



EXECUTIVE

APPENDICES

Item: 12.1.1-12.1.2

ORDINARY COUNCIL MEETING

To Be Held

Wednesday, 30th of June 2021

Commencing at 5.00pm

At

Shire of Dardanup
ADMINISTRATION CENTRE EATON
1 Council Drive - EATON

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LEADING THE WAY



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Information and Registration

WA Local Government Convention
Sunday, 19 – Tuesday, 21 September 2021
Crown Perth

PRESENTED BY



PARTNERED SERVICE



PRINCIPAL SPONSOR





WALGA

WORKING FOR LOCAL GOVERNMENT

EVENT PARTNERS



Partnered Service

LGIS is proud to partner with WALGA at the WA Local Government Convention. The Convention provides a wonderful opportunity for everyone across the sector to come together, share experiences and network.

As the Local Government mutual indemnity Scheme, our members are at the heart of everything we do. We're proud to have stood with our members for over 25 years protecting your communities, organisations and people.

We understand the Local Government industry, its purpose, the risks involved, and our ultimate philosophy of working with you to deliver the best outcome for your communities.

We're also proactive we don't just wait for claims to happen - through our comprehensive Scheme risk program we're dedicated to working with members to manage their risk.

The team at LGIS look forward to seeing all of our members and exploring how we can support you.



CIVIC LEGAL

Principal Sponsor

Civic Legal is proud to be the principal sponsor of the WA Local Government Convention again this year. We always look forward to catching up with you to hear your stories and to learn more about the issues Local Governments are facing.

Civic Legal has its roots in Local Government. Our specialist Local Government lawyers are passionate about working out the best solutions for Local Governments in all areas of Local Government law.

Drop by our booth to find out more, and to chat with our team. We can help you with complex contracts, leases, employment law matters, planning, litigation, SAT appeals, governance or any other issues your Local Government may face.

Enjoy the conference, and see you soon!

Best regards

Anthony Quahe
Managing Principal

Supporting Sponsor



Department of
Local Government, Sport
and Cultural Industries

Convention Breakfast Sponsor



Coffee Cart Sponsors



PART OF THE CREDIT CLEAR GROUP



AN INVITATION

It is my pleasure to invite all Elected Members, Chief Executive Officers and Senior Managers to attend the 2021 WA Local Government Convention, scheduled for Sunday, 19 – Tuesday, 21 September at Crown Perth.



The theme for the 2021 Local Government Convention is Leading the WAY: Looking Forward, Looking Back, taking place against the backdrop of generational change for the sector with reform of the Local Government Act on the horizon.

Additionally, 2020 and 2021 has seen an unprecedented level of uncertainty experienced in areas such as local and international politics; the economy; the environment, together with the ongoing impact and evolving nature of the COVID-19 pandemic. The Convention program has been developed to specifically support and encourage Local Government representatives.

We are pleased to welcome the Honourable Julie Bishop as our Opening Keynote Speaker, and Australian of the Year – Ms Grace Tame, has agreed to deliver the Closing Keynote Speech.

The event will commence with the AGM, followed by a day and a half of plenary and concurrent sessions. These sessions will discuss both contemporary and controversial topics, while the overarching conference format provides opportunity to converse, debate, discuss and share ideas in a welcoming and professional forum.

There is also an opportunity to register for one of the optional field trips scheduled for Wednesday, 22 September.

A significant contingent of industry suppliers will be on display in the trade exhibition to demonstrate their latest products to the Local Government sector. I encourage you to take this once a year opportunity to meet with these suppliers and be updated on what is currently available.

Finally, I would like to express appreciation for the valuable support provided by our Partnered Service – LGIS and Principal Sponsor – Civic Legal. I also wish to thank our Supporting Sponsor; the Department of Local Government, Sport & Cultural Industries and our other sponsors, Ventia, Synergy and Credit Solutions.

I look forward to seeing you in September.

Mayor Tracey Roberts JP
President

ABOUT THE EVENT

Who should attend?

The WA Local Government Convention is presented specifically for those engaged in the Local Government sector.

The conference sessions aim to support and inform Mayors, Presidents, Elected Members and Chief Executive Officers. Additional attendance by Executive Directors and other senior managers is also highly recommended. Available options include full conference participation and daily registration.

Optional events

Monday, 20 September

Australian Local Government Women's Association (ALGWA) AGM and Breakfast (\$70pp)
Convention Gala Dinner at Optus Stadium (\$165pp)

Tuesday, 21 September

Convention Breakfast with Jelena Dokic (\$95pp)
PHAIWA Local Government Policy Awards and Breakfast –
For more information or to register for this breakfast, please visit www.phaiwa.org.au

Wednesday, 22 September

Field Trip: Bushmead Estate (\$70)
Field Trip: Construction Training Fund (\$70)
WALGA Forum on Aboriginal Engagement and Reconciliation

Partner Program

The Partner Program offers an interesting range of options for accompanying guests, including a full day tour to Fremantle. Social networking functions include the Opening Welcome Reception on Sunday evening and the Gala Dinner on Monday evening.

Elected Member training

WALGA Training has scheduled a selection of its Elected Member training opportunities prior and post-Convention for your convenience.

- **Friday, 17 September**
[Developing Specifications for Excellence](#)
- **Wednesday, 22 September**
[CEO Performance Appraisals](#)
- **Wednesday, 22 & Thursday, 23 September**
[Recovery Coordinators Course for Local Government](#)

More information on WALGA Training opportunities can be found in the [WALGA Training Directory](#) or on [WALGA Training Website](#).

2021 #shoWcAse in Pixels Competition

#shoWcAse in PIXELS is an annual exhibition of artwork from Local Governments, displayed on the iconic 45-metre high digital tower at the heart of Yagan Square in Perth City.

As one of the State's largest ongoing community arts projects, the event is widely acknowledged as being one of the most colourful and vibrant displays throughout the year.

The art competition was held in this format for the first time in 2019, which saw art submissions created from recycled products, wall murals and large-scale canvasses.

Artwork will be displayed in Yagan Square from Monday, **6 September** to Sunday, **26 September**, at 12:00pm each day (subject to changes by Yagan Square).



KEYNOTE SPEAKERS



Hon Julie Bishop

The Honourable Julie Bishop served as Australia's Minister for Foreign Affairs from 2013 until her resignation in 2018. She was the first female to hold the role as well as the first female Deputy Leader of the Liberal Party, serving for 11 years.

As Foreign Minister, Ms Bishop was responsible for strengthening Australia's key strategic and economic relationships with Ministerial responsibility for more than 5000 departmental staff, 110 overseas missions as well as government agencies Australian Secret Intelligence Service and Australian Centre for International Agriculture Research.

In 2014, she led the international response to the downing of Malaysian Airlines flight MH17 over Ukraine, and was awarded the Commander of the Order of Merit of the Netherlands Ministry of Foreign Affairs.

Under her leadership, the 2017 Foreign Policy White Paper was developed, providing a comprehensive policy framework for the next decade; and the New Colombo Plan was established, enabling Australian undergraduates to live, study and work in the Indo-Pacific region. Within five years more than 40,000 students have participated in the Plan.

In a political career spanning over 20 years, Julie also served as Minister for Education, Science and Training, Minister for Women's Issues and Minister for Ageing.

Prior to entering politics, Ms Bishop was Managing Partner of the law firm Clayton Utz in Perth.

In 2020 Julie was awarded a Fisher Family Fellowship for the Future of Diplomacy Project at Harvard Kennedy School Belfer Centre for Science and International Affairs. In 2021 Julie was awarded the Kissinger Fellowship at the McCain Institute of International Leadership at Arizona State University. In 2021 Julie was appointed by the UK Government to the G7 Equality Advisory Council (GEAC).

Julie is the Chancellor of Australian National University, chair of Telethon Kid's Institute, Chair of The Prince's Trust Australia, member of the international advisory boards of Afiniti and the Human Vaccines Project and is the Patron of Shooting Stars – an education programme for young Aboriginal girls.

She has also established a boutique advisory firm, Julie Bishop and Partners.



Hon Jason Clare MP

Shadow Minister for Regional Services, Territories and Local Government; Housing and Homelessness

Jason is a member of the Australian Parliament where he represents the seat of Blaxland in Western Sydney.

He was a Minister in the Rudd and Gillard Labor Governments, where he served as Minister for Home Affairs, Minister for Justice, Minister for Defence Materiel and Cabinet Secretary.

Jason is currently the Shadow Minister for Housing and Homelessness, Shadow Minister for Regional Services, Territories and Local Government.

He has also served as Shadow Minister for Communications, Shadow Minister for Trade and Investment and Shadow Minister for Resources and Northern Australia.

Jason's most important job though is being Louise's husband and Jack's dad.

Hon Mark Coulton MP

Federal Minister for Regional Health, Regional Communications and Local Government

Mark was first elected to the House of Representatives for the seat of Parkes, New South Wales, in 2007. He has since been re-elected in 2010, 2013, 2016 and 2019.

On 6 February 2020, Mark was sworn-in as the Minister for Regional Health, Regional Communications and Local Government.

During his time in the Federal Parliament, Mark has also held the positions of Deputy Speaker of the House of Representatives, National Party's Chief Whip, Shadow Parliamentary Secretary for Ageing and the

Voluntary Sector, Shadow Parliamentary Secretary for Water and Conservation and Shadow Parliamentary Secretary for Regional Development and Emerging Trade Markets.

Prior to his election to the House of Representatives, Mark was the Mayor of Gwydir Shire Council from 2004 until 2007.

Mark has an extensive agricultural background having spent 30 years as a farmer and grazier. Mark and his wife Robyn owned and operated a mixed farming system growing cereal crops and running beef cattle.





Anthony De Ceglie

Three-time Walkley Award winner and Editor-in-Chief of West Australian Newspapers

He first started his career as a cadet journalist in regional WA with the *Collie Mail* before becoming a journalist and sub editor at the *Mandurah Mail*.

Anthony previously worked as a reporter with *The Sunday Times* before becoming chief of staff and deputy editor of the newspaper and its website *Perth Now*.

During a secondment to New York in 2011, Anthony helped to launch the iPad newspaper *The Daily* before moving to Sydney to work for *The Daily Telegraph*.

In January 2019 he was appointed senior editor of *The West Australian*, becoming editor in chief in December that same year.

In addition to responsibility for *The West Australian*, *The Weekend West*, *The Sunday Times*, thewest.com.au and perthnow.com.au and the company's 19 regional publications, Anthony has overseen the successful integration of the Community Newspaper Group and Regional Newspapers and the launch of digital subscriptions on the west.com.au

Hon Pru Goward

The Honourable Pru Goward is a former Cabinet minister, Sex Discrimination Commissioner and was a pioneering television reporter with the ABC.

Pru has a long history of promoting women's rights, driving reform and getting it done and has frequently challenged institutional bullying and harassment.

Since leaving politics, Pru is a Professor of Social Interventions and Policy at Western Sydney University, a board member of Anglicare, a regular newspaper columnist, and a diversity and discrimination expert who has recently reviewed sexual misconduct for ministerial staff in the NSW Government and the NSW Supreme Court.

Her outstanding career as a senior government official and government minister saw reforms in Family Law and more recently child protection, social and affordable housing and urban planning.

With her drive, New South Wales overhauled the State Government's approach to domestic violence and is the only Australian state or territory to witness a decline in assault rates.

Prior to this, Pru was Australia's Sex Discrimination Commissioner for six years, promoting the landmark introduction of paid maternity leave, now a national entitlement. She also oversaw Australia's first statistically valid sexual harassment survey which continues to be the benchmark for governments and business and reported on the state of work-life balance for men and women in Australia. Pru was also the commissioner responsible for age discrimination.

As a senior current affairs reporter with the Australian Broadcasting Corporation for 19 years, Pru was ABC Television's first female correspondent, the inaugural presenter of Radio National Breakfast and the recipient of a prestigious Walkley Award for her courageous television profile of organized crime figure George Freeman.

She has authored *A Business of Her Own* and has co-authored a biography of John Howard.

Hon Pru Goward appears by arrangement with Saxton Speakers Bureau





Greg Hire

Founder, A Stitch in Time

As the former Perth Wildcats Vice-Captain, Greg Hire undoubtedly made a huge impact on basketball, however it could be argued his greatest contribution to our State is the work he is doing off the court. A championship player with both the Wanneroo (now Joondalup) Wolves in the State Basketball League, and the Perth Wildcats in the NBL, Hire was named 2018 Western Australian of the Year (Youth) for his efforts as an advocate for youth mental health. Hire grew up around domestic violence, drugs, alcohol, depression and a lack of positive role models and is heavily involved in community and youth sporting activities and other initiatives that aim to combat mental illness and youth suicide.

Greg played for the Perth Wildcats from 2010 until 2019; accumulating 243 games, winning four NBL Championships as Vice-Captain and recently has represented Australia at the World Cup in 3 on 3 Basketball, winning a Gold Medal at 2020 Asia Cup. As the founder of charity A Stitch in Time, his passion and efforts are now transpiring off the court in the work he is doing in the mental health space.

Paul Kelly

Editor-at-Large, The Australian

Paul Kelly is currently the Editor-at-Large at *The Australian*. He was previously Editor-in-Chief and he writes on Australian politics, public policy and international affairs.

Paul has covered Australian governments from Gough Whitlam to Scott Morrison and is a regular television commentator on Sky News. He is the author of nine books including *The Hawke Ascendancy*, *The End of Certainty* and *The March of Patriots*. His most recent book, *Triumph and Demise* covered the Rudd-Gillard era.

Paul has been a Fellow at the Kennedy School of Government at Harvard University and a Fellow at the Menzies Centre, King's College, London.





Glenn Mitchell

Glenn is a former leading ABC sports broadcaster. During his 20 years with ABC Sport in Perth he became a familiar voice around the country with his commentaries on international and domestic cricket and AFL football.

He also commentated at four Olympic Games (Atlanta, Sydney, Athens and Beijing), and three Commonwealth Games.

One of the ABC's senior cricket commentators, Glenn broadcast over 110 Tests and One Day Internationals, covering overseas tours against Sri Lanka, India, Pakistan, England and New Zealand.

But all through this period, Glenn was a sufferer of mental illness and in early 2011 he descended into a highly depressive state that resulted in him inexplicably resigning his dream position at the ABC and making an attempt on his own life. After overcoming his personal demons and reshaping his life, Glenn now aims to try and prevent others from enduring the torturous path he did by candidly speaking about his own journey.

Glenn Mitchell appears by arrangement with Cheri Gardiner & Associates

Grace Tame

After being raped and sexually abused by her maths teacher when she was just 15 years old, Grace Tame has spent the last 10 years turning her traumatic experience into being an advocate for survivors of child sexual abuse and a leader of positive change.

Recognising the injustice of Tasmania's gag order that prevented survivors from self-identifying publicly, Grace offered her story to the #LetHerSpeak campaign created by Nina Funnell, along with the stories of 16 other brave survivors. In 2019, she finally won the court order to speak out under her own name, making her the state's first female child sexual abuse survivor to do so.

Now, 26 and based in Hobart, Grace is dedicated to eradicating child sexual abuse in Australia, and supporting the survivors of child sexual abuse.

Her focus is around enabling survivors to tell their stories without shame, educating the public around the process and lasting effects of grooming and working with policy and decision-makers to ensure we have a federal legal system that supports the survivors, not just perpetrators.

She is also a passionate yoga teacher, visual artist, and champion long-distance runner, having won the 2020 Ross Marathon in a female course record time of 2:59:31.

Grace is the 2021 Australian of the Year.





Liam Bartlett

60 Minutes reporter, host of Radio LPR's morning program, award winning broadcaster and journalist

Having spent nearly 30 years working in Australian media, Liam is one of Perth's highest profile journalists and public broadcasters.

With a Bachelor of Economics from the University of Western Australia, he has held a series of high profile positions across all three major platforms – television, radio and print. His roles have included hosting the State-based 7.30 Report on ABC TV,

news anchor at STW Channel Nine in Perth, reporting for the Nine Network's Melbourne bureau of A Current Affair, columnist and feature writer for News Limited through the Sunday Times and the host of prime-time talkback shifts on Radio 6PR and 720 ABC Perth.

Liam Bartlett appears by arrangement with Cheri Gardiner & Associates

Convention Breakfast – Jelena Dokic

Jelena Dokic has had a storied and well-documented life and tennis career both on and off the tennis court. She started playing tennis when she was six years old and very quickly became the national champion in multiple age groups. However, the war erupted in former Yugoslavia and the family was forced to escape twice. Jelena and her family were refugees before settling in Australia when she was 11 years old.

In 1998, as a 15-year-old, Jelena won the US Open junior title and the French Open doubles title. She became number 1 junior in the world in 1998 and also made a Fed Cup debut the same year winning both her singles matches and becoming the youngest player ever to represent Australia in the Fed Cup.

In early 1999, still only 15 she won the Hopman Cup for Australia partnering Mark Philippoussis and also reached the 3rd round of the Australian Open at 15. Later that year at the age of 16, she caused one of the biggest upsets in tennis history beating world number 1 Martina Hingis as a qualifier. It still remains the only time a world number 1 has lost to a qualifier at Wimbledon. She went on to reach the quarter-finals of Wimbledon that year and it catapulted Jelena to prominence on the world stage.

In 2001 Jelena won her first WTA singles title in Rome. She went on to win two more titles that year and reach the top 10 in the world at the age of 18. At the age of 19 she reached world number 4.

After a string of injuries and a battle with depression, Jelena made a comeback to tennis in 2008 and had an incredible run at the 2009 Australian Open,

reaching the quarterfinals and also winning her first WTA title in nine years in Kuala Lumpur. Jelena's latter part of her career was riddled with injury and illness which forced her to retire early.

Jelena has penned the best-selling autobiography *Unbreakable*, a book which details her career and her life. In the book, she details the struggles of being a refugee, dealing with poverty, racism, bullying, and discrimination. She also talks about the physical and emotional abuse she suffered for over 20 years at the hands of her father which started when she was just six years old.

Jelena now pours her efforts into commentary and TV work for Channel 9, Fox Sports and Tennis Australia. She does work for multiple radio stations and she regularly writes columns.

Jelena Dokic appears by arrangement with ICMJ



THE PROGRAM

SUNDAY, 19 September (pre-conference)

- 2:30pm – 6:00pm Delegate Service Desk open for Convention Registration
- 3:00pm – 5:00pm **Mayors and Presidents' Forum** (separate registration – by invitation only)
- 5:00pm – 6:30pm **Opening Welcome Reception**
A welcoming space to network your way through an evening of food, beverages, music and friendly conversation. Included in Full Delegate Registration.

Monday, 20 September

- 7:00am Delegate Service Desk open for Convention Registration
- 7:00am – 8:30am **ALGWA (WA) AGM and Breakfast (\$70)**
Register online via Delegate Registration.
Other enquiries to Cr Karen Wheatland, City of Melville - 0401 335 642 or CrKaren.Wheatland@melville.wa.gov.au
- 7:30am – 8:45am **Breakfast with Heads of Agencies**
This breakfast is for Mayors, Presidents and CEOs only and invitations will be sent directly. Sponsored by Aware Super.
- 9:00am – 12:45pm **WALGA Annual General Meeting** (includes recognition of Honours Award recipients)
- 12:45pm – 1:45pm Lunch for AGM attendees
- 12:45pm – 1:45pm **2021 Honour Awards Lunch** (by invitation only)
- 1:50pm – 3:00pm **Opening Keynote Speaker: The Honourable Julie Bishop**
- 3:00pm – 3:40pm Afternoon Tea
- 3:40pm – 5:00pm **Local Government, a Federal Perspective**
Hon Mark Coulton MP, Minister for Regional Health, Regional Communications and Local Government
Hon Jason Clare MP, Shadow Minister for Regional Services, Territories and Local Government; Housing and Homelessness
Moderated by **Liam Bartlett**
- 6:30pm – 11:00pm **Gala Dinner, Optus Stadium** (\$165)
Put aside business for the night and enjoy a stunning view, food, drinks and dancing
Includes announcement of #shoWcAse in Pixels winners

Tuesday, 21 September

- 7:00am Delegate Service Desk open for Registration
- 7:00am – 8:45am **PHAIWA Local Government Policy Awards and Breakfast**
For more information or to register for this breakfast, please visit www.phaiwa.org.au
- 7:30am – 8:45am **Convention Breakfast with Jelena Dokic** (\$95)
- 8:50am **Minding Your Mental Health** – Panel Discussion
Aboriginal and non-Aboriginal mental health is an issue that all Australians need to confront to offer genuine support and care for those affected and to help mitigate risks in workplaces and interactions. Local Government in particular, with its role as a major employer and provider of community services, needs to continuously explore how mental health issues manifest and evolve to best inform their options in responding.
Hon Pru Goward, former Cabinet Minister
Greg Hire, Founder, A Stitch in Time
Glenn Mitchell, former leading ABC sports broadcaster
- 10:00am **State and Federal Political Insights**
A conversation centred on the political landscape including the current State Government's performance following the recent State Government Election and an overview of Federal Government initiatives, emerging critical issues and the media response.
Paul Kelly, Editor-at-Large, *The Australian*
Anthony De Ceglie, Editor-in-Chief, *The West Australian*
- 10:40am – 11:15am Morning Tea

11:15am

CONCURRENT SESSIONS

Recovery from Emergencies in WA

Western Australia communities have been hit hard by emergencies in 2021. In February, a fire ignited in the Wooroloo area in the Shire of Mundaring. The blaze rapidly escalated to a level 3 fire, burning for almost a week and crossing two Local Government areas, destroying 86 homes and causing widespread damage.

In April, Tropical Cyclone Seroja made landfall between Kalbarri and Port Gregory. Winds of up to 170 kilometres an hour left a trail of destruction over 35,000 square kilometres of Western Australia. Throughout 10 Local Government areas; it destroyed homes, businesses, resorts, sheds, fences and water stations, leaving thousands of people homeless and without power and communication for extended periods.

Whilst Local Government has the legislative responsibility for recovery, the scale and significance of both of these recovery effects, has seen the State appoint a State Recovery Controller for each of these events to lead the whole of government approach to recovery efforts.

During this session, we will hear the experience of those involved and learn about how they managed the unique challenges of these extensive recovery efforts.

Governance: Roles & Responsibilities

The purpose and intent of the Local Government Act 1995 is to provide efficient and effective good governance to communities. Inherent in this purpose and intent is the separation of powers principle which, as Parliament considered when the Act was introduced in 1993, stated '...there will be clear specifications of the roles of key players ... to promote efficiency ...and to avoid conflicts caused by uncertainty...".

The question of separation of powers remains a focus of Local Government advocacy and has featured in the Final Report of the Local Government Review Panel, Report of the Inquiry into the City of Perth and Select Committee into the Local Government Final Report.

This session will examine why this remains a topic of interest to the sector, scenarios that led to commentary in recent Reports and how proposals for improvements in role clarity will foster efficient and effective Local Government.

Elected Members:

Champions of economic resilience and community prosperity

As community leaders and key decision makers, Elected Members have an important role to play in supporting local economic development and prosperity. This session provides a valuable opportunity to get exclusive access to Economic Development Australia's (EDA's) new economic development education and training program and will cover important topics such as:

- principles for economic development planning
- leading recovery and building resilience for your community; and
- being an Economic Development Champion - promoting economic prosperity for your community

Economic Development Australia (EDA) is the national peak body for economic development professionals.

Tuesday, 21 September (continued)

12:45pm – 1:40pm

Lunch

1:40pm

CONCURRENT SESSIONS

Bushfire Volunteers

Western Australians in rural and pastoral areas rely heavily on Bush Fire Brigade volunteers to keep them safe from the threat of fire. Local Governments are responsible for administering and training the 19,500 volunteers in 565 bushfire brigades around the State.

This session will provide the latest information on volunteer workplace health and safety obligations, training opportunities and the changing landscape in attracting and retaining bushfire volunteers.

Local Government Audits

The WA State Government amended legislation and regulations to provide for the Auditor General to be responsible for undertaking Local Government audits effective from 1 July 2018. The Office of the Auditor General (OAG) phased in over three years the responsibility for undertaking the audits previously carried out by Local Government appointed commercial contract auditors.

This session will provide information on the:

- Experience of initial three years of financial audits
- Lessons learnt from the OAG perspective
- OAG perspective on Local Government financial statutory provisions
- Expectations for future auditing
- Overview of Local Government Performance Audits and future focus

Waste Avoidance and the impact of the Waste Export Bans

In WA, the majority of material that is recycled through the kerbside recycling bin is exported for reprocessing and use in new products. That's all set to change with the introduction of export bans for plastic, paper and cardboard. As of 1 July 2021, mixed plastic, which is about 4% of what is collected through the kerbside recycling bin, will no longer be able to be exported and will be reprocessed locally. While this is a good outcome in relation to increasing transparency of where material goes, it is likely to have a financial impact on the costs of kerbside recycling.

This session will outline the impact of the export bans, the local processing options being developed and ultimately the best thing that Local Government and the community can do with waste – avoid it completely.

3:10pm– 3:45pm

Afternoon Tea

3:45pm

Closing Speaker: Grace Tame

4:45pm

Official Close of the 2021 Local Government Convention

Wednesday, 22 September (post-conference)

8:30am Delegate Service Desk open

9:00am – 11:30am Field Trip: Bushmead Estate, Shaped by Nature (\$70)

Bushmead Estate, 16 km east of Perth's CBD, is a new land development located in the City of Swan that has placed the pristine natural bushland at the forefront of design, with every household connected to the bush. The development which will eventually be home to around 950 new dwellings aims to minimise the environmental footprint and places high importance on the retention of trees within the development. Bushmead is also one of the few estates in Western Australia to have received 6-Leaf EnviroDevelopment Accreditation, ensuring sustainable living for residents.

The land developer, Cedar Woods, will discuss the sustainability features of the estate and the process involved around tree retention from planning to construction, and participants will view a development shaped by the natural site features and experience the parks and walking trails of this unique community.

Includes bus transfers from Crown Perth and Morning Tea.

9:00am – 12:00pm Field Trip: Construction Futures Centre (\$70)



Construction Training Fund (CTF) is a government statutory authority creating a skilled Western Australian construction workforce. It collects a training levy, helps pay for training, conducts research, showcases training and career opportunities and makes a contribution to building our communities. It also operates an interactive venue, the Construction Futures Centre in Belmont, designed to educate school aged children, young adults and others to consider the many job options on offer within the industry.

Join this tour to explore a range of virtual and augmented reality technologies, artefacts, videos, games and static displays that offer a unique insight into the scope of WA's building and construction industry.

Includes bus transfers from Crown Perth and Morning Tea.

9:30am – 3:00pm WALGA Forum on Aboriginal Engagement and Reconciliation

Hear from State Government on key Native Title Settlements in WA, and learn from Local Governments about the process of commencing Reconciliation Action Plans (RAPs) through to embedding reconciliation activities as core business. Join Traditional Owners and Aboriginal leaders for a round-table yarn on opportunities and barriers experienced by local Aboriginal communities, and the positive impact Local Government can make. The program will cover Aboriginal engagement methods, employment and economic opportunities, cultural awareness and interpretation, and traditional ecological knowledge in landcare.

Separate registration - [CLICK HERE](#) for more information

PARTNER ACTIVITIES

Registration is required for all activities – prices include GST. Please contact WALGA for more information should your partner be interested in attending a particular conference session.

SUNDAY, 19 September

Fremantle Tour

8:30am – 4:00pm \$175

Departing Crown Perth at 8:30am we make our way to Fremantle where you will be taken on a private tour of Fremantle Prison. Following the tour, we will replenish ourselves with a two-course lunch at the National Hotel. From there we do a short walking tour of Fremantle before heading back to Crown Perth via train.

Please note: We recommend comfortable walking shoes for this tour.

Includes: Coach transfer, morning tea, tour of Fremantle Prison, Lunch at the National Hotel, walking tour, return train to Crown Perth and Guide

(Minimum 15 – maximum 20)

Opening Welcome Reception

5:00pm – 6:30pm \$85

MONDAY, 20 September

Shaken not Stirred Cocktail Course

2:00pm – 4:00pm \$90

Get ready to have fun and learn how to make cocktails! Held at Crown Perth, your Cocktail Master will teach you insider mixologist techniques and fun facts about each cocktail. All you have to do is sip and enjoy while the demonstrations are given and the ingredients for the next cocktail are prepared.

Includes: 2-hour cocktail course

(Minimum 15 maximum 35)

Convention Gala Dinner at Optus Stadium

6:30pm – 11:00pm \$165

TUESDAY, 21 September

Breakfast with Jelena Dokic

7:30am – 8:45am \$95

Optus Stadium Tour and Morning Tea

8:30am – 11:30am \$70

This private tour presents an exclusive opportunity to explore Optus Stadium. It will be followed by morning tea at the gorgeous City View Café.

Please note: We recommend comfortable walking shoes for this tour and a reasonable level of fitness as there is a lot of walking involved.

Includes: Guide, Morning Tea and Private Tour of Optus Stadium.

(Minimum 12 – maximum 20)

Matagarup Bridge Climb and Zip

12:30pm – 4:00pm \$175

Dare if you will, to climb Matagarup Bridge and Zip down. Afterwards we will have celebratory drinks and nibbles at The Camfield Tavern.

Includes: Matagarup Bridge Zip & Climb Adventure for 2 hours, Drinks & Nibbles and Guide

(Minimum 8 – maximum 16)

GENERAL INFORMATION

ONLINE CONVENTION REGISTRATIONS

Visit www.walga.asn.au/lgc21 to complete your registration online

Full Delegate fees cover the daily conference program, lunches, refreshments, and the Opening Reception on Sunday, 19 September. The Convention Gala Dinner on Monday evening and Convention Breakfast on Tuesday morning are optional, and a ticket fee applies.

Convention Fees

Prices are per person and are all inclusive of GST.

Deadline for all Registrations is **Wednesday, 1 September 2021**

Convention Registration

Full Delegate	\$1,200
WALGA Life Members	Complimentary
Corporate	\$1,500

Optional Extras

ALGWA AGM and Breakfast (Monday)	\$70
Gala Dinner at Optus Stadium (Monday)	
Delegates/Exhibitors/Partners	\$165
Life Members and their partners	\$95
Convention Breakfast with Jelena Dokic (Tuesday)	\$95

Partners/Guests

Opening Reception (Sunday)	\$85
Lunch (Monday/Tuesday)	\$50
Partner Tours	Individual tour fees as listed

Please contact WALGA for more information should your partner like to attend a particular conference session.

Changes to your registration

You can modify your online booking at any time before the close of registrations. Once you have completed your registration, an email with your confirmation number will be emailed to you. Click on the link and enter your confirmation number to make any changes or additions to your reservation.

Registration cancellations must be advised **in writing** prior to the deadline date of **Wednesday, 1 September**. Thereafter full fees are payable. Alternatively, a registration may be transferred to another member of the Council.

Special Requirements

Special dietary requirements, mobility or any other special needs should be indicated when registering – WALGA will use its best endeavours to meet these requests.

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Information in this brochure is correct at time of printing but may be subject to change



ENQUIRIES

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(Appendix ORD: 12.1.1A)

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RISK ASSESSMENT TOOL									
OVERALL RISK EVENT: Western Australian Local Government Association Annual General Meeting RISK THEME PROFILE: 6 - Engagement Practices RISK ASSESSMENT CONTEXT: Strategic									
CONSEQUENCE CATEGORY	RISK EVENT	PRIOR TO TREATMENT OR CONTROL			RISK ACTION PLAN (Treatment or controls proposed)	AFTER TREATMENT OR CONTROL			RESIDUAL RISK RATING
		CONSEQUENCE	LIKELIHOOD	INHERENT RISK RATING		CONSEQUENCE	LIKELIHOOD	RESIDUAL RISK RATING	
HEALTH	No risk event identified for this category.	Not Required - No Risk Identified	N/A	N/A	Not required	Not required.	Not required.	Not required.	Not required.
FINANCIAL IMPACT	No risk event identified for this category.	Not Required - No Risk Identified	N/A	N/A	Not required	Not required.	Not required.	Not required.	Not required.
SERVICE INTERRUPTION	No risk event identified for this category.	Not Required - No Risk Identified	N/A	N/A	Not required	Not required.	Not required.	Not required.	Not required.
LEGAL AND COMPLIANCE	No risk event identified for this category.	Not Required - No Risk Identified	N/A	N/A	Not required	Not required.	Not required.	Not required.	Not required.
REPUTATIONAL	Council's reputation may suffer if it is not involved with current issues affecting Local Government as a whole.	Minor (2)	Rare (1)	Low (1 - 4)	Not required	Not required.	Not required.	Not required.	Not required.
ENVIRONMENT	No risk event identified for this category.	Not Required - No Risk Identified	N/A	N/A	Not required	Not required.	Not required.	Not required.	Not required.

(Appendix ORD: 12.1.2A)

South West Regional Waste Group



REGIONAL OPTIONS PAPER AND STRATEGIC RECOMMENDATIONS

February 2021



(Appendix ORD: 12.1.2A)

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RECOMMENDATIONS

1. That the Group prepares a comprehensive Integrated Waste Management Plan coordinating regional waste assets and operations as a single entity. This is to:
 - a. Identify locations for complex waste treatment facilities;
 - b. Draft community engagement strategies;
 - c. Define responsibilities between Councils including waste ownership boundaries;
 - d. Apportion risk according to the level of engagement.
2. Preparing a Business Plan for the representative entity that clearly defines long term visions, targets, development timelines and proposed expense and revenue projections.
3. Commence planning a regionally focussed 'Expressions of Interest' process focussing on regional Municipal Solid Waste treatment. The included specifications are to allow a variety of service providers to make submissions proposing technologies that may be proven internationally but yet to establish in Australia. Siting requirements and other supportive needs, for example, access to complementary assets/partners should be included.
4. Establish an Integrated Waste Management Working Group comprising senior technical and operational staff from within the members of the South West Regional Waste Group to formalise and review waste management initiatives for the Region.
5. The Group considers formalising a representative entity e.g. a Regional Subsidiary, to equitably represent members in pursuing the Recommendations in this Report.
6. That the Group Accepts the Recommendation in this Paper as presented.
7. Provide regional representation to support or conduct contract negotiations on behalf of, or in conjunction with multiple similarly sized Councils to attain sub-regional economies of scale.
8. Seek funding and institutional support from State and Federal agencies for implementing the Recommendations of this Report.
9. That a standardised data collection program commences across the region. The metrics for Local Government Areas to report against are to be consistent and relevant that informs strategic decision-making and allows reliable triple bottom line comparisons to be made. The data is to be relevant to assessing preferable waste operations between Councils. For example, contamination statistics, waste service costs, capital investments, tonnages, community consultation expenditure and bin audits among others.

EXECUTIVE SUMMARY

The changing nature of the National and State waste industries provides a unique development opportunity for the South West Region that streamlines operations and reduces costs for those Councils willing to collaborate on more complex treatments. The move from cheap landfilling to a more complex diversion system delivers greater cost savings and lower disposal volumes by leveraging market forces.

This Paper addresses themes recurrent in previous studies conducted by the South West Regional Waste Group - cooperation, market creation and maintaining a prudent investment program. New projects such as trialling regional procurement programs can build local markets by using waste products to create jobs and economic growth. The Recommendations proposed in this paper are forward-looking, intended to provide a pathway towards achieving:

- External management of waste operations, separating them from individual Councils;
- Maximising diversion from all landfills in the Region while minimising external impacts;
- Managing the impact of additional waste charges or levies;
- Providing options for waste management investment in the South West; and
- Providing cost neutrality or better when considering relevant waste treatment options.

Using cooperation and common purpose to leverage economies of scale, requires commitment from participating Councils. Formalising how members interact, either as partners or clients provides options to work together. A regionally representative group such as a Regional Subsidiary model or expanded Regional Council, means that common interests can be negotiated in the open market and be held accountable. Commitment can be financial or volume supply of waste. More participation will improve effectiveness in removing barriers preventing private industry from more active roles in diverting waste from landfill.

By framing South Western waste operations as a single entity, coordinating contracts, plant and filling regimes can be streamlined. Innovation can be simplified by choosing from a variety of facilities that are available for set purposes. Plant and operations can be developed on a scale larger than any one Council could provide and benefits shared equitably. Introducing adaptability to a regional waste management system targets multiple levels of the waste management hierarchy, prioritising reduce, reuse, recycling/compost and energy recovery from waste. This focuses strongly on waste prevention and landfill minimisation.

The ultimate goal for the regional entity should be to separate waste operations from SW Councils, equitably distributing cost savings and risk among members without creating unjustifiable cost increases. This long term goal will have local impacts in guiding investment, for example, local facilities can be acquired/ designed assuming that at some future point they may be acquired by a larger organisation. In this context, regional initiatives also must respond to local issues and be easily monitored. These initiatives include:

- Evaluating complex waste treatment plants for the region, investigating external risks (buffer zones), harnessing economies of scale, population effects and other siting factors;
- Designing an optional Procurement Policy Trial for South West Councils to use their collective purchasing power in shaping private industry diversion solutions; and
- Coordinating a regional education and consultation strategy to deliver tangible outcomes for local Councils.

Of the options considered, thermal Waste-to-Energy was found to be magnitudes more expensive than smaller, targeted options but they higher diversion percentages of highly co-mingled, non-

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organic waste. Cheaper initiatives such as education and promoting reuse, repair and recycling were more labour intensive but can achieve significant outcomes and have considerable community support. Blending these approaches can be a role for the regional body which can negotiate waste supply contracts and support multiple waste education officers.

Growing FOGO markets is critical for continued organic matter diversion success. Diversifying the risk by using more than one treatment technology, i.e. composting, can produce more products and reduce long term disposal costs for the region. For example, an anaerobic digestion unit produces energy and bio-fertiliser that can also support composting enterprises.

A combination of several treatments is proposed, coordinated by a central body and organised in a formal framework called an 'Integrated Waste Management Plan'. This Plan coordinates transport, research, business development and community education across Local Government Area boundaries. This approach allows for sub-regional agreements and negotiations between individual Councils to leverage local economies of scale.

TREATMENT OPTIONS SUMMARY

Option	Administrative	Regional Subsidiary	Operational	WTE - Thermal	WTE - Gasification	WTE - Anaerobic Digestion	Composting	Materials Recovery Facility (MRF)	Procurement
Capital Cost Estimate (\$)	Regional Council Expansion	Regional Subsidiary	Operational	WTE - Thermal	WTE - Gasification	WTE - Anaerobic Digestion	Composting	Materials Recovery Facility (MRF)	Procurement
Gate Fee* \$/tonne <small>*(does not include transport)</small>	Under \$250,000	Under \$250,000	Approx. \$3M / Cell	N/A for SW	\$70 M	\$12-15 M	\$5.5M	\$14M Manual \$19M Semi-Auto \$24M+ Automated	Depends on extent of participation
Waste Levy	N/A	N/A	86 (Regional avg) 40 approx (Cleanaway)	150 - 190	160-200	50-80	42 (BHRC)	\$60-100	N/A
Impact	N/A	<ul style="list-style-type: none"> Externalises waste operations from Council Creates opportunities for sub-regional private/public partnerships Quarantines ratepayers from waste operation costs External experts can help guide business development 	<ul style="list-style-type: none"> No change to current practices Will be subject to a Waste Levy Land required for new to construct these facilities Licence requirements are technically demanding This option is losing community support This is at the bottom of waste hierarchy 	<ul style="list-style-type: none"> 95% diversion Large minimum waste volume required High transport costs Could backload facilities with ash for savings Discourages recycling May discourage innovation on other streams Low waste hierarchy option 	<ul style="list-style-type: none"> Lower transport fees (locate in SW) 90% diversion Modular High operational costs Expect community opposition Stifle innovation in other streams EPA and DWER approvals can be onerous No operational model in Australia 	<ul style="list-style-type: none"> Up to 55% diversion (removes organics) Produces fuel (natural gas) and fertiliser Carbon credits available Working examples in Jandakot and Yallingup Specialist knowledge required Needs low feedstock contamination 	<ul style="list-style-type: none"> Wholly owned government enterprise Experienced operators Value add operation Operationally intensive Modular Room to expand Market security Carbon sequestering – long term stability in process 	<ul style="list-style-type: none"> Proactive drive to build local industry Incremental Supporting private enterprise innovation Product needs to be acceptable Sourcing local waste maybe problematic Auditing the system may be problematic 	
Revenue	Gate Fee Share of R&D Findings Member Investment	Contract negotiation Savings Fee for Service Owners investments	Gate Fees, Ratepayers subsidised Reclaimed materials	None. Standard fee for service	Electricity Steam	Compressed Natural Gas (CNG) Digestate / Fertiliser	Fee for service Waste Supply Agreements	Recycled products; Gate fees Container deposit scheme.	None, for procurement action only
Time to Operation	6-12 Months	6-12 months	Currently operating	Commence 2022	Within 5 years from Contract Signing	Within 2 years from approvals	Before 2022	Within 2 years from approvals	Within 12 months
Estimated Payback time	N/A	N/A	Depends on loan conditions and Council reserves	N/A	TBD	TBD	TBD	TBD	N/A

Table 1: Comparison table of prices for alternative waste treatments. Information for composting and a proposed MRF has been supplied by Bunbury-Harvey Regional Council.

The growth in available waste technologies means costs change according to the operators' response to operational demands, environments and minimum waste volume thresholds. The waste levy is applied to waste received at landfill premises and is not applicable to diverted materials.

Integrating regional waste management diversifies investment risk, controls the speed of transition towards a circular economy and provides collaborative opportunities with private industry. Complementary waste treatments can provide a range of diversion methods at varying costs to individual Councils, usually at a reduced rate.

These options are underpinned by a comprehensive Regional Waste Education Program designed to coordinate regional waste operations with local community involvement. This can include supporting community liaison groups, influencing commercial practices through market intervention, employing regional waste officers (preferably from existing staff positions), establishing a uniform Reuse Shop model and potentially a 'Free-Trade Website'. These options are relatively low cost but can have significant impact in the contamination rates and cost-effectiveness of proposed treatment solutions.

FAQs

In the interests of clarity and brevity a summary of main report points are:

- **How should the Recommendations inform immediate progress?**
 - A. Should a formal cooperative model be supported, a low financial contribution is proposed to commence activities. Initially, a model needs to be selected and Business Plans prepared clearly stating each Council's responsibilities and risks.
 - B. An Expressions of Interest should be mapped out with draft Specifications to be circulated among Councils (or through the Technical Group) to capture Municipal Solid Waste treatment options suitable for the Region. Additional treatments such as the organic stream could also be included.
 - C. A voluntary Procurement Policy Trial should be designed that leverages the collective purchasing power of the Councils in growing the local waste diversion economy. This is intended to promote those reuse/recycling businesses that can grow diversion activities by demanding defined reuse/recycling content in Council purchases. For example, requiring all street furniture to comprise ten percent recycled material sourced from the South West. This has been successfully deployed in other States.
 - D. Sub-regional contracts should be negotiated to leverage economies of scale between multiple Councils. This will require significant cooperation between local staff and regional representatives.
 - E. Prepare a regionally Integrated Waste Management Plan that frames regional waste operations as one system, identifying local growth areas and operational coordination, for example, collection regimes, sorting facilities, potential Waste to Energy sites.

- **Are there timelines associated with moving forward?**

As an outline,

Within 5 Years:

- Regional representative entity is formed with clear member benefits and client relationships defined in the waste management industry.
 - A fully costed Business Case including liabilities and risk profiles is prepared.
 - Roles and risks are clarified.
 - Regional coordination plans are used to determine direction
- Regional Expressions of Interest process complete. Negotiations for a major waste diversion operation are at the least, to be underway, if not complete and outcomes enacted.
- Regional Integrated Waste Management Plan completed and consistent with long term goals.
- FOGO treatment expanded through supporting Bunbury Harvey Regional Council's operations.
- Materials Recovery Facility investigations complete.
- Waste-to-Energy investigations complete and potential contracts in place.

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- Anaerobic Digestion feasibility complete and site identification studies accepted.

Within 10 years:

- Partnership opportunities supported by feasibility analysis be operative and external funding support agencies informed. Acquisition could commence.
 - Be substantially on the way to achieving or exceeding State Waste Targets.
 - Regional Entity is established and benefitting members and clients.
- **Can we continue our local agenda without compromising regional benefits?**

Having a long term goal such as externalising waste operations will help shape design and function of local facilities. The risk to regional outcomes is reduced if local facilities are designed to be potentially sold or re-vested within the next 20 years. For example, local processing assets could have the capacity to process volumes greater than the local Council produces using modular technology or flexible site layouts.

- **How much and how long will it cost to start a Regional body?**

Assistance will be required from WALGA to establish this entity. Following the Rivers Regional Subsidiary as an example, it would take approximately six months to prepare documentation and one year to advertise, amend and submit proposal to the Minister for Authorisation.

The early activities of any regional entity will be strategic with contract negotiation to try and prove its effectiveness. Overall investment is anticipated to be low. Legislation governing the behaviour of Regional Subsidiaries is anticipated to be amended by 2025 which will clarify risk, liability and other business parameters. Staff are proposed to be sourced from existing Council staff levels, potentially on a part time basis to avoid any new costs.

- **What other waste management costs can we anticipate?**

The introduction of a Waste Levy is anticipated but the timing and rate remain unknown. Whether \$70 per tonne as applied in Perth Metro or a reduced 'Regional rate' is unclear. Eastern States experience and WA State government discussion papers suggest that a split rate between City/Regional Centres is at least under consideration. This approach has resulted in greater cross-border shipping of waste to smaller towns that may not have the facilities to manage these larger volumes of waste.

Transiting from landfills to Transfer Station is estimated somewhere between \$300,000 - \$500,000 depending on operations, facilities, state of the site and other *in situ* considerations. Designs should be made with consideration to Regional expansion. Further design matters are contained within this Paper.

- **How can we get the best and most suitable treatment options for the SW region?**

Nationally, regions undergoing a similar exercise to the South West have conducted long Expression-of-Interest (EOI) processes to capture the best long term outcomes. The complexity of many of the technologies being considered require a 20 year plus investment horizon, which can justify the long investigation period. This allows for new entrants to the Australian markets and time to solicit submissions from overseas companies which may be appropriate in the SW context. Once complete, discussions with preferred candidates can inform a focussed Tender process which could be shortened by the EOI process.

- **How can we coordinate communication about local and regional waste development?**

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To leverage advantages of local knowledge and larger scale investment continued discussions between local and regional staff are critical. Forming a technical group of committed operational staff with the specific purpose of assessing strategies, planning new investigations and identifying investment opportunities between Councils will improve regional coordination.

- **What are the baseline costs to know before looking at options?**

The range of regional gate fees are \$50 – \$150 /tonne, averaging at \$86/tonne. These costs are not just operational but may include contingencies, remediation, reserve contributions and may be offset using other revenue streams.

There is not a definitive method of setting gate fees which is standard across the region but are determined locally. Complexities in pricing an actual 'processing cost per tonne' include differing contract rates, transport, depreciation, staffing levels and facilities.

Annual waste charges for ratepayers are more complex again and reflect the local policy environment. Costs to ratepayers range across \$147 and \$498 (2020/21) per annum averaging at \$321 per annum.

INTRODUCTION

Since 2010 a regionally coordinated regional approach to waste management has been sought that leverages economies of scale. These efforts are repeatedly undermined by the continued low cost of landfilling. The social willingness of moving away from landfills has not been supported by the economic reality of managing these services. This means more complex facilities that can offer greater diversion, returns on investment and lower overall operation liabilities have not been worth the cost.

There is now a unique opportunity to commence building local, long-term diversion schemes with feasible returns on investment. Aging landfills, population growth and a transitional policy context have made cooperative waste management solutions worth pursuing. A coordinated waste approach across Local Government Area (LGA) boundaries can leverage economies of scale needed for significant waste diversion from landfill and ease the triple bottom line costs. Without a separate waste management entity these benefits are unlikely to be equitably distributed. The simplest means ensuring fairness is by creating an external entity such as a Regional Subsidiary that equitably manages waste on behalf of member Councils.

A central body can then take a strategic view of regional waste, matching local waste needs with regionally available facilities and services. Using Waste to Energy (WTE) facilities as they are established in East Rockingham or Kwinana is a good example of how we use our local solutions. This is an expensive option but highly effective and could form part of a regional solution. Gate fees can be high and when added to transport may exceed \$200 per tonne. This figure quadruples some local processing costs. However, for the highly co-mingled putrescible waste which is not worth recovering, it is a valid treatment solution, we just need to ascertain volumes.

Funding this model is not intended to raise existing costs substantially. Short term gains are proposed to come from negotiating multiple Council contracts. In the long term setting a clear regional goal will align local investment decisions. This goal is to satisfactorily externalise all waste operations for local Council members.

Commencing the formation of a Regional Subsidiary will focus waste efforts on outcomes and provide sufficient planning time to allow rapid expansion when proposed legislative amendments are made, anticipated to be before 2025. The issues faced by the Group when seriously considering any formation of a collaborative waste model include:

1. Reducing waste management costs for individual Councils throughout the South West;
2. Introducing operational efficiencies at individual locations;
3. Attaining more complex and higher diverting technologies in the region;
4. Creating employment opportunities;
5. Growing the local waste economy and remanufacturing sector;
6. Moving towards 'Zero Waste' outcomes throughout the South West Region;
7. Supporting or creating innovative opportunities to divert waste;
8. Collectively negotiating contracts with private enterprise;
9. Building collaboration between government and industry; and,
10. Pursuing beneficial partnership opportunities.

This report has a focus on Municipal Solid Waste (MSW) and organic waste, referred to as FOGO as these are the two main waste streams going into landfill and there is not yet substantial private investment to improve diversion.

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CONTEXT

LITERATURE REVIEW

Since 2010, the Group has commissioned studies that identify opportunities to leverage regional economies of scale by centralising and simplifying waste management. Of these papers, five pivotal studies have been summarised in a Literature Review which is attached in Appendix 1. These are:

1. 'Feasibility Study for the Formation of a Regional Council for Waste' (2010)
– prepared for the City of Bunbury on behalf of the Wellington Group of Councils
2. 'Strategic Waste Management Plan'(2012)
– prepared for the Bunbury-Wellington Group of Councils
3. 'Organics Officer Project: Helping to reach a regional solution to a local problem' (2012)
– prepared as part of the Strategic Waste Initiative Scheme (SWIS)
4. 'Regional Waste Management Strategy' (2015)
– prepared by Talis Consultants
5. 'Integrated Regional Waste Management': Market Sounding Exercise (2020)
– prepared for and by the South West Regional Group

These works have informed significant progress in the South West, such as forming a Regional Council and commenced a composting enterprise. Other initiatives included exploring the potential for a Regional Landfill.

In addition to the operational outcomes, the Group's strategic direction has also adapted to changing conditions, policies and objectives. Throughout these changing contexts, recurrent themes appear suggest there are opportunities which remain unacted upon and the reasons to pursue these recommendations appear to have not fundamentally changed. These themes include;

- Formalising regional collaboration by forming an external entity (such as a Regional Subsidiary) to manage waste. This entity would externalise risk and given sufficient operational capacity would meet the evolving waste management complexity in the South West;
- Recognising the critical role of public involvement in waste management for source separation, program participation and lowering contamination rates to produce higher value waste streams;
- A measured approach to large capital investment early on which can also be high risk;
- Developing appropriate markets for waste derived materials which can service resource separation initiatives. Long term customers are critical to developing complex waste diversion facilities as it creates confidence for investors. Targeting infrastructure providers such as Councils (which can have dual supply/demand roles) can provide the most secure outcomes;
- Private enterprise can contribute essential technical knowledge, investment capacity and risk management in providing new waste diversion technologies to the region;
- Declining landfill availability is common throughout the SW, both in existing sites and finding alternate locations; and
- The need to meet Federal and State government waste targets as a means in providing consistency in approach.

FRAMEWORK AND PRINCIPLES

National

The National Waste Policy 2018

The National Waste Policy – Less Waste More Resources published by the Department of Sustainability, Environment, Water, Population and Communities in 2018 coordinates waste management across jurisdictions through championing a circular economy model.

The Policy provides necessary direction across statutory boundaries now since losing waste exportation as a key component of broad waste management practices. International agreements now impact local operations. This context requires a coordinated strategy across jurisdictions and the State and Federal government have supported imposing Circular Economic theories as a galvanising model. The State Policy approach champions five principles:

1. Avoiding waste
Prioritising waste avoidance, encourage efficient use, reuse and repair so waste is minimised. Materials are made to last and more easily recovered.
2. Improving resource recovery
Making systemic changes and promoting reuse and recycling processes to improve the quality of recycled material produced.
3. Building demand and markets for products that increase use or reuse of materials.
4. Better management of material flows to benefit human health, the environment and the economy.
5. Improving information to support innovation, guide investment and enable informed consumer decisions.

Supporting these principles are 14 strategies articulating the intent for waste to be diverted from landfills in line with waste hierarchy principles.

State

Waste Avoidance and Resource Recovery Act 2007 (WARR Act)

This sets out the management framework for LGAs to ensure operations are comparable across the State. Primary objectives are to contribute to sustainability, protect human health, the environment and move towards a waste free society. The WARR Act coordinates with the National Waste Policy by emphasising the:

- Efficient use of resources, including resource recovery and waste avoidance;
- Reducing environmental harm, including pollution through waste;
- A hierarchical approach to resource management options, specifically;
 - Avoid waste creation and resource consumption;
 - Resource recovery; and
 - Disposal.

This legislation requires Waste Plans from local governments that outline how waste services will implement Waste Strategy priorities in protecting human health and the environment. The WARR Act gives the CEO of the department powers to require a local government to submit a report on the implementation of its waste plan. Waste plans will inform and be informed by the strategic planning activities which local governments undertake under the Local Government Act 1995.

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Waste Avoidance and Resource Recovery Levy Act 2007 (WARR Levy Act)

This legislation allows for the imposition of a levy per tonne of waste disposed to landfill. Although currently only applicable to waste received at metropolitan landfills or non-metropolitan landfills receiving metropolitan waste, this levy can be extended to the Peel and South West regions, which is being considered by the Government as mentioned by the Minister for Environment at the Municipal Waste Advisory Council Meeting in February 2019.

Western Australian Waste Strategy 2030 and Annual Action Plan

The Waste Strategy is the tool supporting the Waste Authority objective of transitioning to a “sustainable, low-waste circular economy in which human health and the environment are protected from the impacts of waste.” Two crucial components of the strategy are the waste hierarchy and circular economy.

The Waste Strategy 2030 asserts targets which depart from landfill diversion benchmarks and focus on three objectives – avoid, recover and protect. Underpinning these objectives is a 10 per cent reduction target in waste generation per capita by 2025 and 20 per cent reduction by 2030. The targets for recovering more value and resources from waste are to increase material recovery from the State rate of 57 per cent to 70 per cent by 2025 and 75 per cent by 2030.

Accompanying the Strategy is the Action Plan renewed annually, which clarifies specific actions, timelines, lead responsibilities and collaborations to achieve the stated objectives.

Better Bins Plus: Go FOGO

Announced in May 2020, this program provides financial support for local governments to shift to a three-bin kerbside collection systems with a separate food organics and garden organics (FOGO) service.

Although local governments are not mandatorily required to move to FOGO, there are considerable regulatory measures the State government is using which obliges local governments to adopt FOGO over time.

Case Study: The Move to FOGO in Mandurah

The City is a member of the Rivers Regional Subsidiary which had collectively negotiated waste contracts with Avertas Energy to process their waste long term in the waste-to-energy (WTE) facility under construction in Kwinana. These contracts allowed for the processing of all waste streams generated from the City, including organics.

In December 2020, the City was strongly obliged to adopt a FOGO component for the organic fraction despite potential cost increases for ratepayers if the service is introduced. Through preparation of the Waste Plans required by the Department of Water and Environmental Regulation, these wouldn't be approved without the introduction of FOGO being included within the Plan's five year timespan.

The Waste Strategy 2030 requires all councils in Perth and Peel to provide three bin kerbside collection by 2025. In providing the third bin, the City found it won't meet the minimum tonnage commitment under the Avertas Energy contract they had negotiated. Not meeting these commitments obliges a minimum tonnage payment stipulated within the contract, regardless whether it deliver the waste to the plant. If the significant financial penalties incurred under the

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contract were enforced, they would be added to the additional costs of implementing FOGO which is estimated at \$80 extra per year to each eligible household.

The State Government reaffirmed their commitment to FOGO to reduce the amount of material sent to landfill and increasing recovery rates to more than 65 per cent. Recycling supports around three times more jobs compared to sending a similar amount of waste to landfill.

The Waste Authority is providing funding for the next five years to support transition to a 3 bin kerbside collection program that includes FOGO. The amount available in 2020/21 was 4.6 million distributed using the 'Better Bins Plus: Go FOGO' program, which is expected to continue at a similar funding level. This supports implementation of a key Waste Strategy initiative, delivering consistency through a three bin kerbside collection program including FOGO by all Perth and Peel local governments by 2025.

The City of Mandurah meets their obligations by incorporating FOGO investigation in their five year Waste Plan as mandated by the State Government.

Within the Group, the shires participating in Better Bins Plus: Go FOGO Program include Augusta-Margaret River, Collie and Dardanup.

Waste to Energy Position Paper 2020

This Position Statement states that the Waste Authority considers waste to energy to be an appropriate resource recovery option only for the management of residual waste. This means that it is appropriate when there are no technically, environmentally and economically practicable options higher up the waste hierarchy available and any recovered material has been used as a recognised input into another product or process.

Projects are to be generally accepted by the local community and community engagement is required throughout the process. Non-technical aspects such as design considerations and publicly available monitoring of emissions are also important.

Container Deposit Scheme

The container deposit scheme 'Containers for Change' commenced on 1 October 2020 and collects empty beverage containers. The scheme has several consequences including litter reduction, product stewardship and producing a low contaminant waste stream. There are opportunities to facilitate the recovery of some of the materials for public or private operators.

REGIONAL WASTE MANAGEMENT

The dominant waste treatment model in the South West is disposal to landfill. Although economic, this approach is being compromised by social policy, a rapidly changing resource recovery market and cost-effective large scale recycling technologies. Land is becoming scarcer for landfill expansion and the costs associated with either closure or expansion of these sites can be a major financial risk.

The Federal and State policy developments are changing the development pressures for landfills. Expansion is no longer a supported strategy, instead, more complex waste treatment solutions are being promoted resulting from greater stockpiling of waste materials, typically in landfills. The complexity of the waste industry demands significant capital investments over longer periods (20-25 years) so favourable cost to benefit ratios can be attained. Although the large capital outlays can increase waste diversion the length of investment is a risk based on the changing nature of the Australian waste industry. For example, diversion technology selected for the next 25 years may be superseded before the returns on investment are realised. Despite this pressure, there are no practical alternatives to maintaining the status quo given the growing costs and operational inadequacies of the current systems.

Introducing adaptability to regional waste management by encouraging greater private company participation targets multiple levels of the waste hierarchy and prioritises reduce, reuse, recycling/compost and energy recovery from waste. These are aimed squarely at waste prevention and landfill minimisation. This approach considers treatment options as part of an integrated system rather than as isolated features within a region. The 'Regional Waste Management Strategy 2015' (RWMS) grouped Waste Management actions for achieving higher diversion rates.

Avoid/Reduce/Reuse

- Waste avoidance is the most preferred but along with reduction are the most challenging aspects of waste management.
- Education plays a strong role in the 'avoid, reduce and reuse' messaging.
- Reuse/Repurpose Shops can capture material value before they move to lower levels

Recycle

- Manufacturing can benefit recycling initiatives and reduce demand for raw materials.
- Local governments can influence recycling through collection, sorting, material sales and education.

Recover and Treat

- Recovery processes waste to make products or energy but unlike recycling, the generated products may not be similar to the original waste materials e.g. compost from organic waste.

Dispose

- Least preferred methods include landfilling and incineration without energy or heat recovery.
- While inevitable that some waste will require disposal, it is a last resort.
- Landfilling inevitably results in a loss of materials/energy, greater contamination and pollution even in best practice landfills.



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Integrating regional waste management diversifies investment risk, controls the speed of transition towards a circular economy and provides collaborative opportunities with private industry. Complementary waste treatments can provide a range of diversion methods at varying costs to individual Councils, often at a reduced rate.

The RWMS groups treatment options into 'Clusters' based on their downstream waste treatment options. By identifying the end of material life treatment options, the composition and quantity of material required for reuse can be determined, allowing additional complementary treatment options to be considered.

The Cluster approach simplifies consideration between low cost/high diversion and high-cost/high diversion options to maximise diversion and minimise future risk. For example, combining clean waste derived from source separated materials including organics with commercially viable treatment of remnant material treated between thermal WTE and gasification.

Low Cost/High Diversion Options

This approach concentrates on maximising materials separation at the source (households) to ensure downstream treatment is as efficient as possible. Households play a significant role in determining both the quality and quantity of contamination in the red, yellow and green bins. Lower contamination from the household makes downstream treatment more economic, lessens environmental impact and benefits from community involvement. Educational messaging emphasising the benefits of clean waste streams and cooperative participation is critical to generate high yields of clean materials. This is low cost as many of these systems either exist or can be easily adapted for new roles.

Recommended activities are:

1. Integrate a Regional Waste Education Program

A systematic education program is critical to the success of any waste management system. Directing information towards households and businesses will ensure wide scope.

2. Support Community Liaison Groups

Within the South West, there are sustainable living training groups (e.g. Living Smart) that frequently result in action groups being formed. These groups do not normally last for a variety of reasons but professional admin support is one factor that would assist their longevity to provide Councils a grass roots waste messenger. Waste management initiatives could be supported by providing information, running talks, workshops and community events. Additionally, this simplifies Community engagement to assist consultation regarding new waste initiatives.

3. Influencing Commercial Practices

Although not a central focus of this Paper, Commercial and Industrial waste is a large contributor to the waste fraction sent to landfill. Greater businesses contact can improve access to services and obtain support for larger waste management initiatives. There is significant potential to improve resource recovery within the C&I and C&D streams within the region.

The South West Group could also influence commercial practices through its procurement processes. Either through requirements for a Waste Management Plan, or requiring recycled products to advance recycling markets.

4. Regional Officer

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A Regional Officer provides consistency across the South West when developing closer partnerships between regions, LGAs and communities. An important role is liaison, new waste management design and services for a reliable waste management strategy.

5. Reuse Shops

Many waste facilities have areas where small quantities of reusable materials are returned to the community for a fee. By treating these operations as a serious opportunity for diversion, their improvement could increase uptake. Creating a regional model for dedicated Reuse Shops with attractive and well organised shops is more likely to encourage use and improve the quality of the items received. The spaces should at least include a stock limits, storage shed, forecourt, consistent layout, signage and receptacles. This is a simple and low investment diversion opportunity that if done correctly with commercial motivation, could provide a good rate of return for the capital investment. Operating Reuse Shops may be undertaken wholly or in part by community groups and be run at least as cost-neutral, if not some profit.

6. Free Trade Website

Free Trade websites promote the reuse of household and commercial materials including those from a Reuse Shop. There are dedicated pages doing this currently such as Facebook and Gumtree but a dedicated approach to develop and promote a common approach for the SW waste to pool reusable items. This includes using existing platforms with a consistent profile across all LGAs in the region.

High Cost/High Diversion Options

These options are more facilities with complex technologies requiring greater investment and focussed on co-mingled MSW. These large capital items also involve a dedicated long term workforce. The options available in the South West are summarised as:

- Sub-regional waste transfer stations,
- WTE, thermal, gasification or biologic (anaerobic digestion),
- Licenced sub-regional landfill options with future expansion approved, which include Busselton, BHRC and Cleanaway (Banksia Road).

Separating the material from red bins requires the highest level of investment to extract the most value following best practice diversion operations. At present the high level of comingling means separating waste streams is inefficient and so it is disposed as an analogous stream to landfill. The red bin is both a costly source of materials if separated but expensive to dispose of as a waste stream.

New technologies are being introduced to Australia to address this stream of waste and many regions have adopted new processing technologies following extended EOI processes to engage with operators and technology suppliers. This process has yielded novel methods of processing MSW that move away from the traditional Council-owned landfill operation towards private/public partnerships that seek returns for all stakeholders.

REGIONAL COORDINATION

INTEGRATED WASTE MANAGEMENT SYSTEM (IWMS)

To commence the process of realising any economies of scale at a regional level, any proposed waste treatment at a local and sub-regional level should be considered as part of a larger system, either regional or beyond. Using a framework called 'Integrated Waste Management Systems' (IWMS), a network of Local, Sub-Regional and Regional infrastructure and services combine to form a coordinated waste management system that is efficient, cost effective and achieves environmental objectives¹. The more efficient examples using this approach considers how to reduce, reuse, recycle and manage waste to protect human health and the natural environment. There are formal processes to evaluate local conditions and needs before choosing, mixing and applying the most suitable solid waste management treatments. The Waste Hierarchy provides a framework within which regional options can be considered.

IWMS Framework

Every organisational level has a specific function when delivering waste management on a regional scale. Although the RWMS2015 advocated for the operations of local initiatives to be owned and operated by the local government, the appropriate strategy for the South West needs to recognise the long term goal of separating waste operations from local government.

Each alternative treatment solution will be addressed on a case-by-case basis to determine which body will be responsible for the facilitation, construction, operation and management of the IWMS. Once implemented, the treatment option will become part of the everyday operations of the LGA and will be utilised to directly engage with the community and waste service providers.

Local

Waste management infrastructure in the IWMS includes Reuse Shops, Recycling Stations and other community drop-off centres as appropriate. Facilities should be designed to assist in changing community behaviours regarding waste management facilities as well as stockpiling recoverable materials prior to processing such as greenwaste, scrap metal, mattresses and clean C&D waste. These types of facilities should be located close to population nodes across the South West Region.

To complement the infrastructure, local waste management services should manage collection or processing waste and/or recyclables. The following options are examples of locally managed initiatives:

- Greenwaste mulching;
- Supporting local waste groups to drive community action;
- Scrap metal recycling;
- Kerbside refuse and recycling;
- C&I waste collections;
- C&D waste processing; and
- FOGO/organics collection.

¹ An integrated approach was discussed in the *Regional Waste Management Strategy: South West Region*. By Talis Consultants, July 2015.

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These services would be implemented by the LGA however, a regional contract for the procurement of the services should be considered by the South West Group to reduce costs.

Sub-Regional

Sub-regional opportunities include those between neighbouring Councils or addressing waste issues which share attributes among certain Councils. Examples include mattress recycling, composting and waste transfer stations. This organisational layer provides a layer of flexibility within the IWMS by diversifying waste processing operations across a wider geographic area and deliver services to more residents than would otherwise have access. In addition to sub-regional infrastructure, services such as haulage can also be considered at this level. Whether this is the purchase and operation of vehicles or negotiating haulage contracts.

Regional

Consolidating waste volumes improves the viability of specific projects and delivers greater economies of scale for recycling or providing processing services. Regionally, the waste management services provided by the South West Group are as important as the associated infrastructure. Messaging consistency is critical when implementing plans and addressing contamination and reclaiming waste. Regional service options include:

- Implementing an integrated waste education program;
- Supporting local waste groups;
- Influencing commercial practices; and,
- A free trade website.

An integrated waste education program would provide consistent waste messaging including the implementation of new initiatives throughout the Region.

The regional infrastructure options include MRFs, Waste-to-Energy facilities and logistical concerns. Developing large scale treatment facilities can divert significant waste volumes from landfill. Combustion, AD, gasification and pyrolysis technologies all exist and should be considered, there are a variety of practitioners which can meet regional demands. Residue from many treatment facilities will always require landfills but reducing that volume to a level that existing best practice sites can manage provides long term waste disposal security.

ADMINISTRATION

The components of a complex IWMS includes management structures that coordinate activities and remain accountable to Councils. Formal entities with clear boundaries include Regional Councils, Regional Subsidiaries and official agreements that allow LGAs to coordinate participation and enable stronger negotiating positions. A separate entity provides considerable advantage to the local waste sector against a manageable risk profile.

Business as Usual

Maintaining the status quo of Councils managing their own waste services more or less independently can persist, although will become less cost efficient and more risky over time. Once landfills reach their capacity, Councils can choose to convert their sites to transfer stations and manage disposal accordingly. Within the SW, there are two best practice landfills in Dardanup and Busselton with lined construction and BHRC in Wellesley is approved to construct lined cells. These three sites have the capacity to take all the waste generated in the South West but it will be a competitive process.

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The cost of continuing business is expected to rise as policy (and potentially a Waste Levy) will work against this option and new landfill sites become harder and more expensive to develop. The expense of transitioning to transfer stations, increased transport costs and ongoing environmental monitoring/remediation costs associated with unlined cells will add further to the financial burden.

The established landfill model provides little opportunity to claim income beyond uncertain benefits of stockpiling waste for mining in the future. Council discretion in pricing their own waste systems will be reduced as the final disposal of waste products must be outsourced. Disposal costs will significantly impact operational costs and be passed on to ratepayers. This moves Councils from a pro-active 'price-maker' role to a passive 'price-taker' role, having to react to market charges which is an additional risk to pricing waste rates for the future.

The opportunity cost of maintaining the current practices is foregoing the improved use of 'waste' materials which can benefit Councils and customers of waste derived products. Capturing lost value in waste streams can be recovered by re-classifying waste as a 'resource'.

The policy and regulatory framework surrounding waste in Australia which has hindered resource recovery and waste management industry from reaching its potential is now changing. Building procurement policies and specifications into waste derived products can provide significant benefit for LGAs and offset transition costs.

Social views on waste are linked with good governance within the sector, perceived impacts, benefits and distributive fairness. These attitudes can be influenced on a national level but affect local opinion. The WA Auditor-General [1] found that stakeholders managing MSW have varying views and attitudes which have not aligned with the Waste Strategy and the State Government's preferred approaches to diverting MSW from landfill. Inconsistent waste management systems for MSW coupled with limited guidance from State Government hinder efforts to increase resource recovery and reduce waste to landfill.

The rising costs of waste management, changes in market innovation, loss of proactive pricing, inability to capture lost value from waste streams and changing social attitudes suggest that business as usual is not the most effective means to continue operating.

Regional Subsidiaries

A Regional Subsidiary is a statutory corporation that can separate risk and investment from Councils while delivering cross-boundary services. In 2016, the *Local Government Act 1995* (the Act) was amended so that two or more local governments could establish a Regional Subsidiary which is:

- managed by a board
- governed by a charter and
- a separate legal entity from the local governments who formed it.

Commencing the formation of a beneficial enterprise is the beginning of long term strategy externalising waste management assets and operations. The separation of these critical services is not advised to be fast but will be an ongoing process, consistent with Councils desire to adopt a cautious investment strategy. This has been a recurrent theme in many previous studies for the Group.

Achieving full separation will take a considerable time and externalising some localised activities may not be possible but it is an aspiration goal that can coordinate the development of waste management in the South West to attain economies of scale.

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Attaining separation of waste management will involve a range of cost effective actions, one leading to another, that needs to prove its viability as it grows. Early tasks will be foundational and include:

- sub-regional contract negotiations seeking more localised savings;
- preparing a cohesive business plan that includes milestones, proposed growth timeframe and review timelines; and
- acting on ongoing regional initiatives as they arise. This may include designing and managing a formal Expressions of Interest (EOI) process seeking waste diversion technology and designing a Procurement Trial intended to help Councils shape their local economies.

It is proposed that a small number of staff are tasked with commencing this process and include a mix of technical skills, employed either part-time or full-time. This is not anticipated to be costly but a cost-neutral approach is to be adopted, where existing roles may contribute to the Regional Subsidiary as it develops. Immediate roles will be to:

- Negotiate MSW and recycling contracts on behalf of multiple members or clients,
- Design a regional Integrated Waste Management system with local assets designed to be relevant across LGS boundaries
- Detail a long term business growth plan setting out milestones in growing the beneficial enterprise,
- Encourage waste diverting industry to operate in the SW and
- Propose effective waste management initiatives for the region following Business Case submissions, including procurement and other policy initiatives.

By centralising regional initiatives, the waste assets and operations in the South West can be more effectively set apart when negotiating with external agencies or companies. Any proposed facilities can be presented to the Group and finding additional support will be a Subsidiary task. Other reasons supporting the formation of this entity include:

- (a) ability to employ professional directors and management with experience specific to the commercial objectives of the entity;
- (b) removing detailed investment decisions from day-to-day political processes while retaining political oversight of the overarching objectives and strategy;
- (c) the ability to take an overall view of commercial strategy and outcomes rather than having each individual transaction within a complex chain of inter-related decisions being subject to the individual notification and approval requirements of the Local Government Act;
- (d) the ability to quarantine ratepayers from legal liability and financial risk arising from commercial or investment activities;
- (e) the ability to set clear financial and non-financial performance objectives for the entity to achieve; and
- (f) providing greater flexibility to enter into joint ventures and partnering relationships with the private sector on conventional commercial terms.

This entity is designed to address market 'gaps' in delivering services which have clear economic, social and environmental benefits but are not necessarily profitable such as waste management. It formalises the lower cost outcomes as a driver for reform rather than making a profit, which is ineffective in a market failure scenario like waste processing. Although unable to profit from the 'beneficial enterprise', coordinating resources can build demand and supply for social good where margins are insufficient to support private investment.

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Regional Subsidiaries legislation constrains the scope of permissible activities such as growing the capacity of local governments to act more commercially, develop alternative revenue streams or enter into commercial partnerships with the private sector. These restrictions limit the role these entities can play in the market place.

The structure of a Regional Subsidiary may provide services or undertake functions more efficiently and effectively than a single local government. Local governments can then focus on projects that directly benefit the region with important flow on effects for its local community without sacrificing local priorities.

Placing the commercial activities of local government at arms' length from political influence - under the control of independent Boards made up of expert directors and the regulatory provisions of normal company or trust law – results in more robust management than more politically influenced arrangements. In this case, experts in the industry can influence development and can support the effects of the election cycle in long term development.

The *Local Government (Regional Subsidiaries) Regulations 2017* (the Regs) determine how to form, operate and disband Regional Subsidiaries but is considered to constrain operations by:

- Prohibiting any land transaction or trading undertaking with a view to producing profit; and
- Prohibiting borrowing money other than from one of the participating local governments.

WALGA is advocating for a review of the legislation provisions which will alter how Regional Subsidiaries can behave. These changes include;

1. Reducing the overly prescriptive community consultation provisions. These are seen as unnecessary in the Regs as Local Governments will have consulted with communities on the proposal to form a subsidiary;
2. Enabling a subsidiary to borrow funds in its own right;
3. Simplifying the financial management provisions;
4. Clarifying permissible commercial activity which can be undertaken such as where limitations are to exist when contemplating major commercial enterprises.

The current regulations are overly prescriptive and do not follow the principle of the Charter being the primary governance tool. The Local Government Act Review Panel has concluded investigations and has recommended changes to the Regs to be addressed by WALGA;

- 1) Overly prescriptive community consultation requirement. Local Governments will have already consulted with their communities on the proposal to form a Subsidiary.
- 2) No power for a subsidiary to borrow in its own right
- 3) Financial Managements provisions are complicated and confusing. States some Act provisions to follow and some not.
- 4) Restrictions around commercial activity require clarification. The Subsidiary should be able to undertake commercial activity within the limits of competitive neutrality following a thorough risk assessment.

Over time, external commercial or corporate experience will be required to manage that risk while seeking commercial efficiency. Isolating assets within a corporate structure places legal accountability with the board of the entity and any financial risk associated with their use. Prudential controls by (for example) lending agencies act as a further constraint on reckless assumption of risk.

For these reasons, it is proposed that the Regional Subsidiary use the time prior to legislative change to establish a detailed Business Model and commence contract negotiations on behalf of or in

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partnership with existing Councils. Should not all Councils wish to participate in this model, provision must be made that for a fee the Regional Subsidiary can act on their behalf as a local government representative, complete with the Region growth model informing local advice and decisions.

Cost estimate

Operations

Item	Title	Role (FTE)	Salary
	Program Director/Coordinating Role	1 FTE	110,000
	Contract negotiation	0.2 FTE	90,000
	Technical Specialist, recycled materials	0.2 FTE	90,000
	Salary Total	1.4 FTE	\$146,000
	Overheads estimated at 40%		58,400
	Events, consumables		5,000
	Assets/Operations		12,300
	Proposed final cost		\$219,400

Asset and Operation costs include:

- A vehicle; \$10,000 /year
- a computer, \$1,300 /year
- a phone \$1,000 /year

The Program Director would be responsible for:

- completing the Business Planning;
- establish new contracts;
- preparing the IWMS;
- negotiating with local councils on supportive information;
- establishing business systems;
- commencing community engagement;
- actively engaging with industry; and,
- engaging other roles as required.

Contract negotiations would include legal assistance, EOI and Tender preparation, site investigation, relationship building. This position can either be separate or contributed to 'in-kind' from participating local governments. Likewise legal counsel could be made available on an as-needs basis to limit costs further.

Technical assistance would include sourcing materials, investigating locations, seeking regional opportunities for land, conducting audits and general work as required. This will be a casual system hiring as needed or accessing skills in participating local governments on an 'in-kind' or seconded basis.

It would be advantageous to maintain consistency of personal in these positions to benefit from industry contacts and information sharing. As the program develops, the number of roles is expected to expand as operations become more complex.

Locations

It is not proposed to have a specific facility work but use Council property, which is the reason for the overhead factor. This location could be anywhere, depending on the proposal being undertaken

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so staff can maintain proximity to the companies and their flexibility for onsite inspections and progress.

A regional approach adopting waste management innovation can assess the collective assets cooperatively to potentially accommodate private enterprises close to resource streams. Providing land and access to clean waste streams. It is hoped that a holistic program of regional waste management will result in diversion initiatives benefitting Councils.

Establishment tasks

The establish the Regional Subsidiary and commence operations, it is proposed to

1. Consult with WALGA regarding the formation of the Regional Subsidiary, steps taken by Rivers Regional Subsidiary and present a list of costs associated with its formation.
2. Prepare a comprehensive consultation strategy, addressing formation of the entity, potential benefits and seeking feedback in each Council area;
3. Legal costs in drafting and advising on the framework being proposed as well as gathering any concerns of locally elected members.

Expand the Regional Council

The Bunbury Harvey Regional Councils (BHRC) already exists and changing the 'establishment agreement' (EA) is a relatively straightforward action. This is an opportunity to serve the SW faster than establishing a Regional Subsidiary. Any proposed change to the EA must account for existing liabilities and investments and be able to isolate new members from existing operational obligations. Should there be an acceptable model for change, this is a relatively low cost, expedient solution to forming a regionally representative body to commence operations.

Regional Councils are body corporates, can open and operate bank accounts, can invest and borrow money and have the ability to make local laws. The governing body of a Regional Local Government consists of Elected Members from the member Local Governments but experts can provide advice as required under contract. There is no scope to appoint external expertise or independent directors to the governing body. The EA under which Regional Councils operate must be agreed to by the Regional Local Government participants and Minister for Local Government.

While a streamlined and effective management body, reporting requirements can be onerous, considering it is only one aspect of managed Council business. As Regional Councils operate under the same legislation as Local Councils most of the compliance and accountability requirements are the same, so efficiency gains must significantly outweigh the compliance obligation costs. These obligations are already established so this cost is minimal.

Although expanding the Regional Council would a practical way of formalising the economies of scale within regional waste operations, an amended EA must be able to protect the different investment profiles of each Council. This will need an in-depth analysis of the various assets and liabilities associated with joining the Regional Council.

A Charter for a Regional Subsidiary can be drafted that allows one-off investment opportunities on specific projects, which is more difficult in a Regional Council model. These are significant legal questions that will need to be determined prior to this option being adopted.

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Regional Subsidiary vs the Regional Council

The amended 'establishment agreement' must include the purpose, membership and representation, means of determining financial contributions and procedures for winding up the Regional Local Government. A cost to join is likely to access established facilities fairly and share the profits and losses of the operation. This will require some negotiation and a clear understanding of the risks and opportunities involved. Asset sharing can form part of these negotiations. A name change is also possible, for example, the South Western Regional Council.

WALGA has suggested that the SW should wait until the recommended changes to the Regs are made but at the same time, significant regional investments are going to be required as landfills are approaching the end of their operational life. Delaying the formation of a regional body risks equitably funded regional solutions. By forming now with cost restrictions, the intervening years prior to legislative review can be used to ensure no time is lost once the financial boundaries are adjusted. Revising the legislation is estimated to be complete by 2025. WALGA is lobbying the Minister to reconsider provisions in the Regs to ease the Regional Subsidiary restrictions and make it a more appealing option.

Case Study - Rivers Regional Council Transition from Regional Council to Subsidiary

The Rivers Regional Council entered a contractual agreement in 2015 to supply the WtE facility in Kwinana. Participants then sought to reorganise to reduce the costs in coordinating the waste supply agreements for the next 20-30 years. The responsibilities are essentially administrative, so avoiding the considerable reporting obligations associated with a Regional Council was economically justified. Activities undertaken by the Regional Subsidiary include:

- Establishing governance, administration and accounting arrangements.
- Preparing the annual Waste Delivery Plan
- Calculating and recover waste charges
- Managing contract responsibilities and act as Principal.
- Co-ordinating the required waste recovery, reuse and disposal education programs
- Co-ordinating the energy supply arrangements.
- Advocating on behalf of member Councils.

A Regional Subsidiary model was established to administer the interests on behalf of the Councils as there were few assets to operate. The role became one of contract negotiation and operational obligations for participant councils. Although not yet approved by the Minister for Local Government, this is currently being assessed and support for forming the Rivers Regional Subsidiary is anticipated.

Sharing transfer station facilities is possible but subject to separate agreements between councils. The significant diversion rates offered by WTE (97.5%) contracts mean that the majority of operating landfills will close.

It is anticipated that up to \$200,000 (based on the 2018/19 Budget) could be saved by transitioning to the Regional Subsidiary and avoiding the reporting obligations required by the Regional Council. The Subsidiary's budget is approximately \$250,000 per annum although collection agreements are separated. The education component is anticipated to rise as it supports the WTE activities and associated supply agreements.

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Other Options

Incorporated Associations

Local Governments have the ability, under the *Associations Incorporation Act 1987*, to form or take part in an incorporated association (IA). These are not permitted to deliver statutory services like regional road construction or waste management. The IA model is typically used for narrow purposes such as economic development and promotion in a broad sense.

This is not considered to be a practical option.

Collective Tenders

The ability to tender collectively for specific or general services is open for Councils. While these may be reasonable in specific cases, Councils should be of similar size to coordinate services, share liability and risk, address different activities and manage transport costs. These variables make this model unwieldy due to the unevenly distributed risk and financial burden.

These agreements work when there are specific outcomes with standardised conditions, otherwise they become too complex to manage and negotiate. Variations to any contract may be costly and time consuming, resulting from the cumulative involvement of multiple signatories. These variations are likely to result in scope creep, potentially affecting the ability to execute the original work.

Considering many of these issues can be managed separately through formation of a Regional Subsidiary, collective tenders are not a preferable option for the Group but have some potential for sub-regional agreements.

Partnering

To make partnerships work enhanced communication is critical to improve the performance and quality of output of any joint project. Without enhanced communication partnering often tries to impose a culture of 'win-win' over the top of a commercial and contractual framework which results in an inherently "win-lose" scenario. Verbal commitments during the partnering process even if genuine at the time, are not enough to withstand the stress imposed by misalignment of commercial interests.

This framework is not considered sufficiently reliable for a joint delivery of waste capital or operations.

FLEET OPERATIONS

The number of Councils participating in cooperative model determines cost savings and investment. Contract values vary and transport can be a blend of Council owned operations and contractor vehicles. Examples elsewhere from Australia may be used as a guide only.

Aggregating waste and recyclables provides an attractive option for the market to bid for, hence the considerable potential savings that could be generated from a joint procurement of this size. Additionally, considering the Cities of Bunbury and Busselton run their own fleet, additional side-loaders are required to service more Councils.

Although weight dependent, side-loading vehicles collect approximately 800-1000 bins per day. Prudent fleet management also requires a reserve truck as to address breakdowns, servicing regimes

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and other non-core obligations. Side-loaders cost approximately \$450,000 each and cost approximately \$350,000 to operate. Approximate costs of running a waste fleet with 6 side-loaders, a semi-trailer and other supportive light fleet costs approximately \$850,000. Without in depth analysis, expanding the waste fleet to those Councils which partook in the regional survey would require an estimated 10 trucks to service MSW in:

- Augusta-Margaret River
- Capel
- Dardanup and
- Donnybrook

Using these calculations, expanding the fleet by 10 sideloading trucks would cost approximately \$4.5M in trucks and another \$3.5M per year to operate. These costs do not include finding a depot, servicing requirements and staff to do so, accounting costs nor savings in efficiency, economies of scale or auditing existing fleets to find opportunities to build on existing operations. Further analysis is needed of weights, route planning and collection regimes, which would also likely reduce this figure. This analysis and organisation would form part of the Integrated Waste Management System and would be a key role of a Regional entity.

Further Consideration:

- a) Commence formalising a Regionally cooperative model to determine a level of commitment that allows greater investment in diversion technologies. This requires a detailed Business Plan with detailed cost analysis into an entity which would have capacity to act as an agent as required for non-member Councils. Clarify the roles, responsibilities and boundaries of an independent entity dedicated to managing regional waste operations on behalf of SW Councils.
- b) Investigate the creation of a sub-agreement allowing Regional Council to share in the investment of new facilities without accruing the risk of previous operations. This must include a proportional investigation into the shared environmental risk going forward and any associated ancillary costs or risks.
- c) Until costs and liabilities of joining the existing Regional Council are clarified, the informal operation of the SWRWG is to continue until such time as the provisions of the *Local Government (Regional Subsidiaries) Regulations 2017* are reviewed and considered beneficial to regional waste management operations. Cooperative alliances and Collective Tenders should be reviewed as tools in delivering location-specific infrastructure as required with a long-term view that these assets could be 'shared' at a later stage.

WASTE MANAGEMENT OPTION ANALYSIS

A whole of system approach on a Regional level coordinates investment decisions and clarifies the potential costs and revenues. Prior to establishing formal administrative frameworks, investment by local councils should acknowledge the extent of the investment and at which point waste streams enter and leave their influence. Reliable and repeatable assessment framework will make these estimates more useful. Determining what and where waste management costs originate requires;

1. Ascertaining the 'whole of life' costs for each stream of waste, identifying the roles of the Group, LGAs and subsequent responsibilities to the products,
2. Prepare an Integrated Waste Management System approach to regional disposal options. This would be helped by forming a central body to collect and analyse this data to find economies of scale.

WHOLE OF LIFE FACTORS

Comparing the values within Council-managed waste streams helps determine risk, investment priorities and assess alternate treatment options but what do these costs include? Should they include long term environmental cost? Costs of imposing social policy? Opportunity Cost? If the region seeks revenue to offset management costs resulting from a particular resource stream, identifying sources of expenditure and revenue can moderate adverse impacts on ratepayers. Transitioning towards a circular economy model requires clear understanding when a 'waste' cost can be offset by redefining a piece of waste as a 'resource'.

Environmental costs can be determined using a holistic approach when considering resources and impacts of waste management. By identifying the parameters of a service: e.g. management of waste from city from "kerbside-to-grave", identifying where costs start and finish are made easier. This has implications on landfill remediation and monitoring costs when they are closed and capped.

Almost all recycling in Australia is subsidised by someone, only metals (steel and aluminium) have sufficient economic value to outweigh the costs of collecting and reprocessing it. Prior to 'China Sword', fibre (paper and cardboard) also had sufficient value and now, some plastics are exhibiting positive value movement (as long as contamination is low). Higher recycling rates cost money for services, collection and sorting - the Group needs to determine who should pay and how much?

The nature of waste as something discarded or unwanted means treatment costs trend towards the cheapest point of disposal. If the recycling option costs a dollar more than the cost of landfill then the waste will go to landfill [2]. Clearly delineating what the cost of landfill becomes fundamentally critical in determining investment into alternative treatments.

Life Cycle Assessment

The Regional body should investigate each step of the waste process and clarify where cost obligations cease and revenue potential can begin. This investigation should be done in partnership with the Waste Authority as each step of disposal needs to be financially audited, which applies to other jurisdictions. For example, management of MSW covers:

- i) generation;
- ii) collection;
- iii) transfer;
- iv) sorting;
- v) treatment;

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- vi) recovery; and
- vii) disposal.

Council's obligations within a regional setting typically include:

STEP	ACTION	END OF OBLIGATION (and to what)
Generation	<ul style="list-style-type: none"> • Community Education to minimise waste generation/contamination • Bin Tagging • Community Reduce/Reuse Initiatives, e.g. Garage Sale Trails, home composting • FOGO Bin collection • Reusable Programs, e.g. nappies • 'Waste Sorted' initiatives 	<ul style="list-style-type: none"> • Kerbside collection (to households) • Transfer Station/Landfill drop off (to households) • Delivery to processors (to collectors and downstream processors)
Collection and Transfer	<ul style="list-style-type: none"> • Collect kerbside bins • Deliver bins to the next stage in treatment • Transport infrastructure and working fleet 	<ul style="list-style-type: none"> • When bin is empty (households) • When material is delivered (to processors)
Processing, Treatment and/or Recovery	<ul style="list-style-type: none"> • Pre-determined condition of deliverables, including contamination rates • Pre-determined volumes 	<ul style="list-style-type: none"> • Delivery (to processors)
Disposal	<ul style="list-style-type: none"> • Landfill Management 	<ul style="list-style-type: none"> • Post-closure monitoring (50 years)

Table 2: Typical set of obligations that local Councils have within a regional waste management system.

Bin Assessment

Commencing the treatment process from a regional standpoint begins with kerbside collection or drop off of the three main waste streams separated into the three bins colours, red, yellow and green.

Red Bin

This bin contains the most comingled materials and the largest uncertainty in the benefits of harvesting its contents. Currently the content of these bins are sent straight to landfill as separation is both costly and complex. The highest level of investment is required to achieve suitable diversion volumes and processing opportunities as it is the main source of material entering the landfills. Unless widespread source separation is adopted then this stream will skip several tiers of the Waste Hierarchy to energy recovery or direct to landfill, both options undesirable in a circular economy model. The bulk of this waste stream entering landfills comes from residential kerbside collection or dropped off by residents.



Figure 1: Waste separation solutions don't need to be onerous. Neat solutions exist for household adaptation.

Further Consideration:

- Audit the volumes of MSW (red bin) delivered to South West disposal sites.
- Conduct random regional bin audits to determine a potential recovery value of the materials.
- Focus education programs on improving source separation to lower recycle of organic matter levels in order to stabilise the MSW contents as much as practical.

Yellow

Most recycled materials by volume are taken to Picton (Cleanaway) for preliminary sorting before being transported to Perth for more in depth sorting. The transport costs added to the operational expenditure costs suggests there may be a cheaper option available part owned by Councils.

The small number of sorting facilities puts the South West at risk for recycling. Investing in a Materials Recovery Facility (MRF) would strengthen our collective waste management position, potentially gaining from an emerging recycled product market. A MRF can produce a cleaner line of higher value resources to supply supportive enterprises in the South West, benefitting the region. Building availability of higher quality recyclable resources is critical in achieving greater diversion from landfill, using the market as part of an integrated waste program.

Since the changes in the international markets and the inability of local manufacturing to meet the volumes created by loss of the export market, there is uncertainty of how and where our recyclables will be processed in the future. Additional weaknesses such as few service providers and distance to travel means that internalising MRFs can serve negotiations for specific product lines in the South West and open up partnership opportunities.

There are economies of scale and market creation potential analysis that needs to be undertaken prior to investment. This will also identify opportunities of working with established service providers in a way that benefits the Group by becoming part of the supply chain recovering materials for remanufacture.

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For large scale producers it is cheaper to buy virgin plastics than to clean and process recycled product. Policy and price directions have defined the role of private operators in waste but with the 'stick' of change in exportation opportunities and 'carrot' of economic and policy incentives, it is becoming possible to see growth of a remanufacturing sector.

Local governments controlling the separation, packaging and disposal recyclable materials offers some opportunity to recapture value invested in earlier stages of the waste cycle, specifically the costs of collection and transport.

Local governments in the South West can influence larger recycling operations to a point. While there are benefits from using the private industry to process certain wastes, taking more control of recycling closer can limit the impact of externally controlled waste policies such as price rise and disposal method due to market conditions outside regional control. Taking direct ownership of the waste fraction can ease the development of a locally focussed waste economy through new business deals or progressive partnerships with operators. This delivers greater autonomy in risk management and broader capacity to adapt to market forces.

A significant risk in this approach is that larger operators can undercut the processing costs which compromises the ability for the region to function more holistically. There are aspects of a circular waste model that may not suit private operators, such as reducing waste generation. Establishing supply commitments reduces this risk either as financial, waste volumes or other support. There are also partnership opportunities with research institutions that are available to local governments which may not yet be profitable. The partnerships could reduce local government costs and as they are normally not yet be profitable, they would be more attractive to a local government cost reduction approach.

The long term strategy is to grow the local recycling market driven by government projects to a point where co-investment with private industry becomes economically and environmentally viable. There may be opportunities at that point to capture other streams such as Construction and Demolition (C&D) waste and process this material to reduce other Council costs for instance, in infrastructure construction, e.g. roads.

Green

Processing green waste and FOGO bin contents locally is occurring but ancillary costs such as transport, decontamination, capital as well as the opportunity cost of alternative technologies means that for some Councils composting or shifting to FOGO is impractical. Social pressure is significant though and often Councils will shoulder the cost burden to provide the service.

The composting operation at BHRC is expected to expand in 2021 and with it, further opportunity for complementary operations, for example, decontaminating the waste stream. Using the service is strongly recommended as this is a government controlled commercial operation but with rising levels of organic matter forecast in the South West, the potential for carbon sequestration offered by organics processing and the increasing pressures of transport, high diversion, more complex, complementary solutions should be investigated.

Within an integrated waste system forecasting rising levels of waste organic matter, it is likely that one operation in Bunbury will be insufficient to service the SW Region. A pre-feasibility study of an Anaerobic Digestion (AD) unit located in Busselton suggests an alternative. More information on this option is discussed later in the 'Regional Options' section of this Report.

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Further analysis into the viability of extending the composting capacity throughout the region is required. Coordinating efforts and establishing complementary activities may continue to provide cost effective processing. Potential locations of organic processing facilities include Busselton/Margaret River, Collie and Bridgetown-Greenbushes, formed with the intent of reducing FOGO transport costs. The analysis is to address:

- a) Potential local demand for product (through infrastructure providers),
- b) Reducing ancillary costs using established plant and knowledge such as decontamination education messaging, transport, infrastructure and expertise,
- c) Working with State educational programs to support regionally low contamination of input,
- d) Seeking partnership opportunities with local private providers where practical.

Applying experience gained from existing operations and leveraging a separated stream of organic matter, local economies and jobs can be supported to a point where the product has a value above the processing costs.

Transporting each bin

Within the Group, only the Cities of Bunbury and Busselton manage their own fleet. Transport costs can be a significant factor when processing waste and a collective fleet may be a solution in waste disposal costs. It is proposed moving towards a separate regional entity requires a full cost analysis of running an independent fleet. This would require auditing:

- Other organic waste bins to be collected, e.g. public bins.
- Collection regimes including route analysis for each Council that helps determine fleet demands; and
- Light fleet demands, what vehicles are needed for local operation of services/waste staff demands.

Further Consideration:

- Determine potential fleet costs and seek savings, for example what trucks would we need for a regional collection service and can route planning reduce the number?
- Can we effectively audit waste handling consigned to contractors? Where does it all go?
- Will these destinations impact Council operations? For example, reducing contamination in collected construction and demolition waste.
- At what point does the ownership of waste transfer between Councils, contractors and Customers of waste derived materials?
- Define the 'whole of life costs' for waste?
- What is the carbon footprint? This should include 'waste miles' recovering carbon credits and potential carbon sinks.

The costs of landfill

Landfill costs vary depending on the size of the landfill, type of waste taken and management measures in place. A list of costs, depending on the complexity of the operation, may include:

- Land purchase;

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- Approvals process(es);
- Capital cost of equipment and buildings;
- Lining landfill to prevent leaching;
- On-site gas recovery and flaring;
- Preventing waste from being blown into adjoining properties;
- Operational costs including labour, fuel and materials;
- Capping landfills and landscaping; and
- Rehabilitation and aftercare.

The SW Regional Strategic Plan in 2015 estimated the cost for a LGA to develop a best practice landfill catering for 15,000 tonnes per annum at approximately \$150/tonne of waste, considering both capital and operational costs. The estimate for an operating regional landfill co-owned by multiple councils was estimated at \$28/tonne. The significant price difference came from the associated economies of scale produced when the capital and operational costs are split amongst the LGAs. In particular, the savings achieved via the split of the operational costs are far greater than the capital costs across the life of the landfill.

Regional Gate fees in 2020/21 range from \$50 to \$150/tonne. The variability of these costs reflect policy and operational approaches in each Council and are not a simple result of local operational costs. Gate fees include operation costs, overheads, plant and equipment, labour, depreciation of capital and other fixed assets and profit. There is also often a policy component, especially for the preparation of reserves for activities related to landfill management such as post-closure measures.

To offset long term costs the gate fee should include 30-50 year post closure management, long term monitoring and reporting and replacement of the landfill asset itself². Many Councils do not include these costs and price gate fees too low to cover the true costs of operation. This pricing strategy reflects the social value and public health concerns of these facilities, where illegal dumping and other costly landfill avoiding techniques used by the public are an immediate risk.

In addition, the average waste costs charged to ratepayers average \$320. The composition of these fees can be detailed and determining what these costs cover and the effects for individual Councils is therefore difficult to accurately predict.

LGA	Waste charges \$/year	Bin Types	Gate Fee \$/T
Augusta - Margaret River	498	R/Y/G	150
Boyup Brook	347	R/Y	107
Bridgetown - Greenbushes	147	R/Y	81
Bunbury	327	R/Y/G	61
BHRC	-	-	73
Busselton	300	R/Y	67
Capel	254	R/Y/G	113
Collie	320	R/Y/G	50
Dardanup	226	R/Y	67
Donnybrook - Balingup	404	R/Y/G	73
Harvey	308	R/Y/G	61
Nannup	400	R/Y	123

² <https://mraconsulting.com.au/what-is-air-worth-appropriately-pricing-landfills/>

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Average	\$320		\$86
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Table 3: Shows the publicly available charges across the region for waste disposal. Determining what constitutes these charges alters between Councils depending on local policy and operational environments.

- Collection costs for kerbside waste within the region are consistent among the responding Councils. Competing collection proposals need to address these costs to be competitive;
 - MSW : \$1.20 – \$1.40 per bin
 - CoRecyc : \$1.20 – \$1.40 per bin
 - FOGO : \$1.20 – \$1.80 per bin

 - Hard waste collection rate ranges between \$60 - \$85 /T.

Post closure management can be very expensive. Costs from \$1-20 million in post closure rehabilitation have been seen. The cost varies with the type of landfill, its location, size and surrounding environment. Additionally, the EPA requires monitoring of the closed landfill for up to 50 years prior to relinquishment of the landfill licence, with costs ranging between \$10-\$200,000 per year.

The cost of airspace in landfills is not often included when pricing new lands or quarries. That is fine if future users get the same benefits i.e. inheriting free voids. But as opportunities shrink and landfills become harder to find or replacement costs rise, future users are at a significant cost disadvantage. Estimates for airspace can range from \$16 - \$50 per tonne depending on the landfill characteristics.

Many Councils intend to borrow to fund the next landfill and therefore don't need to provide for asset replacement from current users. Future users will then pay off new landfills via the debt service costs built into the gate fee. But what about current users of the current landfill? Few existing, council owned, landfills are debt funded.

Esperance Council in WA has recently introduced a one-off \$6 million ratepayer fee because it under-priced its landfill gate fee over the operating life. This means general ratepayers have ended up subsidising all landfill users.

Many Councils introduce special rates to meet unfunded landfill liabilities. But ratepayers are not necessarily the same group as landfill users. On average 50-60% of all landfill waste is non-domestic (commercial and construction) waste but the majority of ratepayers are households. So it is not fair for households to subsidise both big commercial generators like clubs and pubs, retailers and building companies, as well as all past users. Elected representatives understandably want to keep landfill gate fees low for their ratepayers. The questions should be "What is the real cost of this service and who is going to pay for it – ratepayers or landfill users?" They are most often not the same or have very different waste generation profiles. Once the landfill has been filled, there is no chance to go back and recover the losses.

Artificially cheap landfill undermines all other recycling and resource recovery opportunities. Low recycling rates means fewer jobs are being created in this sector. As recycling materials creates more jobs than landfilling and the roles are countercyclical to mining booms and busts. Higher landfill prices create the headroom for recyclers to operate competitively. Recycling is probably the fastest growing manufacturing sector in Australia due to rising environmental controls on landfills and the introduction of landfill pricing signals.

TREATMENT OPTIONS



Figure 2: Holistic waste management seeks to minimise landfill management costs. Externalising these costs separates risk and allows growth using private enterprise knowledge and experience.

WASTE TO ENERGY

Thermal

The investment required in establishing a small scale thermal WTE system in the SW is so high compared to the potential benefits that it would not be economic to build. However, the high diversion rates and ability to process heavily co-mingled waste streams suggest this should be considered within an integrated waste management framework. Support structures in establishing a local thermal WTE facility are lacking within the South West Region including viable waste quantities, low landfilling costs, suitable energy clients and an adequate grid connection.

The thermal facilities being constructed in Kwinana and East Rockingham can reduce waste volumes by up to 90% and result in residues such as ash need to be landfilled typically in a Class III facility. Other uses for these resulting waste materials is being researched.

An interview conducted with New Energy Corporation (NEC) in August 2019 on behalf of the Group identified that the costs associated with this type of technology changed significantly. These variations were not just because of the technology and required scale but also the infrastructure costs associated with becoming an energy generator. Charges such as network augmentation for grid connection could result in extremely high costs. Appropriate zoning, buffers, obtaining necessary permits and grid connectivity are also decisive factors in WTE viability. NEC advised that establishing a plant purely for energy production was a very expensive way to generate power but

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using the steam may be more feasible. NEC submitted to the market sounding exercise in 2019-20 for gasification (addressed below).

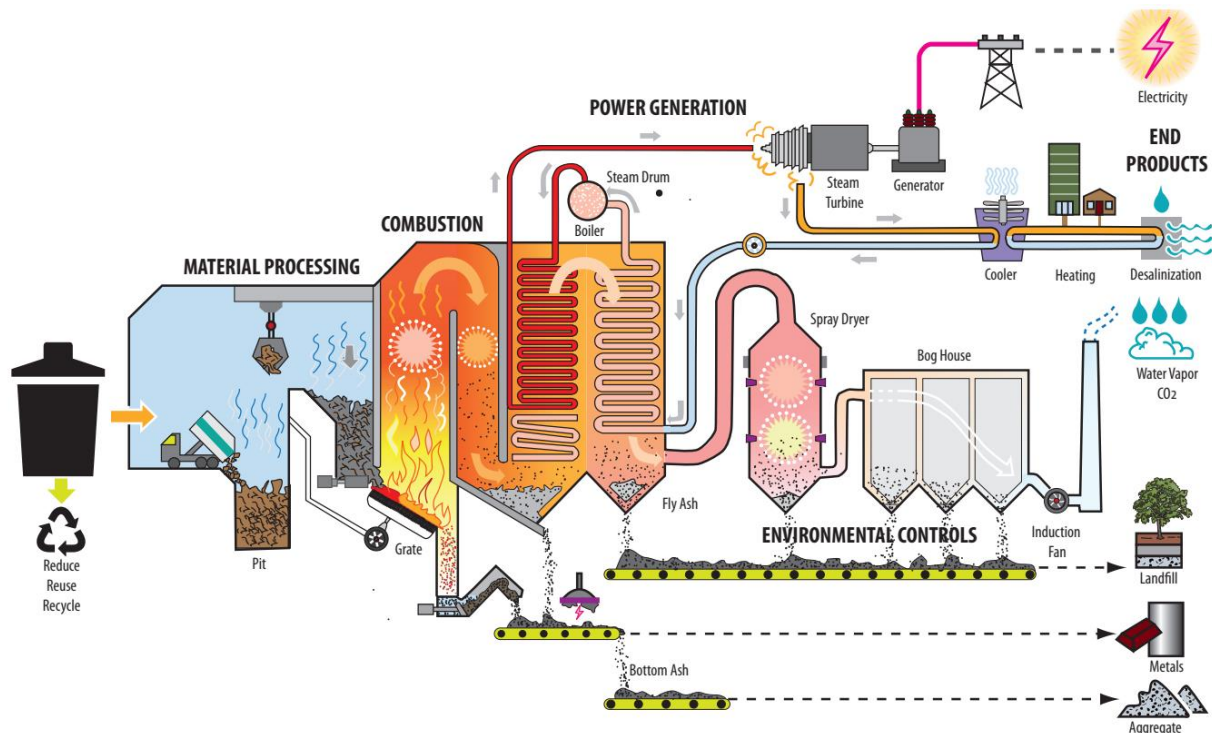


Figure 3: Rendition of a Waste-to-Energy Combustion Plant (National Energy Education Development Program, 2017)

Combustion systems are normally classified by the nature of the combustion chamber; moving grate, fixed grate, rotary-kiln and fluidized bed. The Western Australian facilities are both moving grate systems which are widely used internationally because of the ease of operation, level of technological understanding, high plant availability, comparatively low personnel requirements and relative ease of training new personnel.

As the combustion is less controlled than gasification, the flue gas cleaning systems are more complicated and expensive. Consequently combustion facilities are only economical at scales greater than 250,000 tonnes per annum. The East Rockingham WTE facility being constructed by NEC will be able to process up to 330,000 tonnes of residual waste per annum, generate 28.9 MW of power, around 70,000 tpa of bottom ash (BA) and 12,000 tonnes per annum of flue gas treatment residuals. The plant estimates a 96 per cent diversion from landfill.

A life cycle cost (LCC) analysis includes investment and operational costs. Investment costs typically include:

- Equipment investment costs, including incinerators, fans, flue gas purification systems, waste heat boilers, incinerator supporting facilities and accessories, steam turbine units, generator units, electrical systems, water treatment system and thermal control systems.
- Civil engineering costs and
- Land costs.
- The landfill leachate treatment system can also be divided into building construction costs and machinery and equipment costs.

Economic Analysis is given to the;

- Economic life of the plant Typically 20 years

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- Operating hours per year Approx. 8000 (allowing one month cumulative downtime)
- Ash treatment Variable (\$/tonne)
- Heating network & support cost Variable (\$/kWh)
- Flue gas treatment Variable (\$/tonne)
- Waste pre-treatment Variable (\$/tonne)
- Electricity cost Variable (\$/kWh)
- Gate fees Estimated 140-160 (\$/tonne)

Operating Costs of waste incineration power generation projects are similar to those of conventional power plants and include primarily;

- Labour costs, power costs, costs of chemicals, disposal of waste water, exhaust gas, waste residue, maintenance costs, production safety expenditures, depreciation (straight line), taxes, surcharges, management costs and financial costs.

Should the region consider sending materials to the facilities the following parameters are likely:

- Any waste supply agreement will be long term e.g. 20 years. At this stage, spot prices or short term contracts are not being considered as the volumes and running costs are not yet finalised. Should a contract be signed, this will tie up materials for the long term.
- Savings could be made backfilling waste materials from the processing site and environmental contingency funds if historic landfills are mined. Although these are likely to be small.
- The NEC East Rockingham facility is projected to commence operations in 2023 or before. SUEZ will be the operating agencies in the plant using a fee for service model based on waste supply contracts. Estimated gate fees for the SW region as a single client are approximately \$140-160/tonne prior to transport costs.
- The plant has an estimated 100, 000 tonnes per annum capacity and it is likelt that the final design will allow the NEC facility to receive larger vehicles than the Kwinana facility.
- In Kwinana, Avertas Energy Pty Ltd is attempting to gain 200,000-300,000 tonnes per annum of MSW and up to 100,000 tonnes per annum of C&I waste. Phoenix is seeking contracts with LGAs for the supply of municipal solid waste to the facility on a fee for service contract basis. The Rivers Regional Council is one these clients.

Using these facilities as a Region would:

- Divert up to 96% waste by volume from landfill to extend the operational life of existing landfills;
- Meeting the waste diversion targets adopted by the Waste Authority;
- Reducing the environmental impacts of landfilling;
- Increasing the amount of resources recovered from waste;
- Generating renewable energy;
- Cost four times more than current disposal costs on average; and,
- Require transport to be organised between transfer stations or Councils coordinated to be as cost effective as possible.

Thermal WTE Summary	
<i>Market Sounding:</i>	
Cost Estimate	N/A
Gate Fee	Estimated between \$140-160 per tonne (before transport)
Capacity	Up to 120,000 tonnes
Operational	Kwinana plant is scheduled to commence operations in 2022

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	East Rockingham to commence in 2023
Location requirements	Proximity to high energy users / Grid connection
<i>Strategic Plan</i>	
Australian examples	None operational. Two large scale sites in East Rockingham and Kwinana as scheduled to be operational before 2023.
<i>SWOT</i>	
Strengths	<ul style="list-style-type: none"> • Estimated 90% diversion of waste (by volume) from landfill. • Treat significant portion of the waste stream. • Electricity generation
Weaknesses	<ul style="list-style-type: none"> • Large minimum throughput requirement. • High capital and operational cost. • Diversion of material from recycling. • Long term contracts lock in waste management behaviours, i.e. lack of diverse disposal options
Opportunities	<ul style="list-style-type: none"> • Production of renewable energy. • Funding from external sources. • Communicating emission controls and pollution policy
Threats	<ul style="list-style-type: none"> • Planning and environmental approvals. • Community concerns that include: <ul style="list-style-type: none"> ○ Discourages recycling ○ Creates harmful pollutants (dioxins, furans, heavy metals, etc)³ ○ Source of toxic ash ○ Promotes generating rubbish – conflicting with State and National Policy
<i>Recommendation</i>	
<p>i. That a specific feasibility assessment is made into the full costs including:</p> <ol style="list-style-type: none"> a. This option’s role in an Integrated Waste Management System, i.e. reducing tonnages (e.g. 25,000tpa) to meet diversion targets and maintain waste management diversity; b. costs/benefit of mining capped landfills; c. transport regimes and additional assets as required; d. Delivery parameters and supporting equipment. <p>ii. Review potential stockpiling centres and waste ownership boundaries.</p>	

Gasification / Pyrolysis

These technologies convert carbon based materials into ‘syngas’ - gases comprising carbon monoxide, carbon dioxide and hydrogen in low and oxygen free environments. The gas is mainly comprised of hydrogen which powers the plant or is recovered as a fuel. Gasification has been widely used for generating electricity commercially around the world for more than 50 years in the refining, coal, fertiliser and chemical industries.

³ <https://ensia.com/features/burning-trash-waste-to-energy-renewable-pollution-environmental-justice/>

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Figure 4: Municipal gasification process (from Demoral, Gunay and Malayao. 2018, 'Energy Use in Municipal Services')

Renergi P/L, New Energy Corporation (NEC) and Recovered Energy Australia (REA) made submissions to the Market Sounding Exercise (2019-20). NEC proposed that any facility would need to agree on the following parameters and assumptions before progressing:

- Site identification supported by the Group;
- Technology – it varies and a specific treatment would need to be agreed;
- Estimated total project cost is \$70M;
- Annual throughput – up to 60,000tpa MSW and C&I residuals;
- Gate fee range from \$160/t to \$200/t depending on power off-take agreement (steam/electricity);
- Project operations – 5 years from signed contract.

Although gasification is a suitable WTE technology for the South West, there are challenges - costs, tonnages, markets and community acceptance among others. A Federal investigation into innovative waste management in January 2020 attracted community opposition that was coordinated, and informed about the technology. Their core concerns can be expected from most communities regarding any local proposal of this technology, summarised as:

- Too expensive as the energy produced is a minor fraction of society's energy needs;
- Relying too heavily on waste production, incentivising greater waste production to meet economies of scale. This greater release of carbon emissions conflicts with national emissions targets;
- Labelling the technology as 'resource recovery' as only the calorific value of the products are reclaimed, once burnt the resources are out of the economic loop;
- Requiring long-term municipal supply contracts which would undermine innovation and investment in more effective waste treatments; and,
- Depending on a regulatory environment which is likely to be ineffective in protecting communities from unforeseen negative externalities.

A gasification project similar to that proposed in the SW was planned for Port Hedland by NEC obtained approvals from the Environmental Protection Authority and the Minister for the Environment but never progressed to construction. The proposal was for a modular (scalable) WTE (gasification) facility with process capacity of 70,000 to 130,000 tonnes per annum (tpa) of mixed

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waste, generating up to 15 MW of power. The incoming waste stream was a mix of MSW, C&I and C&D wastes separated in a sorting facility to remove recyclable materials such as concrete, bricks and metals prior to treatment. Following renegotiations based on changing volumes and energy demands any construction has been postponed indefinitely as the return on investment was insufficient to continue. The supply costs and penalties were an unacceptable risk for ratepayers to use the plant.

Gasification Summary	
<i>Market Sounding:</i>	
Cost Estimate	\$70M
Gate Fee	Estimated between \$160-200 per tonne depending on power off-take agreement (steam/electricity)
Capacity	Up to 60,000tpa MSW and C&I residuals
Operational	Within 5 years from signed contract
Location requirements	Proximity to high energy users / Grid connection
<i>Strategic Plan</i>	
	There are limited commercial applications of gasification for municipal solid waste: Entech technology used by New Energy and Energos technology used in Norway. Both of these oxidise syngas to produce steam, rather than capture the gas and use it for other purposes
Australian examples	Funded to undergo a trial in Collie by Renergi Pty/Ltd out of Curtin University. Trials commencing in 2021. No commercially operational examples using MSW as feedstock in Australia.
<i>SWOT</i>	
Strengths	<ul style="list-style-type: none"> • Up to 90% diversion of waste from landfill. • Modular due to simplified quality systems.
Weaknesses	<ul style="list-style-type: none"> • High capital and operational cost. • Diversion of material from recycling. • No operational model in Australia suggests higher risk.
Opportunities	<ul style="list-style-type: none"> • Production of renewable energy. • Funding from external sources
Threats	<ul style="list-style-type: none"> • Community opposition. • Planning and environmental approvals. • Community concerns. • Stifles further innovation investment. • Sourcing sufficiently qualified staff in a highly technical process.
<i>Recommendation</i>	
i.	Prepare EOI specs that allow gasification suppliers to make submissions that address identified weaknesses in the technology.
ii.	A full cost comparison scenario is required investigating what the potential long term environmental risk and contingency funds may add up to as this technology may treat old and capped landfills.

Anaerobic Digestion (AD)

An AD facility accepts organic matter high in nitrogen and produces large quantities of biogas (methane and carbon dioxide) used to generate power and heat or refined to produce Compressed Natural Gas (CNG). The process also produces a solid by-product called 'digestate' which is a pasteurised semi-solid used as a fertiliser or can be composted. Both AD and composting can work

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collaboratively to create a 'bio-fertiliser' and generate both jobs and revenues. Further synergies include back-loading trucks delivering nitrogenous materials to the AD facility with digestate for nearby composting enterprises. These systems can also complement waste water treatment facilities and may qualify for carbon credits as awarded by the Clean Energy Regulator.

Potential suppliers of this technology have stated their contract preference was a 'Build-Own-Operate' model for a 25 year investment horizon. Gate fees are negotiable to be competitive and the region has an opportunity to negotiate as the technology is establishing and there are several new and growing providers in the market. The technology is underpinned by a focussed educational program designed to engage residents in helping reduce contamination levels fed through the system.

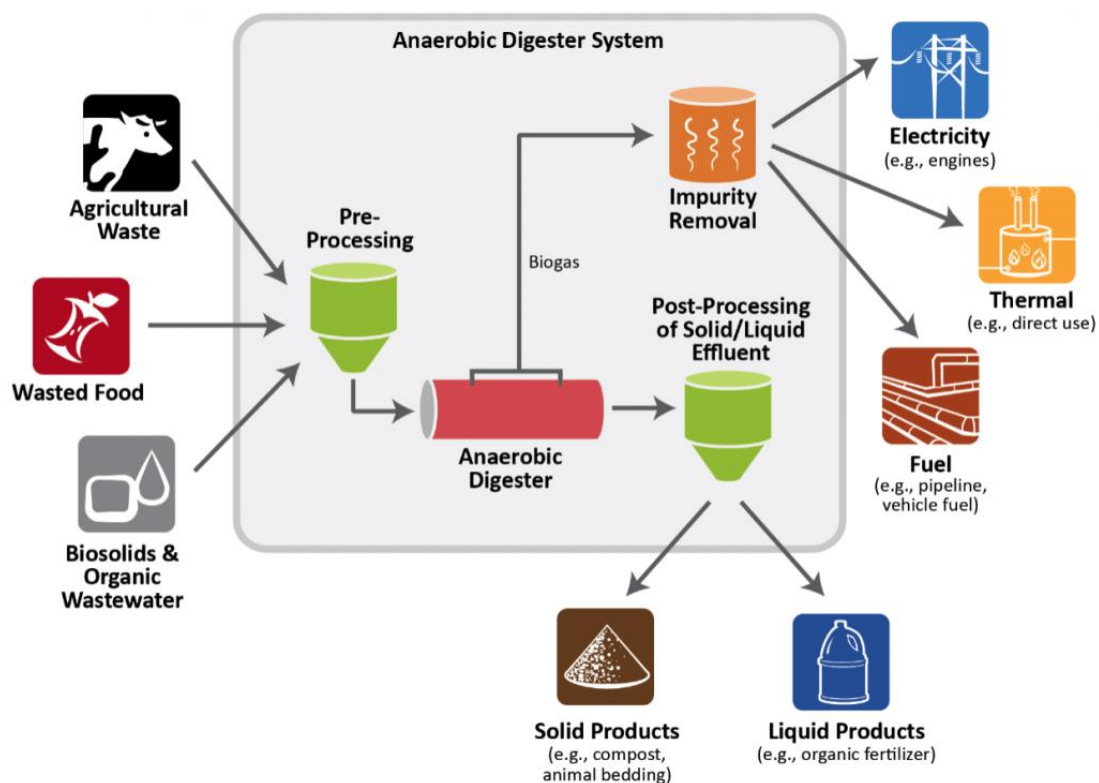


Figure 5: Anaerobic Digester System © Copyright Tennessee Department of Environment & Conservation

AD can produce renewable energy as opposed to aerobic systems such as composting which requires energy input to stabilise. The products generated by AD can offset the investment and be used as resources for further manufacturing for example, composting digestate can create an organic fertilising product and CNG can be refined to produce hydrogen.

The advantages of AD include:

- Producing more energy than required resulting in a constant supply of renewable energy;
- Sanitising the feedstock/ waste (pasteurisation);
- Reducing odour below unprocessed waste odour levels. 'Aromatic' materials are processed in a negative pressure environment which traps noxious fumes;
- Lower sludge mass generation when used as a primary water treatment method compared to an aerobic system applied to the same contaminant concentration and flow; and,
- The effect of the fertiliser is longer lasting than for untreated organic waste.

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To balance these out, disadvantages include;

- Requires a commercial scale level of investment, including in sorting and a clean feedstock;
- Inefficient operation can cause an odour nuisance;
- Cannot convert as much carbon in the biomass to biogas as gasification;
- It takes longer to start the process due to the slow growth rate of the methane-producing organisms compared to aerobic systems;
- In some applications has higher buffer chemical dosing requirements for pH control to keep the pH for AD within the range of 6.5–8;
- Digestate must be transported safely and ensure there is sufficient processing capacity for the generated volumes;
- Manufacturers operation specs must be strictly adhered to, requiring
- Without significant political leadership, AD will likely meet significant community resistance. A full communication data package including emissions, location, benefits and assurances is required prior to opening the public debate. This topic should be addressed in stages, allowing the community to consider the option before addressing community concerns.

Case Study: Jandakot Bioenergy Plant – RichGro

Richgro is a garden products company supplying compost and fertilisers across Australia and are licenced to receive organic waste streams from Councils. Following an extensive selection process they selected Australian company Biogas Renewables Pty Ltd to undertake the design, installation and commissioning of an AD plant for their Jandakot processing facility. The selection process commenced in 2011 and the plant was commissioned in 2015. This is the first plant of its kind in Australia.

Project Breakdown:

- | | |
|--|--|
| • Total Capital Spend | \$8 Million |
| <i>Contributing grants from WA State Government,</i> | <i>(\$ 0.5 M⁴)</i> |
| <i>Federal Clean Technology Investment Program</i> | <i>(\$ 1.6 M),</i> |
| <i>Clean Energy Finance Corporation (CEFC)</i> | <i>(\$ 2.2 M⁵).</i> |
| • Capacity | 35,000-50,000 tpa |
| • Energy Production | 2 MWe electricity total (1.7 MWe to the grid) |
| • Heat production | 2.2MWth |
| • Products | 100m ³ of liquid bio-fertiliser at 6% dry solids |
| | <i>Can be configured for power, heat, steam generation or a mix of these</i> |
| • DWER Approval of Site Applications | 6 months |
| • Grid Connection through Western Power | 2 years |
| • Return on Investment | Sub 4 year payback on capital (before grants) |

Critical decision elements:

- Processed large quantities of green waste from council collections
- Electricity costs from the energy retailer of \$600,000+ / annum
- Enabled higher revenue waste streams to be taken from contaminated organic waste
- Produced a bio-fertiliser that blends with existing products
- Closes a production loop with potential to utilise heat and CO₂ produced on site

⁴ [Waste to clean energy in a Southern Hemisphere first - Richgro](#)

⁵ [Richgro Bioenergy Plant, Jandakot, Western Australia - Waste Management Review](#)

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Biogass P/L provides the following process example:

50,000 tonnes per annum of food waste at 150m³/tonne of biogas has the capacity to produce a mix of:

1. Biogas to power a 600KW genset (120 residences at 5KW per year) 24/7 (as well as 660KW of thermal output) to power a large commercial site, plus
2. 324m³/hour of Natural Gas (CH₄) for compression to CNG which could displace the equivalent of \$3M/year in diesel if used in static engines or a transport fleet.

Following initial pre-feasibility report conducted by Biogass P/L, the financial key points for constructing a plant in the South West are:

Detail	Value
CAPEX	-\$ 9,425,328
OPEX (per annum)	-\$ 775,000
Electricity Revenue BTM (per annum)	\$ 1,206,373
Gate Fee Revenue (per annum)	\$ 814,949
LGC Revenue (Year 1)	\$ 314,430
Heat Revenue (per annum)	\$ -
Estimated Project IRR (Pre-Tax) (20 yrs)	% 11.19
Estimated Project IRR (Post-Tax) (20 yrs)	% 10.18

Table 4: Figures from a 2019 pre-feasibility study conducted by Biogass P/L

Locations

It is recommended that any facility of this type is built in partnership with a suitable services provider, for example a Waste Water Treatment Plant (WWTP). Using the current parameters we have, the most viable site found within the SW at this stage both logistically and commercially would be in direct proximity to the Busselton Waste Water Treatment Plant, which is within a Waste Treatment Buffer Zone. Assuming agreements can be set in place, the location offers significant partnership potential as the WWTP can use a high amount of electricity and potentially use the digestate correctly and responsibly. This represents a potential solution for the southern LGAs in the region by reducing transport costs for organics and introducing a revenue making operation.

Summary	
<i>Market Sounding:</i>	
Cost Estimate	\$12-15M
Gate Fee	\$50-75 per tonne (estimate)
Capacity	30,000-50,000 tonnes of organic material per year
Operational	Projected within 2 years dependent on Approvals
Location requirements	Close to WWTP and users for steam/electricity
<i>Strategic Plan</i>	
Australian examples	Jandakot, Richgro facility operational for 5 years
<i>SWOT</i>	
Strengths	<ul style="list-style-type: none"> • Diversion of material from landfill to meet State and local targets. • Potential to generate electricity.

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	<ul style="list-style-type: none"> • Opportunity to value-add • Potentially cheaper FOGO solution for the smaller, southern LGAs • Job creation is 10 construction jobs and 4-5 full time equivalents for operation.
Weaknesses	<ul style="list-style-type: none"> • Cost and resources. • Environmental controls required. • Sensitivity of the biological process • Contamination of feedstock • Clean and safe transport of digestate
Opportunities	<ul style="list-style-type: none"> • Joint ownership and investment models • Engagement with local landscaping or agricultural businesses. • Partnership opportunities such as WWTP • Plant could be a source of multiple value adding products, eg. Compost, hydrogen, power charging electric vehicles • Community engagement and education • Government funding as alternative waste treatment
Threats	<ul style="list-style-type: none"> • Long term market security for products. • Variability in feedstock contamination, e.g. persistent herbicides
<i>Recommendation</i>	
<ol style="list-style-type: none"> i. Commence Feasibility Studies into this facility ii. Commence site investigation studies into other suitable locations. 	

COMPOSTING

Turning FOGO into a marketable compost product keeps the feedstock out of landfills (reducing greenhouse gases) and boosts soil health and productivity. This activity is by and large uneconomic for single Councils and retailers and establishment requires financial support of collection, capital (construction) and operation.

The existing facility at BHRC processes material from approximately 43,500 households in the City of Bunbury and the Shires of Collie, Capel, Donnybrook-Balingup, Augusta-Margaret River and Harvey. The expansion underway at the BHRC facility is to increase processing capacity to 76,000 households, potentially servicing the City of Busselton, the Shire of Harvey and other local governments in the South West and Peel regions. Demand for FOGO processing capacity is high, with interest already expressed from local governments in the metropolitan region. BHRC remain confident that the supply of FOGO material will reach the 35,000tpa capacity of the facility before 2023.

The increased FOGO processing capacity will help expand the three-bin systems at an additional 32,500 households regionally. This will result in approximately 845,000 additional bin lifts per annum or 33% more collection activity for councils that have a two-bin system.

Assuming one collection vehicle is capable of providing approximately 200,000 bin lifts per annum, it is predicted that an additional 4 to 5 collection vehicles will be required to meet the increased collection demand. Based on a value of \$450,000 for a new side loading collection truck, it is estimated that fleet investment alone will be approximately \$2.250M. Capital investment in collection vehicles will be indirect and dependent on the collection models (internal or contracted services) used by individual councils.

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Councils that implement a FOGO bin will also need to source additional bins and red lids for existing refuse bins, this is anticipated to cost in the range of \$65 to \$75 per household (\$2,112,500 - \$2,437,500).

Assuming no changes to contract pricing, it is expected that implementation of a three bin system will result in bin collection costs increasing by approximately 33% for local government areas that already have a two-bin system (assuming FOGO bin collected weekly, yellow top bin and red bin on alternating fortnights).

Assuming a single bin lift costs in the range \$1.30 to \$1.70 it is estimated that provision of a two-bin waste collection service to 32,500 households costs between \$3,295,500 and \$4,309,500. Introduction of a FOGO bin is anticipated to increase this operational expenditure to between \$4,394,000 and \$5,746,000.

Depending on the how the systems are implemented in each local government area, it is also likely that additional operational expenditure will be associated with the provision of waste education initiatives and source separation materials (compostable bags etc.). Assuming \$10 per annum per household is budgeted for waste education and source separation initiatives, it is estimated that this will increase operational expenditure by approximately \$325,000 per annum.

Compared to landfill disposal it is anticipated that every tonne of FOGO waste composted will result in a \$26 to \$30 saving. The additional 15,000tpa of processing capacity is therefore anticipated to save local governments \$345,000 to \$450,000 per annum in landfill disposal costs. Introduction of a landfill levy to the southwest region is expected to occur within a five-year timeframe which could result in landfill costs increasing by \$70 per tonne. This would increase savings to local governments with FOGO systems.

Based on an annual throughput of 35,000tpa it is forecast that the following outputs will be produced (tonnes) at the BHRC:

Product	Volume (tonnes)
Compost	20,262
Mulch	2,594
Rehabilitation material	1,621
Contamination (landfilled)	1,200
Contamination (recycled)	300
Total	25,977

Table 5: Breakdown of organic outputs from BHRC composting operation

Establishing the composting facility is forecast at \$5.5M of capital investment. The compost and mulch products produced at the upgraded facility will meet the AS4454 specifications and organic certification.

It is anticipated that the initial bulk of future demand will come from the Bunbury Outer Ring Road (BORR) project through 2022 and 2023. The BHRC will continue to market its recycled organic products to the local agricultural, horticultural and landscape sectors to ensure product demand post BORR. Procurement policies from the surrounding Councils should acknowledge this source of material and specifications will need to be established to ensure Councils of the quality standards.

It is anticipated that recycled organics produced will have a market value between \$500,000 and \$845,000 per annum based on a throughput of 35,000tpa.

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Summary	
<i>Market Sounding:</i>	
Cost Estimate	\$5.5M
Gate Fee	\$42/tonne
Capacity	35,000 tpa
Operational	Prior to 2022
Location requirements	Located within the Stanley Road Waste Facility
<i>Strategic Plan</i>	
Australian examples	Currently operating at Banksia Road
<i>SWOT (Forced Aeration System)</i>	
Strengths	<ul style="list-style-type: none"> • Diversion of material from landfill. • Greater control of composting process. • Quicker turnaround time for composting activity. • Relatively low capital cost and infrastructure requirements. • Smaller footprint requirements than windrow aeration. • Reduced greenhouse gas emissions compared to landfill.
Weaknesses	<ul style="list-style-type: none"> • Staff training requirements. • Capital and operational costs commitments. • Potential odour issues. • Spatial requirements.
Opportunities	<ul style="list-style-type: none"> • Engagement with local landscaping or agricultural businesses • Revenue generation.
Threats	<ul style="list-style-type: none"> • Security in markets for products. • Environmental approvals.
<i>Recommendation</i>	
<ol style="list-style-type: none"> To continue supporting the rise and adoption of composting as a viable organic treatment Seek to refine the end product to increase value Investigate centrally coordinating a network of composting activities throughout the region that support related waste treatments. 	

PROCUREMENT

Transitioning to a circular economy is unlikely if market forces are relied upon to drive the change. While landfill remains the cheapest disposal method, processing used materials into a productive resource will be more expensive than using virgin materials or landfills. The market will not transition to a circular economy in this model. Governments and Councils have the most to gain from changing this model because of the benefits associated with landfill diversion. Market intervention appears to be the most effective means to change to an economic model that provides greater value in waste resources, creates jobs, is more diverse and reduces impact on the environment [2].

The direct impact on councils' waste costs resulting from the changing waste operations landscape (and the viability of kerbside recycling in general) are not well understood. The South Australian Local Government Association (SALGA) estimates that the subsequent rise in recyclables processing costs are estimated around \$15 million more in waste costs due to changes in the global market.

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The only way to manage cost increases from recycling services and impacts from any proposed waste levy is to develop local markets for recyclable materials so these materials become a valuable commodity. Impacts from Covid-19 including closing facilities, waived rents for commercial tenants, more residents seeking to invoke hardship provisions and increased demands on resources only highlight the need to control the cost of the facilities and services as low as possible.

Accelerating the transition towards a circular model will deliver return on investments sooner. For the SW Group, transition needs to be facilitated through growth incentives driving the local economy. Investment businesses consulting with WALGA have identified areas that could assist us locally, specifically:

- Levelling the playing field through better financing conditions and access to markets – this may mean establishing local businesses close to resource materials and clean stream of waste to compete with access to virgin materials
- Value-chain collaboration: different organisations in the value chain need to collaborate to optimise the circular solution, as resources and materials remain in a constant loop. This value chain collaborations needs to be enabled and rewarded.
- Long term value creation: there should be actions to incorporate and reward product longevity in business models
- Market Participation and end-users play a crucial role in the value chain to make products circular. Typically this is the part in the value chain where products turn into waste. There is a need to ensure better participation of consumers and end-users to change this behaviours
- Integration of the public good: The cost of negative externalities and the benefits of positive externalities need to be considered in order to allow circular companies to compete more fairly. On average companies that price externalities contribute more to public goals and/or reduce societal costs
- Financial knowledge build up: financiers who often struggle to quantify linear risks and fail to reward circular businesses need to know more about circular models. It is important that financiers and investors understand the differences in order to be able to correctly value the business model and its longer term economic potential.
- First movers action: market demand pull is part of the success of new business models. This demand pull works as a magnet for new entrants and/or current businesses to change their operational and commercial model.

Relying on price alone to drive the transition towards greater uptake of recycled materials is unlikely to succeed. This is due to a number of factors including the unequal comparisons of virgin materials against recycling resources by using price alone. Recycling materials should also factor in the costs of keeping the materials out of landfills.

In a transitioning market local government purchasing policy can reshape the market and align new market conditions for businesses to refine and develop. A 'good procurement system' meets two conditions [3]:

- i. A central 'decision centre' setting non-contradictory objectives, periodically assessing whether the system works coherently; and
- ii. Establishing a set of processes that maximize the chance of reaching the system's objectives while minimising the use of resources.

By targeting particular outcomes, local government can create complimentary policies to ensure sustainable development of the circular economy. This is currently underway in South Australia

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using a SALGA initiative, the 'Buying it Back LGA Circular Procurement Pilot Project'. The project is intended to grow the value of recycled materials, build viability of the recycling system and reduce councils' waste management costs.

CASE STUDY SALGA's 'Buying it Back LGA Circular Procurement Pilot Project'

At the 2018 SALGA Annual General Meeting the City of Prospect put forward a motion requires the LGA to investigate how the local government sector can leverage its procurement capacity of products/goods made partially or wholly from recycled materials, in efforts to develop onshore end markets for waste derived materials.

A pilot procurement project was initiated in which nine councils volunteered to participate. A Grant was secured to progress the project resulting in a Memorandum of Understanding (MoU) between the councils and the LGA requiring councils to:

1. Prioritise the purchase of recycled-content products and materials through the procurement process;
2. Track the recycled-content purchased by weight; and
3. Publicly report on the tonnes of recycled-content products and materials they have purchased under the MoU.

Additionally, most councils adopted a procurement target for plastic materials, seeking to incrementally buy back up to 10% of the amount of recyclable plastics collected in their council area and increase this to 50%.

Outcome

Councils purchased of recycled content across the target product areas including:

- Stationery and office paper;
- Fixtures (street furniture, fencing, fitness equipment, garden boxes etc.);
- Compost; and
- Road construction materials.

After 6 months of data capture the councils purchased plastic materials equivalent to 36% of the amount of the target.

The reported data was analysed to develop recommendations when rolling out circular procurement to the local government sector as a whole. The resulting recommendations were:

1. Acknowledge that action by councils is imperative for addressing the current challenges in waste and recycling (as detailed in the National Waste Policy Action Plan and including the implications of the impending COAG waste export ban);

This is the biggest barrier to councils buying recycled materials as the connection between councils' role in collecting waste (and paying for this service) and their ability to influence the market by creating demand for end-use recycled products is not directly related.

2. Commit to "buying recycled" as a high priority and as a necessary method of mitigating councils' rising waste management costs;

This talks to the nuance within the circular economy model which goes beyond recycling – it is about maintaining the economic value from production investment for as long as possible.

3. Amend existing Procurement Policies to
 - a. Temporarily (e.g. 5 years) prioritise recycled-content through procurement;
 - b. Mandate recycled-content in design/planning (including current contracts);

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- c. Specifically consider “opportunity cost” associated with any purchase (i.e. When asking “which is best value for money?”, also ask “what will this mean for the materials involved past their intended use”);
- d. Track the purchase of recycled-content by weight and report this publicly.

Amendments should reconcile this priority with other priorities such as “buying local”

This addresses market failure and growth of new supply sources with a monitoring component

4. An administrative approach outside of the policy is to be considered. For example, buy stationery items with recycled-content;

This is a transitional option for councils cautious about amending their existing Procurement Policy.

5. Share knowledge and experience to explore and/or support development of a certification scheme for recycled-content products and materials.

Certification schemes are a cheap but effective means to build value down the supply chain and lend local government or State government integrity to the process.

6. Endorse the LGA writing to the Commissioner for Highways to request work be undertaken with peak bodies or Austroads to develop specifications allowing for recycled-content in roads (in particular, recyclable materials including plastic and glass fines).

The Group continues to work with Main Roads WA (MRWA) to incorporate this in their plans although the materials are subject to considerable rigour. MRWA, the Australian Road Research Board (ARRB) and Western Australian Road Research Innovation Program (WARRIP) are looking at a number of recyclable materials that could have a future role in road construction. The ‘Roads to Reuse’ program has developed specifications for recycled road base and recycled drainage rock and is funding construction and demolition recyclers to ensure they meet the specifications. MRWA are committed to use more than 25,000 tonnes of recycled construction and demolition waste as road base.

The products regularly purchased by local governments include:

- Office stationary/paper;
- Fixtures (e.g. street furniture, drinking fountains, bollards, fencing, decking, garden edging, planter boxes, fitness equipment, wheel stops, speed humps, bins, pipes, signage);
- Construction materials (recycled-content includes recycled asphalt, glass fines, plastic, rubber, toner); and
- Compost.

The estimated magnitude of potential financial benefits is sufficient to justify a similar investigation into a comprehensive regional procurement strategy. This approach would also give manufacturers confidence to invest in the region to build on these recovery initiatives.

For tendered local government projects, a LGA could require contractors to:

- Prepare Waste Management Plans (WMP) for proposals seeking planning approval,
- Stipulate that the WMP maximises diversion of materials from landfill,
- Require the use of recycled products, locally produced if necessary,

This approach can be particularly relevant to construction projects, which could be leveraged to grow local recycling markets. These WMPs should help maximise the diversion of materials from landfill and ensure appropriate management systems are in place for all waste arising.

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Influencing Commercial Practices SWOT

Internal		External	
Strengths	Weaknesses	Opportunities	Threats
<ul style="list-style-type: none"> • Involvement with local businesses. • Opportunity to promote initiatives preferred in the Waste Management Hierarchy. • Targets a significant proportion of the waste stream. 	<ul style="list-style-type: none"> • Cost and resources. • Getting buy in from the industry sectors. 	<ul style="list-style-type: none"> • Influencing consumer behaviour. • Increased availability of recycled materials. • Potential for new business in the South West Region. 	<ul style="list-style-type: none"> • Impacts on charity organisations and small businesses currently involved in resource recovery.

Further Considerations

- Research a Regional Procurement Strategy which fits LGA policy priorities and cost constraints. Input should be sought from Council representatives, SWDC, WALGA, DWER and other relevant parties.
- Develop sector-wide strategies focussed on greatest cost/benefit, especially in areas with a significant 'infrastructure gap' and limited financial capacity to close that gap.
- Deliver strategies that effectively aggregate demand and reduce costs as well as enhancing local and regional local economic development.
- Extend procurement collaboration into cross boundary sharing, service provision, assets and other infrastructure created for the benefits of communities.

LOGISTICS AND TRANSPORT

Regional Economic Indicators

Within the SW, 12 different waste management operations exist involving various contractors, disposal methods and acceptable waste types. To simplify this situation and externalise waste operations from local government operations will require considerable preparation, economic analysis and support from State agencies. The issues surrounding landfill conversion as the region moves towards a more holistic waste management system include:

- Transition costs converting landfills to Transfer Stations,
- Estimated ongoing Transfer Stations operational costs,
- Ownership of waste and partition of responsibilities,

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- Collection Costs for kerbside waste and fleet ownership/operation. The recent survey conducted through the region suggested costs should be competitive to target the following lift rates;
 - MSW : \$1.20 – \$1.40 per bin
 - CoRecyc : \$1.20 – \$1.40 per bin
 - FOGO : \$1.20 – \$1.80 per bin
 - Hard waste collection rate between \$60 - \$85 /T.
- Gate fees of alternate disposal services; for example the WTE gate fee from Avertas Energy for processing waste at Kwinana was \$115/T in 2015. More recently estimates of either plant come in at approximately \$150-160/tonne.
- Design to serve economies of scale at a regional level.

Transfer Station Design

The local need for the transition to Transfer Stations reflect the nationwide trend in solid waste disposal towards the construction of large, centralised facilities rather than maintaining small, rural, and often unsupervised landfill sites. The rising cost and risk management pressures in maintaining small landfills are becoming unacceptable for the Councils responsible. Fewer but larger engineered landfills have increased environmental controls and opportunities for improved resource recovery, which aligns with state and national waste management and environmental legislation. Servicing these landfills with material require a coordinated network of Transfer Stations which will have to be developed across the South West within the next ten years.

The design of the Transfer Stations should help streamline future regional logistics pressure to effectively process and sort local waste streams. Facilities are to be located on land already owned by Council to prevent further land acquisition, reduce planning timelines and other negotiations. Consideration should be given to broader resource recovery networks, regional strategies, transport economics/logistics and potential for regional co-operation.

The operational areas of the proposed facilities should be sized depending on the:

- Volumes of waste type to be transferred;
- Rates of waste transport to and from the site;
- Functions to be carried out on site (for example whether they are solely for waste transfer, will they hold Councils service vehicles, what recyclables can be stockpiled such as green waste or concrete for crushing);
- Size and type of potential vehicles that may accessing the site, for example B-doubles for bulk transport; and
- Types of customers the facility is intending to serve.

Accommodating future expansion is required when considering the preferred land area. Sufficient space can increase operating efficiency over time and avoid expense relocation costs. Other considerations include space for resource recovery activities, community education facilities operational processing such as mulching/composting, metal recycling, reuse centres and community education centres can also be located at the site.

- MRF/Sorting Facility
- Partnerships/Alliances
- Innovation Hubs
- Market Development & Potential market opportunities

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Logistics

Coordinating regional waste operations to capitalise on our economies of scale requires siting facilities that do not impose a disproportionate burden upon lower income or smaller communities. Negative impact facilities in smaller communities, labour demands that cannot be filled locally or creating various environmental and health issues need consideration. A central body to manage the various aspects not least location, is critical to obtaining cost-effective results.

Previous site investigations for the Group have focussed on putting dedicated facilities e.g. a Regional Landfill, in places acceptable to the majority of LGAs in the SW resulting from the Site Selection Study completed by Talis consultants in 2015. This was not found to be viable. The nature of the SW Region limits the effectiveness of centralised processing facilities over a certain volume and the RWMS2015 recommended developing a network of Local, Sub-Regional and Regional infrastructure and services to form an IWMS.

As the industry is now moving towards specialisation in resource recovery, the benefits of operating centralised locations need to be balanced against local opportunities to value add to waste streams. For example, multiple sorting centres would be too costly, so centralising the capital investments and targeting high value materials in sub-regional centres is necessary to recover economic volumes from large waste streams. Over time, LGA specialisation may be an option but this will be influenced by the development pattern of the resource recovery operations.

The ongoing development of the waste-to-reuse industry needs to ensure that Waste Derived Materials (WDM) are regulated to ensure safety of use and minimise risk to the growing business. Examples of commonly used WDM include:

Waste	Use
Food organics and garden organics	Energy production and Composting
Construction and demolition waste	Road base and drainage rock
Fly ash or bottom ash from waste to energy or electricity production	Engineering materials
Treated acid sulfate soils	Fill
Biosolids from wastewater treatment	Soil amendment
Red sand and alkaloam	Soil amendments
Gypsum and other calcium sulfate minerals produced from manufacturing	Soil amendments
Mixed gypsum, iron and manganese oxides from the refining of titanium ores	Soil amendments
Alumino silicate from lithium production	Concrete and cement products
Reclaimed asphalt from public roads	Road base and construction products
Used tyres and conveyor belts	Crumbed rubber modified bitumen (CRMB) used for road sealant spray applications
Recycled/reprocessed granular plastic	Polymer modified bitumen (PMB)
Treated wastewater	Irrigation

Table 6: Examples of materials that could be considered for general WDM determinations

Taking advantage of these opportunities requires specialities throughout the Region. To balance these, a summary of the sub-regional strengths can then identify potential industries:

SW Sub-Regions

LGAs

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- Bunbury-Geographe Bunbury, Harvey, Collie, Dardanup, Capel
- Capes Augusta-Margaret River and Busselton
- Southern Forests Boyup Brook, Donnybrook-Balingup, Bridgetown-Greenbushes, Manjimup and Nannup.

Identifying the major economic drivers of each region will then identify the local opportunities for waste recovery and processing:

Bunbury Geographe region	Southern Forests region	Capes region
Mining	Agriculture	Tourism
Infrastructure projects	Timber	Viticulture
Manufacturing	Tourism	Agriculture
Agriculture	Viticulture	Creative industries
Commercial & professional services	Professional services	Professional services

LGA	Industries	Popln*
City of Busselton	Tourism, Viticulture, Dairying, Market Gardening, Manufacturing, Creative Industries	38,926
City of Bunbury	Business, Retail, Entertainment, Health, Arts, Government sector, Heavy and light industry, Tertiary Education, Tourism, Mining, Port Trade	31,776
Shire of Harvey	Dairying, Beef Cattle, Horticulture, Mining, Citrus Fruits, Vineyards, Abattoir, Silicon Smelter, Pigment Plant, Dairy and Fruit Processing Plants, Light Engineering	27,798
Shire of Capel	Mineral Sands Mining, Basalt, Dairying, Vineyards, Fruit, Dairy Products, Timber, Arts and Crafts	18,022
Shire of Augusta-Margaret River	Dairying, Beef, Sheep, Deer, Fishing, Timber, Market Gardens, Viticulture, Tourism, Timber Crafts and Furniture Making, Arts and Cottage Industries	15,700
Shire of Dardanup	Beef cattle, Dairying, Poultry, Sheep, Brickworks, Timber Processing, Viticulture and Wineries, Tourism, Stockfeed, Mineral Sands Mining. Light Industry	14,368
Shire of Manjimup	Tourism, Timber, Wood chips, Horticulture, Beef Cattle, Fruit and Vegetables, Dairying, Sheep, Wineries and Viticulture, Marron and Aquaculture, Truffles	9,159
Shire of Collie	Power Generation, Alumina Refinery, Open Cut Coal mining, Timber, Farming, Tourism, Aquaculture, Viticulture	8,754
Shire of Donnybrook-Balingup	Sandstone Quarry, Fruit Orchards, Vegetables, Sheep, Viticulture, Tourism, Dairying, Beef Cattle	6,062
Shire of Bridgetown-Greenbushes	Mining, Timber, Farming, Horticulture, Marron, Viticulture, Crafts & Cottage Industries	4,722
Shire of Boyup Brook	Vineyards, Timber Plantations, Sheep, Cattle, Pigs, Grain Harvesting, Olives, Cottage Industries	1,756

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Shire of Nannup	Timber, Dairying, Beef Cattle, Horticulture, Tourism, Arts and Crafts, Floriculture, Fishing, Furniture Making, Aquaculture, Viticulture	1,363
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Table 7: Figures arranged in order of population data as listed from Australian Bureau of Statistics, March 2018

Waste Products Opportunities

- **Bunbury-Geographe waste opportunities:**
 - Waste Water,
 - Tailings,
 - Logistics centre,
 - Mine Operations Waste,
 - Construction & Demolition,
 - Road Construction,
 - Organics processing,
 - Glass,
 - Rubber & Tyres
- **Southern Forests region waste opportunities:**
 - Organics Processing,
 - Water processing,
 - BioMass
- **Capes region Waste Opportunities:**
 - Glass,
 - Liquid waste,
 - Organics processing,
 - Rubber,
 - Cottage Industry recycling programs.

Suitable Waste Streams or Facilities for Processing by LGA

LGA	Potential waste processing facilities	Complementary Assets
City of Busselton:	Bio-digester (WTE), Rubber shredding Liquid waste MRF	Lined landfill Land at Transfer Station Proximity to power users Council owned side-loader fleet Mineral sand mining Organic waste sources
City of Bunbury & Shire of Harvey BHRC	Composting Rubber shredding R&D MRF Textiles	Operating landfill licenced for lined cells Central location Access to Mining operations Access to Port Kemerton Industrial Park.
Shire of Capel	Transfer Station, Timber/high cellulose stockpiling	Mineral sand mining Centralised location
Shire of Augusta- Margaret River	Composting, Biomass, Large scale reuse/repair facilities Textiles	Engaged community Organic matter from agriculture (viticulture), forestry, restaurants.

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Shire of Dardanup	Transfer Station	Close to BHRC Softwood milling
Shire of Manjimup	Biomass	Access to forests for wood waste
Shire of Collie	R&D Pyrolysis Gasification Metal recycling Glass manufacturing Liquid Waste Textiles	Access to power grid Land at landfill Mining operations Power generation industries Provides region's water from forested catchments.
Shire of Donnybrook-Balingup	Biomass, Transfer Station	Organic matter from agriculture and forestry Sandstone extraction
Shire of Bridgetown-Greenbushes	Transfer Station	Organic matter from agriculture and forestry
Shire of Boyup Brook	Biomass	Access to forests for wood waste Organic matter from agriculture
Shire of Nannup	Transfer Station	Organic matter from agriculture and forestry

Table 8: Identifies the most suitable waste facilities for further investigation according to the sub-regional strengths. Transfer stations are critical for waste supply volumes and are suited to high producers close to processing facilities. MRFs have been identified in high volume waste processing facilities (>15,000 tonnes/year).

WASTE LEVY IMPACTS

Although not formally announced, the Minister for Environment, Stephen Dawson MLC stated at a meeting of the Municipal Waste Advisory Council (MWAC) in February 2019 that the levy is likely extend to the Peel and South West. Further messaging has reinforced this objective and although not a guarantee, addressing the impacts is critical to understanding the economic pressures that may impact regional waste solutions.

The Department of Water and Environmental Regulation (DWER) stated objectives of the waste levy are summarised as influencing waste management practices, especially reducing waste to landfill by:

- generating less waste;
- recovering more value and resources from waste; and,
- protecting the environment by managing waste responsibly.

The waste levy is currently set at \$70 tonne and applies to materials received at landfill premises. There are few exemptions which include hazardous materials, waste need or generated for a function (e.g. cover) or resulting from non-human processes, e.g. waste washed up on shore by the sea. For practical purposes, it can be assumed that the MSW accepted by SW landfills will incur the levy. The rise in disposal cost per tonne makes alternate uses of waste more economically justifiable.

The State has signalled that should the Perth and Peel Levy area be expanded then compliance costs particularly in smaller areas where alternatives are more costly, is likely to be modest. Should the levy be applied to discourage metropolitan waste from being disposed in the SW, then it may be applied at a rate equal or slightly less than the metropolitan charge (\$70/tonne). Regardless of the final charge, raising the cost of disposal will make alternative waste treatment more financially viable. A waste levy does not directly impact ratepayers but impacts the cost of landfill operations for LGAs. This incentivises source separation improvement and avoiding disposal.

Experiences from elsewhere in the country have shown:

- The waste levy has helped develop alternate waste management projects but the landfills remain central in waste operations. The investment from the levy is insufficient to adequately deal with the total volumes of overall waste management needs, despite generating significant amounts of money for State governments.
- The waste levy unduly burdens certain councils. Large contributions from certain Councils to State programs mean that levy funds are applied to regions which are not subject to the levy.
- There is a risk that should the government choose a different levy rate in regional areas as has been done in other States, urban Councils such as the Cities of Bunbury and Busselton will be subject to a higher levy rate than smaller regional Councils despite being further away from Perth and Peel. This incentivises waste operators to take greater volumes to smaller regional councils, resulting in shorter operational lifetimes due to increased volumes being received.
- Already the return of funds generated from the waste levy to alternative treatment solutions is considered by many to be too low when considering the amounts of MSW still being deposited in landfills. The levy is included in the state's consolidated revenue and a proportion is assured through various recycling programs. Insufficient investment of the levy undermines long term solutions and competition within the sector

(Appendix ORD: 12.1.2A)

At a recent Parliamentary enquiry, national tyre recycling company, Tyrecycle stated that waste levies incentivise waste collectors in finding economic methods to dispose of material. By way of example, Tyrecycle showed that the profit-driven nature of the waste management sector means waste collectors will look for the cheapest point of disposal. Manipulating the disposal price to be higher than the cost of recycling makes recycling more attractive. In NSW where landfill costs can exceed \$250/tonne, landfilling tyres becomes uneconomic. In contrast, tyres in Queensland, the Northern Territory and Tasmania are sent mainly to landfill. The costs associated with tyre disposal are generally lower than those associated with recycling.

- Since the Levy rates in Western Australia were substantially increased in 2011, there has been a significant diversion from landfill for C&D waste and C&I waste. Inert material diverted from landfill has resulted in reducing overall levy payments for inert material however it is unclear where this material has gone.
- Low landfill prices are also a financial barrier to recycling, investing in resource recovery and implementing waste reduction.
- Resource recovery operations employ more people and require greater investment in infrastructure per tonne of material compared to landfills. An example of this was provided by Enviroinex, which highlighted that in Victoria (with a levy) four tonnes of waste black poly pipe would cost \$600 dollars to dispose of at a landfill site, but in Tasmania (with a very low levy), disposal would only cost \$40. The conclusion was that landfill levies should be priced to encourage businesses to send their waste to recyclers and not to landfill.

Should levies not be appropriately priced and managed, unusual and unintended outcomes have been seen such as:

- the unnecessary transport of waste between jurisdictions to avoid levy costs;
- an uncertain regulatory environment undermining investment in recycling infrastructure;
- high administrative costs, particularly in the application of complex schemes;
- potential for fraud created by mislabelled waste.
- levies can encourage stockpiling and illegal dumping.

CONCLUSIONS

The Group recognises that continued individual waste management reduces negotiating power for sub-regional contracts and increases costs. Coordinating operational assets using a separate entity, for example a Regional Subsidiary, is likely to achieve greater diversion and more effective education programs at an overall lower cost.

Although the Regional Subsidiary legislation is not ideal for operating and acquiring large waste assets or operations, clarifying the goals, risks and investment levels for SW Councils seeking to externalise all waste operations sets the long term vision to be ready when the legislation is amended. IF the changes do not proceed, there will remain a solid foundation for regional cooperation and investment strategies. Given the trend of waste management growth in Western Australia over the previous 15 years, strategic partnerships with private industry and growing the local economy will spread risk and reduce overall costs for Councils in the Region.

Councils participating in a cooperative model of investment will likely result in services being provided that are beyond the scope of an individual Council. More complex treatment processes underpinned by a comprehensive community engagement strategy and coordinated procurement policy can further reduce waste volumes through building a regional waste economy.

- Forming a Regional Subsidiary to equitably manage larger and more complex waste treatment systems is critical to achieve regional aspirations. Clear outcomes and business phases need to be approved prior to commencement;
- All proposed treatments and growth needs to be underpinned by strong, consistent community messaging that plays a significant role in managing contamination and participation; and,
- Councils need to use their purchasing power to promote the growth of the local reuse and recycling industries.

Although not as simple as a single disposal process, a comprehensive waste management plan takes a strategic view of the combined operations, providing greater flexibility and diversity in waste management. The loss of the international waste export market and the increase in recycling investment are significant drivers that have not been seen before in the Western Australian waste processing industry. With the existing State and Federal support for waste processing growth, this is the time to build the local economy. Identifying long term clients like Councils and State organisations provides a reliable market for waste derived goods as long as clear specifications determine quality.

As the industry undergoes growth and change, an Expressions of Interest process focussing on processing municipal solid waste is proven approach that will open the region to a wide pool of service providers. Crafted skilfully, the specifications can capture economic long term solutions that in some areas have developed local economies focussed on reusing materials previously considered worthless.

APPENDICES

1. Literature Review

RISK ASSESSMENT TOOL									
OVERALL RISK EVENT:		South West Waste Regional Options							
RISK THEME PROFILE:		7 - Environment Management							
RISK ASSESSMENT CONTEXT:		Strategic							
CONSEQUENCE CATEGORY	RISK EVENT	PRIOR TO TREATMENT OR CONTROL			RISK ACTION PLAN (Treatment or controls proposed)	AFTER TREATMENT OR CONTROL			RESIDUAL RISK RATING
		CONSEQUENCE	LIKELIHOOD	INHERENT RISK RATING		CONSEQUENCE	LIKELIHOOD	RESIDUAL RISK RATING	
HEALTH	No risk event identified for this category.	Not Required - No Risk Identified	N/A	N/A	Not required	Not required.	Not required.	Not required.	Not required.
FINANCIAL IMPACT	No risk event identified for this category.	Not Required - No Risk Identified	N/A	N/A	Not required	Not required.	Not required.	Not required.	Not required.
SERVICE INTERRUPTION	No risk event identified for this category.	Not Required - No Risk Identified	N/A	N/A	Not required	Not required.	Not required.	Not required.	Not required.
LEGAL AND COMPLIANCE	No risk event identified for this category.	Not Required - No Risk Identified	N/A	N/A	Not required	Not required.	Not required.	Not required.	Not required.
REPUTATIONAL	Council's reputation may suffer if it is not involved as part of the Regional Council collective.	Minor (2)	Rare (1)	Low (1 - 4)	Not required	Not required.	Not required.	Not required.	Not required.
ENVIRONMENT	No risk event identified for this category.	Not Required - No Risk Identified	N/A	N/A	Not required	Not required.	Not required.	Not required.	Not required.

