

MEMORANDUM



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TO: Strategic Working Group (SWG)

FROM: CEO

DATE: 23 August 2016

SUBJECT: **Waste Precinct – Waste to Energy Issues Paper**

FILE NO: COR/48-05

RECORD NO:

The Mandarie Regional Council's (MRC) Strategic Community Plan (the Plan) sets a 20 year vision for waste management from 2013 to 2033. In part, the Plan determined that an Alternative Waste Treatment Facility would be required in 2020 to enable the member councils to meet the Waste Authority target of 65% diversion of Municipal Solid Waste (MSW) from landfill by 2020.

In 2014, Hyder Consulting Pty Ltd produced a report entitled "Waste Processing Infrastructure Options Assessment" (the Report) designed to review the most appropriate infrastructure mix that would enable the MRC and its member councils to meet or exceed the target set by the Waste Authority. The report reviewed a range and combination of infrastructure solutions determining that there were only two combinations of technologies that would enable the diversion target to be met and both of these combinations included Waste to Energy (W2E) as the most effective process indicating that it could take up to 250,000 tonnes per annum by the year 2022 (refer Appendix 1). It was noted in the report that this tonnage would vary depending on the recycling strategies put in place by the member councils.

In February 2015 the MRC adopted the Report and the member councils have subsequently agreed (through the SWG) to adopt and/or use the Report when considering infrastructure solutions for the Region.

Since 2013 the MRC has kept itself informed of the W2E market both worldwide and in Australia. Currently in Western Australia there are three commercial W2E proposals at varying stages of approval, being;

1. Phoenix – Incineration Waste to Energy project in Kwinana (400,000 tonnes per annum)
 - EPA part IV Environmental Approval
 - Development Approval by JDAP
 - DER part V Works Approval
 - Ministerial Approval for Exemption of a Generator License
 - Building Permit exemption for main building
 - Completion of the Early Engineering Works and Basic Design
 - Submission and acceptance of application to connect to the grid



- Registration of generation on the SWIS

Latest discussions with Phoenix indicate that the five banks involved in the project are finalising their position on backing the project (Financial Close) with a decision expected by the end of September 2016. The MRC is pursuing a short term supply arrangement with Phoenix aimed at assisting the member councils in meeting the Waste Authority's diversion target of 65% by 2020.

2. New Energy Corporation - Gasification Waste projects in:

- i) Boodarie - Pilbara (70,000 to 130,000 tonnes per annum)
Location: Boodarie Industrial Estate, Port Hedland
 - EPA & DA approval (2013)
 - Waste
 - City of Karratha signed 20 year WSA & Lease to build Transfer Station at 7 Mile landfill (July 2015)
 - Town of Port Hedland signed 20 year WSA & PPA (June 2016)
 - Power
 - Draft ETAC agreement with Horizon Power
 - Negotiations on PPAs well progressed with several counterparties
 - Financing
 - Funding support by CEFC
 - Term sheets from major international lenders
 - Expected FC by Q1 2017, Operations by Q1 2019

- ii) East Rockingham (up to 200,000 tonnes per annum)
Location: Office Rd, East Rockingham
 - EPA & DA approval (2015)
 - Waste
 - C&D residual waste contract signed with IWM
 - Negotiating waste with local councils & commercial customers
 - Power
 - PPAs being negotiated with major power retailers (Synergy & Perth Energy)
 - Connection to Western Power in progress
 - Financing
 - Term sheets from major international lenders
 - Expected FC by Q2 2017, Operations by Q2 2019

The MRC has continued to work with the member councils through the SWG to ensure that every opportunity to be involved in W2E is presented. The EMRC are well advanced in developing a tender for the provision of Alternative Waste Treatment Facilities for the waste produced in its region.

The MRC, on behalf of the member councils, entered into discussion with the EMRC to determine if there was an opportunity for the MRC to join the tender on the basis of aggregating the tonnes of the two regional councils to achieve economies of scale that would reduce the cost of W2E for their member councils. The SWG was kept informed of this opportunity as it progressed.

The EMRC agreed to amend the tender to allow a regional local government to join the tender. The tender was advertised on Saturday, 13 August 2016. To take up this opportunity the MRC will require a commitment from each of its member councils, nominating the amount of general (green



bin) waste they would be prepared to commit to the tender process by no later than the end of October 2016.

There is no reason the commitment of these tonnes to the MRC can't be made subject to nominated price and waste diversion targets being met by any tenderer the MRC may consider. Once made however, the tonnage commitment to the tender process by the member councils would need to be honoured in the event that successful qualifying tender was accepted by the MRC.

Noting that if the MRC joins the tender it will automatically be involved in the assessment of the tenders and will independently be able to decide whether to accept or reject any tender or join with the EMRC in the tender.

Some concerns have been expressed by members of the SWG around the fact that the tender process is being led by the EMRC, rather than the MRC, which might light to a less beneficial or optimal outcome for the MRC and its members.

The MRC is confident that any risks which may exist are outweighed by the potential benefits which would flow as a result of joining the EMRC tender process.

To assist members of the SWG to better assess the potential risks and benefits of joining the EMRC's tender process, the following table provides an overview of the benefits and risks associated with getting involved in the tender.

MRC TO JOIN EMRC IN ALTERNATIVE WASTE TREATMENT TENDER (AWTT) – RISK/BENEFIT ANALYSIS

BENEFITS	COMMENTRY
Ability to enter the waste to energy market in a timely manner	Joining the tender will save up to two years on the MRC's estimated timing to enter the W2E market (the time required to develop, advertise and assess the tender responses)
Ability to test the market's response to varying commitment of waste tonnages	<p>The tender as it is currently written requires the tenderer to respond to various capacity plants, providing clarity in the assumed benefits of a reduced gate fee for a larger facility.</p> <p>The joint tender would allow the MRC to go to market with a greater pool of tonnes than if it simply went to tender on its own. While not participating in the EMRC tender does not preclude the MRC from going to tender on its own, it would mean that any solution the MRC could procure on its own would likely be at a more expensive rate per tonne than would be available under the EMRC tender.</p>
Savings on the cost of developing the tender	The EMRC have used credible consultants (Mr John King – Talis Consulting) and solicitors (Ms Melanie Cave – Partner in Herbert Smith Freehills) to develop an understanding of the W2E market and design the tender documentation aimed at obtaining the best market response
Improving waste diversion	Joining this tender will enable the member councils to meet the Waste Authority's target of diverting 65% of MSW from landfill by 2020

BENEFITS (cont)	COMMENTRY
Reducing overall cost of waste management	<p>The market is indicating that the cost per tonne for a waste to energy solution using incineration processes tis competitive. This rate improves when the tonnes available increases.</p> <p>The per tonne cost benefit also improves as the landfill levy increases. The visibility on the land levy expires when it reaches \$70 per tonne. Based on evidence elsewhere in Australia and across the world it is likely that the levy will continue to increase post \$70 per tonne.</p>
Major step towards realising MRC's Waste Precinct vision and the outcomes suggested in the report developed by Hyder entitled "Waste Processing Infrastructure Options Assessment"	

RISKS	COMMENTRY
Lack of involvement in the tender process and lack of visibility of the content of the tender document may result in the MRC being exposed to some risk	The EMRC have advised that they would be willing to release the tender to the member councils as long as a confidentiality statement is signed by each recipient
Lack of involvement in the tender process means that the commercial market may not have been tested properly, resulting in a sub optimal outcome for the MRC and its members	<p>The tender documentation has been structured in such a way that it is broad enough to allow industry players to respond in the most commercial way they see fit, including the location of transfer stations and other infrastructure that is required.</p> <p>The MRC would not accept any tender that did not meet the predetermined gate fee rates and waste diversion outcomes. This in essence protects the member councils from being drawn into a facility which does not yield a market related service at a market related price.</p>
<p>The EMRC have indicated that it would require to be reimbursed for a portion of the consultant/legal costs relating to the development of the tender.</p> <p>Concerns were raised that the MRC could end up funding a disproportionately large portion of the tender development costs.</p>	The MRC will be provided with a detailed breakdown of the development costs and will only pay an amount commensurate with its involvement in the tender, which will include a share of the costs associated with the Waste Supply Agreement part of the tender
The timeframes are too tight to get a decision from the Councils of the member councils	The MRC could assist in the drafting of the report to Councils and attending Council briefing sessions/workshops (possibly along with Mr King) to fully inform the Councillors of the opportunity on offer

Appendix 1 – Extract from the Waste Processing Infrastructure Options Assessment prepared by Hyder - January 2015

RECOMMENDATIONS

Hyder has conducted a series of modelling analyses in consultation with the member councils to arrive at the preferred scenario 2C. The modelling is based on a range of assumptions that do not fully account for the political and social considerations of implementing the preferred model. However, the outcomes do provide for a broad direction, taking into account the best interests of the region as a whole. To progress in implementing the infrastructure plan, it is recommended that the MRC and its member councils:

1. Agree on a broad waste infrastructure direction as outlined in the infrastructure plan, and seek endorsement of the plan from their respective councils.
2. Agree to commence discussions regarding the preliminary work required to develop the appropriate business plans and procurement options for each infrastructure project.

Recommended infrastructure and preferred locations

Processing facility	Capacity required	Preferred location
Landfill	74,000 tpa (existing)	Tamala Park
Mechanical biological treatment	100,000 tpa (existing)	Neerabup
Materials recovery facility	100,000 tpa	Neerabup
Transfer station	300,000 tpa	Balcatta
Green waste processing facility (open windrow)	35,000 tpa	Neerabup
Bulk waste sorting shed	40,000 tpa	Balcatta
Waste to energy facility	250,000 tpa	TBC – market to determine

3. Agree to the actions outlined in this plan when infrastructure solutions are being considered by the MRC or its member councils, which includes bringing any proposed infrastructure solutions which may impact on the region to the attention of both the MRC and the Strategic Working Group.
4. Agree to support the MRC pursuing regular kerbside waste audits to inform the regional waste strategy and monitor progress on system changes.