Green waste recycling.

Purchasing Policies

Implement sustainable purchasing policies to encourage waste minimisation and reuse of recyclable materials.

Planning Solutions

As part of the Region's planning approval processes ensure that developers are required to submit waste management plans. Include fees and charges in the application process to ensure developers comply with agreed waste management plans. Activities to include:

- Minor modification of planning approval processes.
- Implement fees and charges to cover waste management costs.
- Community education as to the reasons behind the change in planning approval process (concept of user pays).

Improved Communication/Knowledge Sharing

Improve internal communication and knowledge sharing through regular waste management meetings amongst the Region's Officers.

Links with Neighbouring Shires

Develop links with other neighbouring Shires to share knowledge and potentially identify synergies such as resource and skills sharing.

Elected Members Support

Elected members need to actively support improved waste management and recycling activities within the Shires. Elected members should also canvas the State Government for increased support with regards to the following:

- Implementation of an Extended Producer Responsibility (EPR) scheme.
- Implementation of a Container Deposit Legislation (CDL) scheme.
- Development of large-scale waste processing/recycling facilities in the Perth metropolitan area and/or in larger regional centres to be able to receive the separated recyclable products.
- Increased support for waste management activities in regional areas.
- Encourage/enforce the use of recycled products.
- Lead by example (waste minimisation, reuse and recycling).

Dedicated Waste Management Officer

In time, once waste management and recycling activities gain increased momentum within the Region, there may be a need to employ a dedicated waste management officer for the Region. The need for this position will depend upon the ability of other council officers (EHO's) to undertake the necessary activities aligned with continuous improvement in waste management and recycling activities.

Continuous Improvement

The Region should strive for continuous improvement with regards to waste minimisation activities. Activities include:

- Improving existing facilities and processes.
- Increasing the quantity of material recycled.
- Decreasing quantity of residual waste ending up in landfill.
- Continuously communicating with the community.
- Staying abreast of the latest recycling trends and activities.
- Continuous knowledge sharing within the region and with neighbouring shires.

Future Action
<ol style="list-style-type: none">1. Lead by example - improve Shire internal recycling activities.2. Implement sustainable purchasing policies.3. Implemented planning solutions to force the developers to manage waste appropriately.4. Improve internal communication and knowledge sharing.5. Developer links with neighbouring shires.6. Encourage elected members support in waste minimisation.7. Assess the need to employ a dedicated waste management officer.8. Continuous improvement.

4.5.2 DEC RECOMMENDATIONS – PROPOSED ACTIONS

As part of the assessment of the Phase 1 survey data the DEC proposed the following recommended actions:

Lead by Example

DEC Recommendations

Look at options to produce mulch or compost from green waste to enable the products to be used by Local Government or the community. The collected green waste might also be marketed to industry for processing.

Proposed Actions

This has been identified in 4.5.1 above a priority action.

The recycling of green waste includes the reuse of the processed/composted product.

Purchasing Policies

Nil

Planning Solutions

Nil

Improved Communication/Knowledge Sharing

DEC Recommendation

- *Investigate opportunities to jointly tender contracts for the provision of waste services. Enabling joint contracting of waste management services can increase market power and enable resource sharing across the region. This could promote economies of scale and could lead to greater efficiencies in purchasing, resourcing and better waste management practices.*
- *Where external contractors are used to handle wastes and recyclables, consider aligning the timing of waste contracts as existing contracts expire.*
- *Consider sharing infrastructure and plant between local governments, including;*
 - *mulchers/chippers*
 - *crushers for glass and construction and demolition waste*
 - *compactors/balers*
- *Where possible, share human resource skills on a regional basis through professional forums, site visits, formal training or the implementation of waste management programs etc.*
- *Consider working with other local governments and DEC to promote and invigorate recycling. Contact your DEC Regional Coordinator who can assist in the development and delivery of consistent waste education and promotion material for Western Australia.*

Proposed Actions

This has been identified in 4.5.1 above a priority action.

The improvement of internal communication and knowledge sharing amongst the Region's Officers is aimed at identifying synergies between the Shires.

Links with Neighbouring Shires

Nil

Elected Members Support

Nil

Dedicated Waste Management Officer

DEC Recommendations

Consider introducing a staff training program to increase the awareness and skills of Local Government personnel in respect to all aspects of waste management and recycling.

Proposed Actions

The dedicated waste management officer would be appropriately trained and as part of his/her activities would be to educate and train Shire staff in the appropriate waste management and recycling skills.

Continuous Improvement

Nil, but consistent with the direction recommended by the DEC.

5 ACTION PLANNING

5.1 FUTURE ACTIONS

For information on the Issues, Actions and Outcomes refer to the following:

- **Appendix J - Issues, Actions and Outcomes 2008-2013 - Region**

- **Appendix K - Issues, Actions and Outcomes 2008-2013 - Shire of Cranbrook**
- **Appendix L - Issues, Actions and Outcomes 2008-2013 - Shire of Plantagenet**
- **Appendix M - Issues, Actions and Outcomes 2008-2013 - Shire of Denmark**

6 IMPLEMENTATION SCHEDULE

This Strategic Waste Minimisation Plan covers a vast range of waste management improvements to be undertaken within the Region. Not all of these activities can be undertaken immediately.

Although the Plan is for the period 2008 – 2013, all activities have been scheduled for completion between January 2009 and December 2012. This allows the final year (2013) for ongoing improvement of existing waste minimisation activities or, if there are some activities that are lagging behind the schedule, there is an opportunity to catch up prior to the end of the Plan period.

The following implementation schedule sets out an appropriate timeline by which the Region and individual Shires can manage the implementation of future waste management activities:

Activity	Timeframe
Financial Year 2008/2009	
Where possible, apply local solutions to local problems.	Jan 2009
Develop systems for the collection and recording of waste management data.	Jun 2009
Improve the management of landfill facilities.	Jun 2009
Implement a household hazardous waste collection system.	Jun 2009
Financial Year 2009/2010	
Implement regular community education/information communication.	Dec 2009
Implement sustainable purchasing policies.	Dec 2009
Improve internal communication and knowledge sharing.	Dec 2009
Develop links with neighbouring shires.	Dec 2009
Investigate and implement additional recycling activities.	Dec 2009
Investigate the development of organics/composting facilities.	Dec 2009
Financial Year 2010/2011	
Implement E-Waste collection systems.	Dec 2010
Lead by example - improve Shire internal recycling activities.	Dec 2010
Encourage elected members support in waste minimisation.	Dec 2010
Improve transport efficiencies in recycling management.	Dec 2011
Financial Year 2011/2012	
Improve materials handling of all existing recycling activities.	Dec 2011
Implemented planning solutions to force the developers to manage waste appropriately.	Dec 2011
Assess the need to employ a dedicated waste management officer.	Dec 2011
Continuous improvement.	Dec 2011
Financial Year 2012/2013	
Investigate implementation of C&I waste processing.	Dec 2012
Improve participation rate in existing recycling systems.	Dec 2012
Investigate the potential for increasing the range of products included in kerbside recycling.	Dec 2012
Investigate the potential for developing an "Earth Carers" group in the region.	Dec 2012
Financial Year 2013/2014	
Nil	

7 BUDGET - FUNDING OPTIONS

Striving "Towards Zero Waste" is fundamentally undertaken for environmental and social reasons, there are very limited financial benefits. What financial benefits are achieved out of recycling a particular waste stream (for example metal recycling) is quickly consumed by the other wide range of costly waste reduction activities. Recycling within the Region is not undertaken for financial gain.

The Region has been and continues to be committed to spending a significant portion of its annual budget on appropriate waste management activities.

Costs would be allocated to any Shire depending on the activity being undertaken and typically in portion to the population ratio within each Shire. Based on the current population of each Shire, the Shire of Cranbrook would cover approximately 10% of the costs with the Shire of Plantagenet paying for 42% and the Shire of Denmark 48%. For activities that only impact one or two Shires, the Shire(s) would cover the associated costs (eg. "Improve the management of landfill facilities" - predominantly the Shire of Plantagenet, possibly some Shire of Cranbrook costs).

Item	Estimated Cost	Potential Funding
Financial Year 2008/2009		
Where possible, apply local solutions to local problems.	\$0	\$0
Develop systems for the collection and recording of waste management data.	\$5,000	\$5,000
Improve the management of landfill facilities.	\$15,000	\$0
Implement a household hazardous waste collection system.	\$15,000	\$15,000
Sub-Total	\$35,000	\$20,000
Financial Year 2009/2010		
Implement regular community education/information communication.	\$10,000	\$2,000
Implement sustainable purchasing policies.	\$0	\$0
Improve internal communication and knowledge sharing.	\$0	\$0
Develop links with neighbouring shires.	\$0	\$0
Investigate and implement additional recycling activities.	\$5,000	\$5,000
Investigate the development of organics/composting facilities.	\$15,000	\$15,000
Sub-Total	\$30,000	\$22,000
Financial Year 2010/2011		
Implement E-Waste collection systems.	\$5,000	\$3,000
Lead by example - improve Shire internal recycling activities.	\$10,000	\$0
Encourage elected members support in waste minimisation.	\$0	\$0
Improve transport efficiencies in recycling management.	\$20,000	\$20,000
Sub-Total	\$35,000	\$23,000
Financial Year 2011/2012		
Improve materials handling of all existing recycling activities.	\$30,000	\$30,000
Implemented planning solutions to force the developers to manage waste appropriately.	\$0	\$0
Assess the need to employ a dedicated waste management officer.	\$0	\$0
Continuous improvement.	\$0	\$0
Sub-Total	\$30,000	\$30,000

Item	Estimated Cost	Potential Funding
Financial Year 2012/2013		
Investigate implementation of C&I waste processing.	\$10,000	\$10,000
Improve participation rate in existing recycling systems.	\$15,000	\$15,000
Investigate the potential for increasing the range of products included in kerbside recycling.	\$5,000	\$5,000
Investigate the potential for developing an "Earth Carers" group in the region.	\$5,000	\$5,000
Sub-Total	\$35,000	\$35,000
Financial Year 2013/2014		
Nil	\$0	\$0
Sub-Total	\$0	\$0
TOTAL	\$165,000	\$130,000

Note: all cost estimates are in 2008 dollars

It is imperative that the Region obtain significant external funding for the proposed waste minimisation activities as without funding the Region will incur considerable additional expenditure over the next five years. This level of funding will be extremely difficult for the relatively small Shires. Without the external funding, it is highly likely that the implementation of the Strategic Waste Minimisation Plan will be severely restricted.

In addition to capital expenditure, there will be a requirement for increased non-capital expenditure. These activities would primarily relate to:

- increased staffing requirements to manage increased waste management activities
- community education and awareness activities
- funding joint operations between neighbouring shires
- increased maintenance of waste management equipment.

In conjunction with the funding provided directly by the Region, there are various additional external funding sources available from which the Region could be able to obtain funds to further its waste reduction initiatives.

Potential external funding sources include:

- Waste Authority – Regional Develop Fund (RDF) {fund specifically set up to fund SWMP activities}
- Waste Authority - Strategic Waste Initiatives Scheme (SWIS)
- Waste Authority - Community Grants Scheme
- Waste Wise Schools Grants Program
- Waste Wise Youth Grants Program
- National Packaging Covenant (reducing packaging to landfill)
- Rural Recycling Cost Offset Scheme (subsidy for long-distance recycling haulage)
- Keep Australia Beautiful WA - Litter Prevention Grants
- Packaging Stewardship Forum.

8 REVIEW

In order for the Region to remain up-to-date with regards to current waste management initiatives and direction, it is necessary that this Strategic Waste Minimisation Plan be reviewed and updated on a regular basis.

This Plan covers the way forward for the Region based on current waste management direction, practices and the waste streams that are being generated within the Region. It is envisaged that over time, as the waste management industry and the Region's waste management practices evolve, that this Plan will need to be reviewed and updated.

This Strategic Waste Minimisation Plan is to be reviewed and updated in accordance with the following schedule:

Timeline	Action
Year 1 (Dec 09)	Nil
Year 2 (Dec 10)	Nil
Year 3 (Dec 11)	Review/confirm relevance and update as appropriate
Year 4 (Dec 12)	Nil
Year 5 (Dec 13)	Use as a basis for a complete rewrite for the next five-year period.

9 WASTE MANAGEMENT WEB SITES

There is a significant quantity of information on waste management and recycling available on the internet. The following is a list of relevant waste management web sites that could be used to obtain additional information on various aspects of waste management and recycling:

www.zerowastewa.com.au (Waste Management Board website)

www.dec.wa.gov.au (Department of Environment and Conservation website)

www.wastewise.wa.gov.au (Waste Management Board related website)

www.wastenet.net.au (Municipal Waste Advisory Council)

www.RecyclingNearYou.com.au (Local Government Recycling Hotline)

<http://awd.csiro.au> (Australian Waste Database)

www.mobilemuster.com.au

www.recycleatwork.com.au

www.closetheLoop.com.au

www.brba.com.au (Buy Recycled Business Alliance)

www.ecobuy.org.au

The waste management industry is an ever-changing environment; consequently, there are increasing numbers of relevant web sites that should be progressively added to the above list.

APPENDICES:

- A. MATRICES OF INFRASTRUCTURE AND SERVICES – SHIRE OF CRANBROOK**
- B. MATRICES OF INFRASTRUCTURE AND SERVICES – SHIRE OF PLANTAGENET**
- C. MATRICES OF INFRASTRUCTURE AND SERVICES – SHIRE OF DENMARK**
- D. AREA MAP OF POPULATION CENTRES, WASTE MANAGEMENT INFRASTRUCTURE AND MAJOR TRANSPORT ROUTES - SHIRE OF CRANBROOK**
- E. AREA MAP OF POPULATION CENTRES, WASTE MANAGEMENT INFRASTRUCTURE AND MAJOR TRANSPORT ROUTES - SHIRE OF PLANTAGENET**
- F. AREA MAP OF POPULATION CENTRES, WASTE MANAGEMENT INFRASTRUCTURE AND MAJOR TRANSPORT ROUTES - SHIRE OF DENMARK**
- G. BASE DATA – SHIRE OF CRANBROOK**
- H. BASE DATA – SHIRE OF PLANTAGENET**
- I. BASE DATA – SHIRE OF DENMARK**
- J. ISSUES, ACTIONS AND OUTCOMES 2008-2013 - REGION**

A. MATRICES OF INFRASTRUCTURE AND SERVICES – SHIRE OF CRANBROOK

Existing Services Delivered by Shire of Cranbrook in a Matrix of Services Currently Practiced in WA as at 19 November 2007*

Reference							Priority	Comments	
Collaboration	1	Are you a single Local Government or part of a Regional Council or a grouping of Local Governments	No Data	Regional centre dealing with its material only.	Partial collaboration, e.g. taking some material from neighbouring areas, Exporting materials to another local government area.	Fully collaborating with other local government in a formal or informal arrangement, including collection, processing, education, joint contracts etc.	1		
Kerbside	2A	Container type and size (waste)	Information not provided to DEC/unavailable	no kerbside service	240 MGB		120/140 MGB	6	
	2B	Container type and size (recycling)	Information not provided to DEC/unavailable	no kerbside service at this time but scheduled for implementation on 1 July 2008	recycling bag/rate/120-140 MGB		240 MGB		
	2C	Collection frequency (waste)	Information not provided to DEC/unavailable	N/A	fortnightly	weekly			
	2D	Collection frequency (recycling)	Information not provided to DEC/unavailable	N/A	fortnightly	weekly/fortnightly			
	2E	Participation rate (recycling)	N/A	none -10%	11-50%	51-80%	81-90%	Greater than 90%	
	2F	C&I services	Information not provided to DEC/unavailable	No service available			Industry serviced by contractor		
Verge/edge Collections	3A	Green Waste (GW)	No service	Collected and landfilled		Annual collection. Materials processed.	Biannual or more frequent collection	7	
	3B	Bulk waste	No service	Collected and landfilled		Annual collection. Materials processed.	Biannual or more frequent collection		
Public Place/Event Recycling	4A	Waste Collection	Information not provided to DEC/unavailable	no		yes		10	
	4B	Public Place Recycling	Information not provided to DEC/unavailable	no		yes			
Drop off centres	5A	Waste Transfer Station	Information not provided to DEC/unavailable	no		yes		4	
	5B	Paper/boardboard	Information not provided to DEC/unavailable	no		yes			
	5C	Glass container	Information not provided to DEC/unavailable	no		yes			
	5D	Plastics	Information not provided to DEC/unavailable	no		yes			
	5E	Metal (ferrous)	Information not provided to DEC/unavailable	no		yes			
	5F	Metal (non-ferrous)	Information not provided to DEC/unavailable	no		yes			
	5G	Aluminium	Information not provided to DEC/unavailable	no		yes			
	5H	E-waste	Information not provided to DEC/unavailable	no		yes			
	5I	Greenwaste	Information not provided to DEC/unavailable	no		yes			
	5J	Oil	Information not provided to DEC/unavailable	no		yes			
Landfill management	6A	Number/Status	Information not provided to DEC/unavailable	More than one-limited management	Single limited managed or sent to landfill in other local government area with limited management	Single or multiple well managed	Single well engineered either within area or located in another local government area	3	
	6B	Operational staff	Information not provided to DEC/unavailable or non-applicable	no	Part-time	Full-time			
	6C	Fenced	Information not provided to DEC/unavailable or non-applicable	no		yes			
	6D	Lined	Information not provided to DEC/unavailable or non-applicable	no		yes			
	6E	Data collection	Information not provided to DEC/unavailable or non-applicable	no	Log book/vehicle count/volumetric audits	Operational weighbridge			
	6F	Gas recovery	Information not provided to DEC/unavailable or non-applicable	no	Flared/oxidized	Energy recovery			
Separation/treatment/disposal strategies	7A	Transfer Station(s)	Information not provided to DEC/unavailable	no		yes		8	
	7B	Access to MRF	Information not provided to DEC/unavailable	no		yes			
	7C	AWT facility for organics from MSW	Information not provided to DEC/unavailable	no	Organics composted/stabilised prior to sale/landfilling	Organics composted and applied to land			
	7D	Green Waste facility	Information not provided to DEC/unavailable	no	Greenwaste separated and burnt or disposed of to landfill	Green waste mulched and reused on or off site	Greenwaste composted and provided to market		
Communication/education	8A	Education centre (or have access to)	Information not provided to DEC/unavailable	no		Yes. Either within local government area or located within collaborating local government area		6	
	8B	Publications/Flyers	Information not provided to DEC/unavailable	no	Ad-hoc publications	Regular, targeted information			
	8C	Waste Wise Schools	Information not provided to DEC/unavailable	no		yes			
Local Government's own activities	9A	C&D Waste	Information not provided to DEC/unavailable	No reuse	Limited processing and reuse	Policy in place/ material processed and used in civil works		2	
	9B	Green Waste	Information not provided to DEC/unavailable	No reuse	Greenwaste separated and burnt or disposed of to landfill	Greenwaste mulched and used on or off site	Green Waste composted and marketed		
	9C	Office Waste	Information not provided to DEC/unavailable	No program in place			Program in place		
	9D	Data Collection and Reporting	Level Unknown	No data collection systems in place	Limited data collection		Good data collection and management		
	9E	Sustainable procurement Policy	Information not provided to DEC/unavailable	No policy in place			Policy in place		
Participation in waste management related programmes	10A	Drum/Muster	Information not provided to DEC/unavailable	no		yes		9	
	10B	Chemclear	Information not provided to DEC/unavailable	no		yes			
	10C	Mobile Muster	Information not provided to DEC/unavailable	no		yes			
	10D	Tidy Towns-sustainable communities	Information not provided to DEC/unavailable	no		yes			

*The position in the matrix is based on the DEC's interpretation of the information provided in your response to Phase 1 of the zero waste plan. The DEC acknowledges that individual local governments might, by virtue of their population and geography, be capable of providing different levels of service. As such, the position in the matrix of your local government does not necessarily mean you are performing exceptionally well or poorly. The matrix should be used to stimulate thought on service delivery options that may result in improved resource recovery levels.

B. MATRICES OF INFRASTRUCTURE AND SERVICES – SHIRE OF PLANTAGENET

Existing Services Delivered by Shire of Plantagenet in a Matrix of Services Currently Practiced in WA as at 16 November 2007*

Reference		Priority	Comments
Collaboration	1	1	Fully collaborating with other local government in a formal or informal arrangement, including collection, processing, education, joint contracts etc.
Kerbside	2A	5	Container type and size (waste) Information not provided to DEC/unavailable no kerbside service 290 MGB 120/140 MGB
	2B	5	Container type and size (recycling) Information not provided to DEC/unavailable no kerbside service recycling bag/rotate/120-140 MGB 240 MGB
	2C	5	Collection frequency (waste) Information not provided to DEC/unavailable N/A fortnightly weekly
	2D	5	Collection frequency (recycling) Information not provided to DEC/unavailable N/A fortnightly weekly/fortnightly
	2E	5	Participation rate (recycling) N/A none -10% 11-50% 51-80% 81-90% Greater than 90%
	2F	5	C&I services Information not provided to DEC/unavailable No service available Industry serviced by local government
Verged Collection	3A	7	Green Waste (BW) No service Collected and landfilled Annual collection. Materials processed. Biannual or more frequent collection
	3B	7	Bulk waste No service Collected and landfilled Annual collection. Materials processed. Biannual or more frequent collection
Public Place/ Event Recycling	4A	10	Waste Collection Information not provided to DEC/unavailable no yes
	4B	10	Public Place Recycling Information not provided to DEC/unavailable no yes
Drop off centres	5A	4	Waste Transfer Station Information not provided to DEC/unavailable no yes
	5B	4	Paper/boardboard Information not provided to DEC/unavailable no yes
	5C	4	Glass container Information not provided to DEC/unavailable no yes
	5D	4	Plastics Information not provided to DEC/unavailable no yes
	5E	4	Metal (ferrous) Information not provided to DEC/unavailable no yes
	5F	4	Metal (non-ferrous) Information not provided to DEC/unavailable no yes
	5G	4	Aluminium Information not provided to DEC/unavailable no yes
	5H	4	E-waste Information not provided to DEC/unavailable no yes
	5I	4	Greenwaste Information not provided to DEC/unavailable no yes
	5J	4	Oil Information not provided to DEC/unavailable no yes
Landfill management	6A	3	Number/Status Information not provided to DEC/unavailable More than one-limited management (3 x sites) Single limited managed or sent to landfill in other local government area with limited management Single or multiple well managed Single well engineered either within area or located in another local government area
	6B	3	Operational staff Information not provided to DEC/unavailable or non-applicable no Park time Full-time
	6C	3	Fenced Information not provided to DEC/unavailable or non-applicable no yes
	6D	3	Lined Information not provided to DEC/unavailable or non-applicable no yes
	6E	3	Data collection Information not provided to DEC/unavailable or non-applicable no Log book/vehicle count/volumetric audits Operational weighbridge
	6F	3	Gas recovery Information not provided to DEC/unavailable or non-applicable no Flared/vented Energy recovery
Separation/treatment/ disposal strategies	7A	8	Transfer Station(s) Information not provided to DEC/unavailable no yes
	7B	8	Access to MRF Information not provided to DEC/unavailable no yes
	7C	8	AWT facility for organics from MSW Information not provided to DEC/unavailable no Organics composted/established prior to sale/landfilling Organics composted and applied to land
	7D	8	Green Waste facility Information not provided to DEC/unavailable no Greenwaste separated and burnt or disposed of to landfill Green waste mulched and reused on or off site Greenwaste composted and provided to market
Communication/ education	8A	6	Education centre (or have access to) Information not provided to DEC/unavailable no Yes. Either within local government area or located within collaborating local government area
	8B	6	Publications/Flyers Information not provided to DEC/unavailable no - but plans to do so Ad hoc publications Regular, targeted information
	8C	6	Waste Wise Schools Information not provided to DEC/unavailable no yes
Local Government's own activities	9A	2	C&D Waste Information not provided to DEC/unavailable No reuse Limited processing and reuse Policy in place/ material processed and used in civil works
	9B	2	Green Waste Information not provided to DEC/unavailable No reuse Greenwaste separated and burnt or disposed of to landfill Greenwaste mulched and used on or off site Green Waste composted and marketed
	9C	2	Office Waste Information not provided to DEC/unavailable No program in place Program in place
	9D	2	Data Collection and Reporting Level Unknown No data collection systems in place Limited data collection Good data collection and management
	9E	2	Sustainable procurement Policy Information not provided to DEC/unavailable No policy in place Policy in place
Participation in waste management related programmes	10A	9	Drum Muster Information not provided to DEC/unavailable no yes
	10B	9	Chemclear Information not provided to DEC/unavailable no yes
	10C	9	Mobile Muster Information not provided to DEC/unavailable no yes
	10D	9	Tidy Towns-sustainable communities Information not provided to DEC/unavailable no yes

*The position in the matrix is based on the DEC's interpretation of the information provided in your response to Phase 1 of the zero waste plan. The DEC acknowledges that individual local governments might, by virtue of their population and geography, be capable of providing different levels of service. As such, the position in the matrix of your local government does not necessarily mean you are performing exceptionally well or poorly. The matrix should be used to stimulate thought on service delivery options that may result in improved resource recovery levels.

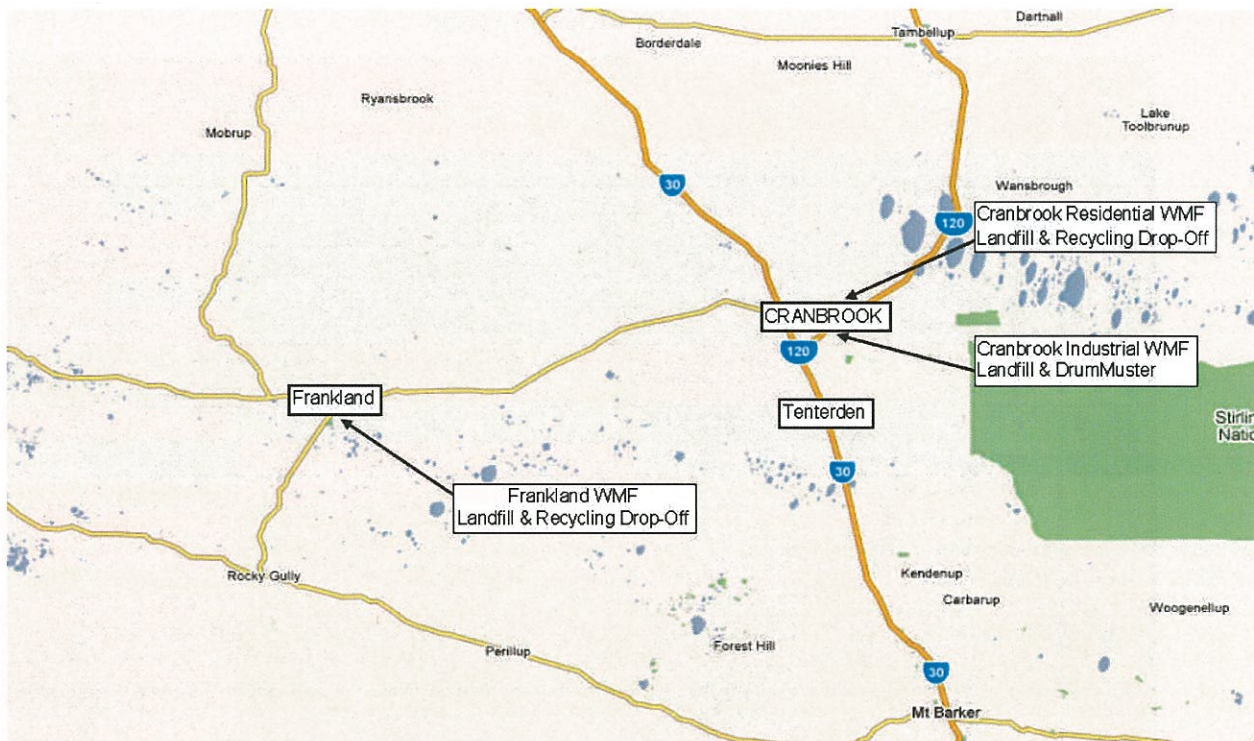
C. MATRICES OF INFRASTRUCTURE AND SERVICES – SHIRE OF DENMARK

Existing Services Delivered by Shire of Denmark in a Matrix of Services Currently Practiced in WA as at 10 January 2008*

Reference								
Collaboration	1	Are you a single Local Government or part of a Regional Council or a grouping of Local Governments	No Data	Regional centre dealing with its material only.	Partial collaboration, e.g. taking some material from neighbouring areas, Exporting materials to another local government area.	Fully collaborating with other local government in a formal or informal arrangement, including collection, processing, education, joint contracts etc.		
Kerbside	2A	Container type and size (waste)	Information not provided to DEC/Unavailable	no kerbside service	240 MGB	120/140 MGB		
	2B	Container type and size (recycling)	Information not provided to DEC/Unavailable	no kerbside service	recycling bag/crate/120-140 MGB	240 MGB		
	2C	Collection frequency (waste)	Information not provided to DEC/Unavailable	N/A	fortnightly	weekly		
	2D	Collection frequency (recycling)	Information not provided to DEC/Unavailable	N/A	fortnightly	weekly/fortnightly		
	2E	Participation rate (recycling)	N/A	none -10%	11-50%	51-80%	81-90%	Greater than 90%
	2F	C&I services	Information not provided to DEC/Unavailable		No service available		Industry serviced by contractor	
Verge/edge Collections	3A	Green Waste (GW)	No service	Collected and landfilled	Annual collection. Materials processed.	Biannual or more frequent collection		
	3B	Bulk waste	No service	Collected and landfilled	Annual collection. Materials processed.	Biannual or more frequent collection		
Public Place / Event Recycling	4A	Waste Collection	Information not provided to DEC/Unavailable	no		yes		
	4B	Public Place Recycling	Information not provided to DEC/Unavailable	no		yes		
Drop off centres	5A	Waste Transfer Station	Information not provided to DEC/Unavailable	no		yes		
	5B	Paper/cardboard	Information not provided to DEC/Unavailable	no		yes		
	5C	Glass container	Information not provided to DEC/Unavailable	no		yes		
	5D	Plastics	Information not provided to DEC/Unavailable	no		yes		
	5E	Metal (ferrous)	Information not provided to DEC/Unavailable	no		yes		
	5F	Metal (non-ferrous)	Information not provided to DEC/Unavailable	no		yes		
	5G	Aluminium	Information not provided to DEC/Unavailable	no		yes		
	5H	E-waste	Information not provided to DEC/Unavailable	no		yes - limited (tip shop)		
	5I	Greenwaste	Information not provided to DEC/Unavailable	no		yes		
	5J	Oil	Information not provided to DEC/Unavailable	no		yes		
5K	Batteries	Information not provided to DEC/Unavailable	no		yes			
5L	HHW facility	Information not provided to DEC/Unavailable	no	yes-limited		yes		
Landfill management	6A	Number/Status	Information not provided to DEC/Unavailable	More than one-limited management	Single limited managed or sent to landfill in other local government area with limited management	Single or multiple well managed	Single well engineered either within area or located in another local government area	
	6B	Operational staff	Information not provided to DEC/Unavailable or non-applicable	no	Part-time		Full-time	
	6C	Fenced	Information not provided to DEC/Unavailable or non-applicable	no	no		yes	
	6D	Lined	Information not provided to DEC/Unavailable or non-applicable	no	no		yes	
	6E	Data collection	Information not provided to DEC/Unavailable or non-applicable	no	Tip passes/fees		Operational weighbridge	
	6F	Gas recovery	Information not provided to DEC/Unavailable or non-applicable	no	Flared/oxidised		Energy recovery	
Separation/centre/disposal strategies	7A	Transfer Station(s)	Information not provided to DEC/Unavailable	no			yes	
	7B	Access to MRF	Information not provided to DEC/Unavailable	no			yes	
	7C	AWT facility for organics from MSW	Information not provided to DEC/Unavailable	no	Organics composted/stabilised prior to sale/landfilling		Organics composted and applied to land	
	7D	Green Waste facility	Information not provided to DEC/Unavailable	no	Greenwaste separated and burnt or disposed of to landfill	Green waste mulched and reused on or off site	Greenwaste composted and provided to market	
Communication/education	8A	Education centre (or have access to)	Information not provided to DEC/Unavailable	no			Yes. Either within local government area or located within collaborating local government area	
	8B	Publications/Flyers	Information not provided to DEC/Unavailable	no	Ad-hoc publications		Regular, targeted information	
	8C	Waste Wise Schools	Information not provided to DEC/Unavailable	no			yes	
Local Government's own activities	9A	C&D Waste	Information not provided to DEC/Unavailable	No reuse	Limited processing and reuse		Policy in place / material processed and used in civil works	
	9B	Green Waste	Information not provided to DEC/Unavailable	No reuse	Greenwaste separated and burnt or disposed of to landfill	Greenwaste mulched and used on or off site	Green Waste composted and marketed	
	9C	Office Waste	Information not provided to DEC/Unavailable		No program in place		Program in place	
	9D	Data Collection and Reporting	Level Unknown	No data collection systems in place	Limited data collection		Good data collection and management	
	9E	Sustainable procurement Policy	Information not provided to DEC/Unavailable		No policy in place		Policy in place	
Participation in waste management related programmes	10A	Drum Muster	Information not provided to DEC/Unavailable		no		yes	
	10B	Chemclear	Information not provided to DEC/Unavailable		no		yes	
	10C	Mobile Muster	Information not provided to DEC/Unavailable		no		yes	
	10D	Tidy Towne-sustainable communities	Information not provided to DEC/Unavailable		no		yes	

*The position in the matrix is based on the DEC's interpretation of the information provided in your response to Phase 1 of the zero waste plan. The DEC acknowledges that individual local governments might, by virtue of their population and geography, be capable of providing different levels of service. As such, the position in the matrix of your local government does not necessarily mean you are performing exceptionally well or poorly. The matrix should be used to stimulate thought on service delivery options that may result in improved resource recovery levels.

D. AREA MAP OF POPULATION CENTRES, WASTE MANAGEMENT INFRASTRUCTURE AND MAJOR TRANSPORT ROUTES - SHIRE OF CRANBROOK



E. AREA MAP OF POPULATION CENTRES, WASTE MANAGEMENT INFRASTRUCTURE AND MAJOR TRANSPORT ROUTES - SHIRE OF PLANTAGENET



F. AREA MAP OF POPULATION CENTRES, WASTE MANAGEMENT INFRASTRUCTURE AND MAJOR TRANSPORT ROUTES - SHIRE OF DENMARK



G. BASE DATA – SHIRE OF CRANBROOK

**Shire of Cranbrook
Waste Management Related Data**

Total Shire Population		1,170	Projected Annual Population Growth		0.2%
Development Nodes					
	Population	600	Y	N	N
Cranbrook		275	Y	N	N
Frankland		125	Y	N	N
Tansey		20	N	N	N
Gullyng Area		150	N	N	N
Waste Management Facilities (WME)					
	Manned Facility (Y/N)	Fenced Facility (Y/N)	Landfill (Y/N)	Transfer Station (Y/N)	Liquid Waste (Y/N)
Cranbrook Residential WHF	N	Y	Y	N	N
Cranbrook Industrial WHF	N	Y	Y	N	N
Frankland WHF	N	Y	Y	N	N
Other (Provide Details)					
Other (Provide Details)					
Waste Collection Data					
	2005/2006 Measured or Estimate (M/E)	2006/2007 Measured or Estimate (M/E)	2007/2008 Measured or Estimate (M/E)	Green Waste (Y/N)	Green Waste (Y/N)
General Waste (metres)	>	>	800	Y	Y
Green Waste (tonnes)	>	>	>	Y	Y
Kerbside Waste Collection (tonnes)	>	>	2,435	Y	Y
Kerbside Recycling Collection (tonnes)	>	>	>	Y	Y
Public Place Waste Collection (tonnes)	>	>	>	Y	Y
Commercial Waste Collection (tonnes)	>	>	>	Y	Y
Second Hand Goods Shops (metres)	>	>	>	Y	Y
Metals (tonnes)	>	>	>	Y	Y
Glass (tonnes)	>	>	>	Y	Y
Paper & Cardboard (tonnes)	>	>	>	Y	Y
Plastic (tonnes)	>	>	4,000	Y	Y
Oil (litres)	>	>	>	Y	Y
Car Batteries (tonnes)	>	>	>	Y	Y
Tires (tonnes)	>	>	>	Y	Y
Text Waste (metres)	>	>	Included	Y	Y
ChemClean (litres)	>	>	100	Y	Y
DrumMinerals (tonnes)	>	>	>	Y	Y
Liquid Waste (litres)	>	>	>	Y	Y
Apexos (tonnes)	>	>	>	Y	Y
Woods/Timber (tonnes)	>	>	>	Y	Y
Solvents/Oils (tonnes)	>	>	>	Y	Y
Other (Provide Details)					
Other (Provide Details)					
Waste Management Budget/Actual					
2005/2006 Actual	\$ 75,159	2006/2007 Actual	\$ 80,403	2007/2008 Actual	\$ 85,958
2005/2006 Budget	\$ 64	2006/2007 Budget	\$ 69	2007/2008 Budget	\$ 71
Total Expenditure	\$ 75,159	Total Expenditure	\$ 80,403	Total Expenditure	\$ 85,958
Cost Per Capita	\$ 64	Cost Per Capita	\$ 69	Cost Per Capita	\$ 71

Comments

Based on 1 waste trench = 100m³; Cranbrook Baz & Indus = 3 trenches each; Frankland = 2 trenches (extremely rough estimate)
 Intermix quantities
 Excludes domestic and commercial collections
 Kerbside recycling introduced July 2008
 No Second Hand Goods Shops
 High glass recycling introduced in 2008
 Included in General Waste quantities

Comments

Kerbside recycling collection commenced 2008/2009 FY, no expenditure on Chillingup site, values include asset depreciation

J. ISSUES, ACTIONS AND OUTCOMES 2008-2013 – REGION

ISSUES, ACTIONS AND OUTCOMES 2008 – 2013

ISSUES	ACTION/RESPONSE	OUTCOMES		RESPONSIBILITY	ESTIMATED COST	POTENTIAL FUNDING
		EVENT	DATE			
Data Management Systems	Develop systems for the collection and recording of waste management data.	On implementation of an effective data collection system.	Jun-09	LG CEO All Three	\$ 5,000	\$ 5,000
	Improve the management of landfill facilities.	Finalisation of a facility management plan for each landfill.	Jun-09	LG CEO Plantagenet	\$ 15,000	\$ -
	Where possible, apply local solutions to local problems.	On formal adoption of this SWMP by both Councils.	Jan-09	LG CEO All Three	\$ -	\$ -
	Investigate the development of organics/composting facilities.	On presentation of organics management plans to both Councils.	Dec-09	LG CEO All Three	\$ 15,000	\$ 15,000
	Implement a household hazardous waste collection system.	On establishing household hazardous waste collection points within the Shires as part of the DEC/MWAC program.	Jun-09	LG CEO All Three	\$ 15,000	\$ 15,000
	Improve transport efficiencies in recycling management.	Noted increase in the recyclable materials density during transport (> 10%) - continuous improvement.	Dec-11	LG CEO All Three	\$ 20,000	\$ 20,000
	Implement E-Waste collection systems.	On establishing E-Waste collection points within the Shires and securing disposal locations for the collected products.	Dec-10	LG CEO All Three	\$ 5,000	\$ 3,000
	Investigate implementation of C&I waste processing.	On presentation of C&I management plans to both Councils.	Dec-12	LG CEO All Three	\$ 10,000	\$ 10,000
	Investigate and implement additional recycling activities	On implementation of a minimum of 3 new recycling activities in each Shire	Dec-12	LG CEO All Three	\$ 5,000	\$ 5,000
	Improve participation rate in existing recycling systems.	Noted decrease in recyclable materials within the residue waste (>20%) - continuous improvement.	Dec-12	LG CEO All Three	\$ 15,000	\$ 15,000
Improving Existing Service Efficiencies	Improve materials handling of all existing recycling activities.	Noted increase in the quantity of recyclable materials processed without changing existing systems.	Dec-11	LG CEO All Three	\$ 30,000	\$ 30,000
	Investigate the potential for increasing the range of products included in kerbside recycling.	On finalisation of a report documenting products that can be included in the kerbside recycling bin.	Dec-12	LG CEO All Three	\$ 5,000	\$ 5,000

J. ISSUES, ACTIONS AND OUTCOMES 2008-2013 – REGION (CONT.)

ISSUES	ACTION/RESPONSE	OUTCOMES		RESPONSIBILITY	ESTIMATED COST	POTENTIAL FUNDING
		EVENT	DATE			
Raising Community Awareness of Waste Management Issues	Implement regular community education/information communication.	On publication of regular (minimum monthly) waste management brochures to the broader community.	Dec-09	LG CEO All Three	\$ 10,000	\$ 2,000
	Investigate the potential for developing an "Earth Carers" group in the region.	On finalisation of a report documenting the potential of developing an Earth Carers program in the Region - including appropriate community consultation.	Dec-12	LG CEO All Three	\$ 5,000	\$ 5,000
	Lead by example - improve Shire internal recycling activities.	On implementation of a comprehensive internal recycling collection program within at least 50% of all the individual Shires' activities within the Region.	Dec-10	LG CEO All Three	\$ 10,000	\$ -
	Implement sustainable purchasing policies.	On presentation of sustainable purchasing policies to both Councils.	Dec-09	LG CEO All Three	\$ -	\$ -
	Implemented planning solutions to force the developers to manage waste appropriately.	On presentation of sustainable planning solutions policy to both Councils.	Dec-11	LG CEO All Three	\$ -	\$ -
	Improve internal communication and knowledge sharing.	On the establishment of a joint waste management committee between both Shires.	Dec-09	LG CEO All Three	\$ -	\$ -
	Develop links with neighbouring shires.	On the establishment of a broader waste management committee amongst neighbouring Shires - similar to or part of AVROC.	Dec-09	LG CEO All Three	\$ -	\$ -
	Encourage elected members support in waste minimisation.	On presentation of a State Government waste management communication policy to both Councils.	Dec-10	LG CEO All Three	\$ -	\$ -
	Assess the need to employ a dedicated waste management officer.	On presentation of a waste management staffing report to both Councils.	Dec-11	LG CEO All Three	\$ -	\$ -
	Continuous improvement.	Year-on-year comparison of per capita residual waste quantities indicating a continuous decrease - ongoing.	Dec-11	LG CEO All Three	\$ -	\$ -

