
3.1 Confidential – Water Proofing the South Stage 2 – Council’s Role

This report provides information on the various roles available to Council in stormwater reuse schemes within the city and seeks endorsement regarding the preferred delivery model.

This report is for Council's information and endorsement.

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Attachments:	<ol style="list-style-type: none">1. Water Futures – Water Management Strategy role statements (1 page)2. Water Proofing the South Stage 2 – schematic (1 page)3. Stormwater reuse – delivery model 1 (1 page)4. Stormwater reuse – delivery model 2 (1 page)

1 Executive summary

1.1 Topic

This report provides information on the various roles available to Council in stormwater reuse schemes within the city and seeks endorsement regarding the preferred delivery model.

1.2 Context

The Water Management Strategy – Water Futures 2008-2013 provides the strategic framework for the City of Onkaparinga's management of all water resources. It was endorsed by Council at its 17 June 2008 meeting. Since that time:

- the delivery of Water Proofing the South Stage 1 has continued with the commitment of \$34.5M federal funding.
- on the 23 March 2009, Minister for Climate Change and Water, Senator Penny Wong, announced the opening of applications to the federal government's \$200M stormwater harvesting and reuse project initiative.
- on the 19 May 2009, Council noted an update on investigations in stormwater harvesting and reuse in the City of Onkaparinga as the basis for the Water Proofing the South Stage 2 funding application to the Australian Government's National Urban Water and Desalination Plan June 2009 intake of submissions.\

This report provides a further update on investigations. Namely the roles available to Council and the preferred delivery model which will inform the funding application.

1.3 Suggested outcome

It is suggested that Council consider this item in Confidence. Section 90(3)(b) of the Local Government Act 1999 is suggested as the most appropriate to use for this purpose.

This item is presented as a confidential item because it presents information that could reasonably be expected to confer a commercial advantage on a person or company with whom the Council is conducting, or proposing to conduct, business, or to prejudice the commercial position of the Council.

The possible implications of not considering this item in confidence could reasonably be expected to prejudice Council's commercial position. Recommendation 6 is intended to allow information on WPS Stage 2 to be made publicly available but the commercial aspects to be kept confidential.

2 Recommendation(s)

1 That

- a. under the provisions of Section 90(2) of the Local Government Act 1999 an order be made that the public be excluded from attendance at the meeting in order to consider in confidence this item.**
 - b. the Council is satisfied that it is necessary that the public be excluded to enable the Council to consider the report at the meeting on the following grounds:**
 - Section 90 (3) (b) information the disclosure of which :**
 - (i) could reasonably be expected to confer a commercial advantage on a person with whom the council is conducting, or proposing to conduct, business, or to prejudice the commercial position of the council; and**
 - (ii) would on balance, be contrary to the public interest**
 - Section 90 (3) (d) commercial information of a confidential nature (not being a trade secret) the disclosure of which:**
 - (i) could reasonably be expected to prejudice the commercial position of the person who supplied the information, or to confer a commercial advantage on a third party; and**
 - (ii) would, on balance, be contrary to the public interest**
 - c. accordingly, on this basis the principle that meetings of the Council should be conducted in a place open to the public has been outweighed by the need to keep the information or discussion confidential.**
- 2. The Council receive and note the information contained within this report and its attachments.**

- 3. That Council endorse its role outlined as delivery model 1 within this report and its attachments as its preferred role in stormwater reuse schemes within the city.**
- 4. That Council update its Water Futures policy statement to reflect its preferred role in stormwater reuse schemes within the city.**
- 5. That Council resolve to delegate responsibility to the Chief Executive Officer to finalise negotiations and execute relevant federal and state funding deeds for Water Proofing the South Stage 2 subject to:**
 - a. the funding deeds and other contractual documents being reviewed by Council's legal and commercial advisors**
 - b. a detailed business case including project delivery plans, community engagement plans and risk profile being prepared for Council's subsequent consideration and approval prior to the commencement of capital works.**
- 6. That an order be made under the provisions of Section 91(7) and (9) of the Local Government Act 1999 that the commercial aspects of the above mentioned document (or part of such document) including the minutes and the report of the Council relating to discussion of the subject matter of that document, having been dealt with on a confidential basis under Section 90 of the Act, should be kept confidential on the grounds of information contained in 90(3)(k) until the conclusion of negotiations with the federal and state governments regarding funding and Council's resolution of its water pricing policy.**

3 Key Factors

3.1 Discussion

3.1.1 Water Management Strategy - Water Futures 2008-2013

Water Futures provides the strategic framework for the City of Onkaparinga's management of all water resources – main's water, surface water (including stormwater), groundwater and wastewater.

Water Futures is a five year rolling program and will build on existing achievements including Water Proofing the South and other water management projects that the Council has initiated.

It also defines our roles in water management under:

- Leadership
- Owner/Custodian
- Regulatory
- Information Provider
- Advocate
- Initiator/facilitator

- Agent
- Part funder
- Direct Service Provider

The role statements have been provided in attachment 1.

3.1.2 Water Proofing the South

Water Proofing the South is a localised integrated water resource management strategy based in the City of Onkaparinga. It seeks to provide 'fit-for-purpose' alternative water sources such as recycled water and stormwater for traditional sources such as mains water and groundwater so that overall water use in the region is sustainable; economically, environmentally and socially.

Water Proofing the South Stage 1 (WPS1)

Conceived and developed from 2003, and committed to in 2007, Stage 1 of WPS brings together Federal, State and Local Government's with the private sector. The project will deliver 3800ML of agricultural, viticultural and urban reuse facilitated by the creation of 1.1GL (1159ML) of additional storage.

WPS1 is to be achieved through a number of projects concurrently being developed across the city, at a total cost of \$180M.

Water Proofing the South Stage 2 (WPS2)

The focus for WPS2 is the capture, storage, treatment and reuse of stormwater to service reuse opportunities through the creation of an integrated system of Managed Aquifer Recharge (MAR – formerly Aquifer Storage and Recovery (ASR)) schemes across the city. The objective is to offset as much as possible of the City's mainswater demand with fit-for-purpose water cognisant of the targets identified within *Water Futures*.

An application for funding support through the Australian Government's *National Urban Water and Desalination Plan* is currently being finalised, and will be submitted for the June 2009 intake of submissions (as reported to Council on the 19 May 2009).

Since the 19 May 2009 report to Council, detailed investigations have continued. The WPS2 scheme proposes (as presented in attachment 2):

- 4 new wetlands and associated MAR schemes across 5 separate sites including an extensive network of pipe transfer infrastructure across the City
- to harvest approximately 2.8GL (2.8billion litres) of stormwater from local creeks, which will be stored below ground via MAR schemes for reuse
- to preserve 20% of water injected in to the aquifer for environmental purposes (in accordance with the plans that govern the water allocation areas), hence a total reuse volume of 2.2 GL of stormwater will be available for reuse either by direct supply to localised customers or bulk supply to a third party distributor, under a negotiated commercial arrangement.

3.1.3 Stormwater in the City of Onkaparinga

Across all 9 catchments within the City of Onkaparinga:

- the annual stormwater outflow to Gulf St Vincent is approximately 24GL
- considering environmental flow needs (50% of flow) there is 12-13GL available for harvesting
- retaining 20% of harvestable flows in the aquifer for environmental purposes, the total reuse volume within the City is in the order of 10-11GL.

Future stages of Water Proofing the South will seek to harvest and reuse the remaining 9-10GL of harvestable water. It is intended that each scheme will be an augmentation of its predecessor with a view toward capitalising on previous investment, attributing to water security within existing schemes and reducing future costs. It is estimated that the complete reuse of all harvestable stormwater within the City would cost in the order of \$200-\$250M.

3.2 Delivery models

Stormwater reuse, specifically WPS2, may be delivered under any one of the following three models. Each model is premised on the fact that there is 2.2GL (2200ML) of stormwater available for reuse and council undertakes the capture and storage of harvested water.

3.2.1 Delivery model 1

Council as owner and operator of stormwater capture, storage and treatment and distribution infrastructure providing water direct to customers, including schools, sports fields, council owned areas of open space and other users within close proximity to the storage sites. Water surplus to local demand is intended to be supplied to third parties for distribution to other customers via their infrastructure as presented in attachment 3 and summarised in the following table:

Potential Council Role	Volume (of 2200ML)	CAPEX	Council	Other
Direct Supply	1400ML	\$30M	\$7.5M	\$22.5M - \$15M federal government - \$7.5M state government.
Bulk Supply	up to 800ML			

3.2.2 Delivery model 2

Council as owner and operator of stormwater capture and storage infrastructure to bulk supply water to third parties for its distribution to customers (including Council) via its infrastructure (as presented in attachment 4).

Potential	Volume	CAPEX	Council	Other
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Council Role	(of 2200ML)			
Bulk Supply	up to 2200ML	\$20M	\$5M	\$20M - \$10M federal government - \$5M state government

3.2.3 Delivery model 3

Council as owner and operator of stormwater capture, storage and treatment and distribution infrastructure providing all water direct to customers, including itself. This may still include a limited element of bulk supply to a third party.

At this stage, the capital costs and likely customers for this model have not been identified. As such this model has not been further developed. It should be noted however that it may be a future outcome resulting from the further stage development and expansion of delivery model 1 should Council elect to capitalise on the identified additional volumes of water that may be harvested.

3.2.4 Summary comments

The role statements presented in Water Futures do not currently address the possibility of Council entering the water market and directly supplying water to end users under commercial arrangements – as proposed in models 1 and 3. This is new territory for the City of Onkaparinga; however there are precedents in a South Australian context for a local government authority to enter this market. Should Council elect to enter the water market via endorsing delivery model 1 as proposed within this report, the role statements within Water Futures will be amended accordingly.

All models consider the bulk supply of water to a third party at varying levels under commercial arrangements for distribution via its networks. The City of Onkaparinga is in a unique position in that we have established third-party providers with an interest in the creation, operation and management of water distribution infrastructure.

3.3 Determining Council’s Role

The financial/commercial aspects and risk exposure associated with each delivery model discussed in Section 3.2 have been reviewed.

3.3.1 Financial/commercial review

The basis for the financial/commercial review are:

- capital and operational cost estimates prepared by Sinclair Knight Merz, which have been peer reviewed by Tonkin Consulting
- a total reuse volume of 2200ML available with the varying levels of direct supply and bulk supply allowing a contingency for seasonal variability and climate change impacts on water flows

- water charges based on a percentage of the cost of potable water, which are subject to clarification as Council develops a pricing regime (subject of a future report to Council)
- the assumption that the scheme is operational from 2014, following the completion of the project in 2013 cognisant of the requirements of federal and state funding agreements.

3.3.2 Risk review

The risk review of each scheme is outlined in Section 3.3.3 of this report and considered:

Risk	
Accuracy of SKM modelling i.e. proving the feasibility of the MAR concept, water flows, water quality etc	Achieving outcomes of funding agreement
Water volume sensitivities - seasonal variability	Loss of public open space
Resource capacity - skills and knowledge	Reduced potable water cost (reuse water charge sensitive)
Public health and safety (EPA, Dept of Health)	Limits opportunity for future market venture
Managing environmental sustainability against commercial aspects	Water security for the region
Failure to address City of Onkaparinga's legislated and regulated responsibilities	Equitable cost distribution to end users
Prohibitive terms and conditions within funding agreement for the commercial scheme	

3.3.3 Outcomes of reviews

The reviews were undertaken in consultation with:

- Bruce Williams, General Manager, Projects and Services
- Steve Mathewson, Chief Financial Officer
- Michelle Gegenhuber, Manager Projects
- Mark Booth, Director, BRM Holdich

The following table presents the outcomes of the financial/commercial review. It highlights that delivery model 1 presents the best option for council in terms of its profitability and equity creation, positioning us strategically to enter the local water reuse market.

	Delivery Model 1 Direct Supply	Delivery Model 2 Bulk Supply
Capital Investment	\$30M	\$20M
Council Contribution	\$7.5M	\$5M
2014 Profitability	\$380,000 ¹	\$250,000
Year 2020 Profitability	\$610,000	\$400,000
Equity (Funding)	\$28.2M (\$22.5M)	\$18.3M (\$14.6M)
Price	70% Potable	0.84c (2014 indexed)
Break Even 2014	\$1.71/KL ²	\$0.73/KL
Notes	<p>¹ Figure does not include bulk sale of 800ML of surplus water, which if sold increases profitability. Preserving this volume provides a contingency for seasonal variability and the longer term effects of climate change.</p> <p>Does not include any savings council would make on its own water costs. Our current mains water consumption at the sites proposed to be replaced by stormwater under WPS Stage 2 is approximately 750ML which represents savings of approximately \$600,000 per annum (at 70% of potable water charge).</p> <p>² SA Water has advised that potable water costs in 2014 will be \$3.17/kl for volumes greater than 120KL. Water charge at 70% of potable water costs is \$2.22/KL.</p>	

The following table presents the outcomes of the comparative risk assessment between the two models. It highlights that delivery model 1 presents the lowest level of risk to council.

	Delivery Model 1 Direct Supply		Delivery Model 2 Bulk Supply	
Risk	Rating	Comment	Rating	Comment
Accuracy of SKM modelling i.e. proving the feasibility of the MAR concept, water flows, water quality etc	Medium	The integrated approach to WPS 2 distributes the storage responsibility across a number of sites.	Medium	The integrated approach to WPS 2 distributes the storage responsibility across a number of sites.
Water volume sensitivities -	Medium	Council can manage its	High	Third parties commercial

seasonal variability		commercial arrangements in accord with water balance to accommodate seasonal variability		obligations to supply water to its customers may not be as tolerable of seasonal variability
Resource capacity - skills and knowledge	Medium	Partial immediate ownership	Low	Full transfer of resource requirements to third party
Public health and safety (EPA, Dept of Health)	Medium	Not all customers of Council - transfer some risk	Low	Full transfer of water quality requirements to end user
Managing environmental sustainability against commercial aspects	Medium	Council can manage its commercial arrangements in accord with environmental needs	High	Third parties commercial obligations to supply water to its customers may not be as tolerable of environmental needs
Achieving outcomes of funding agreement	Low	Administered by Council	High	Possibly not in commercial interest of private sector
Loss of public open space	Medium	Some loss of public space to create harvest locations	High	Third party may require preclusion of public access to mitigate water quality risks
Reduced potable water cost (reuse water charge sensitive)	Low	Unlikely	Low	Unlikely
Limits opportunity for future market venture	Medium	Manage commercial arrangements accordingly.	Extreme	It is expected that third party would seek a long-term water supply agreement, prohibiting council from entering the water market

Water security for the region	Low	Council's interest is in servicing local demand	Medium	Third party may target other market areas outside of the region
Equitable cost distribution to end users	Low	Councils interest is in equitable water pricing	Medium	Commercial interests of third party
Failure to address City of Onkaparinga's legislated and regulated responsibilities	Low	Council's interest is in gaining multiple benefits	Medium	Commercial interest of third party
Prohibitive terms and conditions within funding agreement for the commercial scheme	High	Unknown.	High	Unknown.
Ownership rights for stormwater to be assumed by state government	Medium	Negotiations to occur between council and state government regarding compensation should risk eventuate.	Medium	Negotiations to occur between council and state government regarding compensation should risk eventuate.

3.4 Resource implications

3.4.1 Current

Preliminary financial analyses for models 1 and 2 have been reviewed. Both models include significant council funding (for the initial establishment) varying from \$7.5m (for model 1) to \$5m (for model 2). These models assume we secure both the federal and state government grant funds (as detailed in section 3.2).

The preliminary financial analyses incorporate our funding contribution being met through loans. All known operational revenues and costs (including the required debt servicing) are included. As detailed above (section 3.3.3) both models result in operating profits in the first year of operation (2014) and continue to increase profitability through to year 2020. As a result both models illustrate an increase in equity to year 2020.

At its meeting on 26 May 2009 Council considered a report on the Major Projects Fund (MPF) and our debt modelling for 2009/10. Consistent with our Budget Strategy 2009/10 – 2011/12 as part of the 2009/10 budget process we have

undertaken a review of the MPF including rescheduling of projects to ensure we were within the distinct MPF funding model. This resulted in decreasing our forecast debt levels.

It is proposed that any borrowing required to undertake either of these models would not be incorporated into the MPF as each model is self funding and there is a specific debt servicing strategy.

Depending on the final model adopted for implementing WPS2 the borrowings may be undertaken by us and as a result would be included in our overall debt position. Our current long term financial modelling indicates we have adequate capacity to undertake these borrowings within the endorsed upper debt servicing limit (ie 10% of rates revenue as adopted when the MPF was established during the 2007/08 budget process) while still providing significant capacity to respond to any unforeseen events or financial shocks.

The preliminary financial analyses assume all profits are available and utilised at our discretion. We are continuing discussions with the federal and state governments to identify final funding agreements.

3.4.2 Future

All operational costs are considered in the financial/commercial viability of the scheme. They include:

- Power costs
- General maintenance
- Licence fees and charges
- Capital loan repayments
- Full asset depreciation
- Operational carbon emissions offset

3.5 Conclusion

In summary, delivery model 1 is recommended as the most appropriate role for Council at the present time. This includes:

Council as owner and operator of stormwater capture, storage and treatment and distribution infrastructure providing water direct to customers, including schools, sports fields and council owned areas of open space, within close proximity to the storage sites. Water surplus to local demand is intended to be supplied to a third party for its distribution to other customers via its infrastructure.

Delivery model 1 is recommended as the most suitable role due to the following benefits:

- presents the greatest level of return with additional profitability associated with the bulk sale of surplus water

- provides a water volume contingency accounting for the seasonal variability and the anticipated effects of climate change
- the overall lower level of risk.

Experience, knowledge and skills gained through implementation of WPS1 and WPS2 will be used to develop further stages in the expansion of reuse schemes across the city. This strategy would be precluded if delivery model 2 was pursued as Council's favoured scheme.

1. Closure

