

City of Burnside
Section 48 Prudential Report
Waterproofing Eastern
Adelaide Project

April 2015





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EXECUTIVE SUMMARY

This report has been prepared for the City of Burnside in accordance with Section 48 of the Local Government Act (Act) which requires a council to consider a report addressing the prudential issues set out in subsection 2 of the Act before engaging in a project where the expected capital cost over the ensuing five years is likely to exceed \$4 million.

The Eastern Region Stormwater Project, known as Waterproofing Eastern Adelaide, (the Project) is a stormwater harvesting scheme developed to its final form by the Cities of Burnside and Norwood Payneham & St Peters and the Town of Walkerville. The Project is comprised of two treatment sites which are capable of harvesting 660ML and yielding for use 540ML of water per annum and approximately 46km of distribution network across the area of the councils and through part of the City of Campbelltown in order to service a number of high demand customers. The Project expects to sell 458ML of water (84.8% of forecast availability), of which 214.67ML is committed to the Councils on a 'take or pay' basis and an additional 243.3ML is forecast to be sold to other customers.

Although the Project is to be undertaken through ERA Water, a regional subsidiary established specifically for this purpose under Section 43 of the Act, each Council is required to consider the prudential issues from their own perspective. Accordingly, each Council has commissioned their own Section 48 report.

Relationship with Strategic Management Plans

The Project is consistent with the City of Burnside strategic direction and desired outcomes as outlined in its Strategic Community Plan, Be the Future of Burnside 2025.

The Project has not progressed to the point where it ought to have been included in the Annual Business Plan and Budget 2014/2015.

The Project has not yet progressed to the point where it needs to be included in Council's Long Term Financial Plan.

If the Project achieves the forecast sales volumes of water, ERA Water will supply water to Burnside at a lower price than the comparable price of SA Water, this should be taken into account when reviewing the LTFP in the ordinary course of business.

As all assets to be acquired through the Project are to be owned by ERA Water there is no direct impact on the City of Burnside's Stormwater Infrastructure and Asset Management Plan.

The Project will also make a positive contribution towards a number of regional, national and State objectives.

Objectives of the Development Plan

Within the Council area the Project involves the laying of a pipe network and the construction of an underground water storage tank at Langman Recreation Reserve. The Development Act Regulations provide exemptions for certain works, such as the laying of the pipe network, however the installation of the water tank will require approval under the Council's Development Plan. The proposed development does not appear to conflict with the objectives of the Development Plan.

Contribution to Economic Development

It is highly likely that the Project will make a significant positive contribution to regional economic development above and beyond the capital investment through economic multipliers. In the construction phase alone, an estimated \$22.850 million in initial capital works is projected to have \$62.247 million in economic impact and a total employment impact of up to 162 jobs.

Council should ensure that ERA Water is transparent in its pricing of water for sale to ensure its operations are not unfairly subsidised to the detriment of any potential competitors. This can be achieved by complying with the requirements of the Essential Services Commission of South Australia to apply certain pricing principles in the determination of their costs and in developing a price for the sale of water. It can also be achieved by reviewing its operations to determine if they constitute a 'significant business activity' in accordance with the Clause 7 Statement of the National Competition Policy.

Community Consultation

Consultation and communication of the Project has been undertaken and is in accord with the City of Burnside Community Engagement (Public Consultation) Policy. As the Project progresses, engagement strategies should be developed consistent with Council Policy to keep the community informed and to ensure that these strategies fulfil the requirements of the Commonwealth Funding Deed.

Financial Issues

The Project financial modelling is based on equivalent annual value (EAV) and distilled to establish a breakeven price for water which on average over the life of the Project should be lower than the SA Water price in order for the Project to be considered financially viable. The key assumptions of the Project financial model are as follows.

- The total volume of water available for sale is 458ML of which 214.67ML (46.9%) is for the Constituent Councils on a 'take or pay' basis and an additional 243.3ML of water is sold to other customers over and above the amount committed to by the Councils. We note that the volume modelled for sale is 84.8% of the estimated productive capacity of 540ML.
- Capital expenditure of \$22.850 million. Approximately 90% of the capital costs have been subjected to a competitive process and fixed prices have been received.
- Fixed Operating Costs are estimated at \$150,000. The Fixed Operating Costs are considered to be materially understated if ERA Water is attempting to sell significant volumes of water to multiple customers however, they appear adequate for the early years of operation. We note that the financial model is highly sensitive to increases in Fixed Operating Costs and have increased these costs to a more realistic level in our analysis.
- Operational Costs commence at \$300,970. These estimates appear reasonable based on experiences elsewhere and provided maintenance is undertaken by the ERA Water Councils. If maintenance is not provided by the otherwise these costs may rise and negatively impact financial viability.
- Discount Rate of 4%. We note the discount rate of 4% applied in the financial model is higher than the average real interest rate of 3.19% reported by the Local Government Finance Authority for FY2006 to FY2014. However, a discount rate for

project evaluation purposes needs to have regard to expected long-run real interest rates over the 70 year life of the Project. According to World Bank data, over the past 39 years the average real interest rate in Australia has been above 4% in 28 of the 39 years, and over that time it has averaged 5.41%.

Based on these assumptions the model produces an EAV of \$2.26 which is considerably lower than the current SA Water price of \$3.32.

The sensitivity of the EAV to changes in the key assumptions in the model produces the following outcomes. For an increase of:

- 20% in Operational Cost the EAV would rise to \$2.39;
- \$50,000 in Fixed Operating Cost would see the EAV rise to \$2.37; and
- \$150,000 in Fixed Operating Cost would see the EAV rise to \$2.59.

Further, if the World Bank real interest rate is used as the discount rate the EAV would be \$2.55, which is still significantly below the SA Water price.

The Project financial model is constructed at a high level, our own financial modelling was undertaken at a more detailed level to ensure Council is informed on the timing impacts of the operations of the subsidiary. This modelling is based on the Project financial model but has also, out of necessity, made certain assumptions about the funding of the Project, the future price of SA Water and other key variables. The outcomes of this modelling are summarised below.

Indicator	Outcome
Average ERA Water Price	\$2.73
Peak Debt	\$12.624m
NPV at 5.21% (World Bank adjusted for LGFA)	\$9.339m
NPV at 3.19% (LGFA rate)	\$20.386m

Risk Issues

The Project feasibility study sought to identify and mitigate risk from the outset, this has been formalised in a Risk Register which has 108 Scheme risks only one of which (Commonwealth Funding) is rated as Very High, the highest categorisation. In our view the following risks should also be rated as Very High, and appropriate mitigation strategies need to be developed.

- Securing long term commitments from the ERA Water Councils to the specified volumes of water on which the financial model is based on a 'take or pay' basis.
- The long term risks associated with membership of a regional subsidiary, allied to the lack of financial certainty over exit arrangements.
- Securing the sale of significant additional volumes of water to customers other than the Council's over the life of the Project.

However we do note that 300ML of demand has been identified from educational institutions (155ML), commercial customers (45ML) and other local government authorities (100ML) who are located along the Project pipe network. Notwithstanding that there has been a positive response to this opportunity to date there are no formal binding commitments in place for the sale and purchase of water. Furthermore, although the Department for Education and Child Development has provided a letter of support for schools to connect to the Project, - until such support is formalised contractually, this remains a significant risk to the financial viability of the Project.

In addition, there are a number of financial risks which need to be considered and mitigated, the most significant of these are as follows.

- Increases in Fixed Operating Costs.
- Delays in bringing the Project into production due to technical difficulties or construction delays or both.
- The possibility that the price of SA Water increases at a lower rate than forecast, resulting in a lower financial benefit than forecast.

The City of Burnside should ensure that on commencement, the appropriate mitigation strategies are implemented for the risks associated with the Project and further that these are progressively updated through a formal risk register and as part of regular project management meetings.

Project Delivery

Procurement undertaken to date has been consistent with the City of Burnside Procurement Policy.

As ERA Water will implement the Project, the City of Burnside should ensure that appropriate arrangements for the procurement and delivery of the Project are implemented, consistent with Council's policy or with identified best practice across the constituent Councils.

Conclusions

We acknowledge there are sound strategic reasons for undertaking the Project and that based on the forecasts the Project is not expected to materially adversely affect Council's ability to remain within the financial parameters it has established within its Long Term Financial Plan, in fact it ought to lower the cost of water used by Council.

Notwithstanding this, there are a number of significant risk issues which will require active management and mitigation throughout the life of the Project, and these must be weighed against any benefits that are to be derived from the forecast lower price of water.

1. INTRODUCTION

1.1 Background

- 1.1.1 The Eastern Region Alliance (ERA) consists of seven eastern metropolitan Adelaide Councils, the cities of Burnside, Campbelltown, Norwood Payneham & St Peters, Prospect, Tea Tree Gully, and Unley and the Corporation of the Town of Walkerville.
- 1.1.2 In 2009 Wallbridge and Gilbert (W&G) and Australian Groundwater Technologies (AGT) undertook a Stormwater Harvesting Opportunities Study for ERA.
- 1.1.3 The study was undertaken in two parts, Part A addressed opportunities for the greater region including all potential sites across the seven Councils. From this, eight potential stormwater treatment and harvest sites were identified from which approximately one gigalitre per annum (GL/a) of urban stormwater could realistically be harvested in the greater eastern region of Adelaide subject to finding favourable aquifer conditions in the vicinity of the harvesting sites.
- 1.1.4 After review of Part A five of the seven Councils, the cities of Burnside; Campbelltown; Norwood Payneham & St Peters; Tea Tree Gully; and the Town of Walkerville, proceeded with the further development of the schemes to form the basis for the National Urban Water Desalination Plan: Stormwater Harvesting and Reuse Grants: Round 2.
- 1.1.5 In 2011 the ERA was successful in obtaining commonwealth funding to proceed with the ERA Stormwater Harvesting and Reuse Feasibility Study, which further developed the ERA Stormwater Harvesting Opportunities Study, undertaken as a submission for funding under the National Urban Water Desalination Plan. The Feasibility Study involved:
 - Undertaking hydrogeological drilling and testing of proposed ASR sites to understand if the underlying hydrological conditions suit ASR;
 - Site investigation including reviewing the sites and the available space to construct the treatment facilities;
 - Consideration of the impact on public open space; and
 - Detailed financial analysis and costing.
- 1.1.6 The Feasibility Study submitted in December 2011, presented three viable scheme options, yielding between 560 – 774ML/a, with capital costs ranging between \$29.7 million and \$33.9 million.
- 1.1.7 After negotiation the project budget for the Feasibility Study works was capped, at that time, at \$26 million with the Commonwealth Government contributing \$9.5 million and the five ERA Councils, who were part of the scheme, \$16.5 million. Subsequent to this, the Adelaide and Mount Lofty Ranges Natural Resources Management Board (AMLRNRM) committed an additional \$2 million in grant funding, conditional upon this being used for specified infrastructure works. To satisfy the Commonwealth grant conditions the scheme is expected to yield 494ML/a of harvested stormwater.

- 1.1.8 From 2012 onwards the five ERA Councils continued to modify and refine various scheme options in order to establish the viability of the scheme.
- 1.1.9 In February 2015 a number of the Councils formally considered a scheme option which was expected to yield between 620ML and 810ML per annum to service identified annual demand of between 419ML and 521ML.
 - 1.1.9.1 Only Council reserves are irrigated (419ML);
 - 1.1.9.2 Council and schools are irrigated with demand from schools limited to 40ML (459ML); and
 - 1.1.9.3 Council reserves and schools are irrigated (521ML).
- 1.1.10 After consideration of a Prudential Report prepared in accordance with the requirements of Section 48 of the Local Government Act ('the Act') the City of Tea Tree Gully formally resolved not to join the proposed Eastern Region Alliance Water Regional Subsidiary (ERA Water) on the basis that 'the project poses too many significant risks on our current and future communities that have not been adequately mitigated.' It further resolved to seek feedback from the four remaining ERA Water Councils on whether they would be willing to include the City of Tea Tree Gully as a customer of the subsidiary provided water was provided at a price to be negotiated but at less than SA Water prices.
- 1.1.11 The four remaining ERA Councils subsequently re-scoped the project reducing the capital expenditure through a reduction in pipe sizes for a section of the Eastern Trunk Main, the removal of the Scales Reserve Bore and pipeline, the removal of one steel tank at the Marden Pump Station, one buried concrete tank at Langman Recreation Reserve Pump Station and one buried concrete tank at Max Amber Reserve Pump Station and the removal of the St Peter pipeline.
 - 1.1.11.1 The reductions in capital expenditure are not expected to reduce the yield from between 620ML and 810ML per annum and subject to when water is to be supplied the total volume available for sale remains at 572ML.
 - 1.1.11.2 The annual demand has been modelled on supplying Council reserves (321ML) and with an additional 40ML of demand supplied to other customers, such as schools.
 - 1.1.11.3 The re-scoping of the project has included a change to the draft charter of the proposed regional subsidiary to remove the requirement for the subsidiary to operate at a financial breakeven on an annual basis.
- 1.1.12 After consideration of a Prudential Report prepared in accordance with the requirements of Section 48 of the Act the City of Campbelltown resolved 'that the report be received and that Council does not proceed with being involved in the ERA Water Project'.
- 1.1.13 Following the decision of the City of Campbelltown, the City of Burnside resolved (in part) as follows:

"Council requires the Section 48 Prudential Report prepared for the City of Burnside be revised to take into consideration the withdrawal of the City of Campbelltown from the Scheme and that this revised Report be presented to the City of Burnside as soon as possible for Council's consideration in respect of joining the proposed Eastern Region Alliance Water Regional Subsidiary;"

- 1.1.14 The three remaining ERA Councils subsequently re-scoped the project reducing the capital expenditure through a reduction in the length of the pipe network and changes to the treatment facilities.

1.1.14.1 The reductions in capital expenditure have resulted in a harvesting capacity of 660ML with a yield for use of 540ML.

1.1.14.2 The annual demand has been modelled on supplying Council reserves (214.67ML) and with an additional 243.33ML of demand supplied to other customers.

1.2 Rationale

- 1.2.1 Harvesting this urban stormwater would provide major and immediate benefits to the public realm through the sustainable and efficient management of water which is consistent with the vision of the City of Burnside:

"We are renowned for our City's green and leafy character and unique integrated urban form. We are highly regarded for our sense of community spirit, support for one another, social diversity and commitment to the environment."

- 1.2.2 Harvesting stormwater would also increase water security for the City of Burnside.

- 1.2.3 The City of Burnside resolved to proceed with the project on 25 September 2012 subject to:

"That Council's commitment to the Waterproofing the East Project is conditional on all participating Councils (Burnside, Norwood Payneham & St Peters, Campbelltown, Tea Tree Gully and the Town of Walkerville) jointly funding the construction, operation and ongoing management of the project on a prorata basis as defined within the Project Scope and provided that the Commonwealth's grant of \$9.5M is not rescinded.

That the governance model for the project is agreed to by the participating Councils prior to any grant funding agreement being executed with the Commonwealth."

- 1.2.4 Relevant resolutions relating to the project are included as Attachment One.

1.3 The Project

- 1.3.1 The Eastern Region Stormwater Project, known as Waterproofing Eastern Adelaide, (the Project) is defined for the purposes of this report as a stormwater harvesting scheme comprised of two treatment sites with a harvest capacity of 660ML per annum, yielding 540ML of water for re-use and a 46km distribution network across the area of the three ERA Councils and through part of the City of Campbelltown. The scheme is shown in Attachment Two.

- 1.3.2 The two treatment sites included in the stormwater harvesting scheme are located at Felixstow Reserve Wetland and the Drage Reserve Biofiltration system both of which are located within the City of Norwood Payneham & St Peters.
- 1.3.3 The total capital cost of the Project is estimated at \$22.850 million. The majority of the Project assets are estimated to have a useful life of 70 years after commissioning.
- 1.3.4 The Project will be undertaken by a new, separate entity, ERA Water, created under Section 43 of the Local Government Act specifically for this purpose.
 - 1.3.4.1 Section 43 provides for two or more councils (known as constituent councils) to establish a subsidiary to perform a function of the council in a joint service delivery arrangement.
 - 1.3.4.2 It is intended that each of the constituent councils will have an equitable interest in the entity. The Charter which governs the operations of the entity will require formal adoption by each of the four constituent councils.
 - 1.3.4.3 The regional subsidiary was chosen as the governance model in recognition that in order to optimise outcomes decisions will need to be taken which are for the collective good with disregard to the boundaries of an individual Council.
 - 1.3.4.4 The Charter states that each Constituent Council must appoint one person which person shall be the Chief Executive Officer (or a person acting in that capacity) of that Constituent Council to be a Board Member.
 - 1.3.4.5 The Charter sets out wide ranging objects and purposes for the Subsidiary including that it should 'maximise economic, environmental and social benefits to the community' along with being 'financially self-sufficient as far as possible'.

1.4 Legal Framework and Prudential Issues

- 1.4.1 This report has been prepared in accordance with Section 48 of the Local Government Act 1999 (Act), this section is reproduced in full as Attachment Three. The Waterproofing Eastern Adelaide Project meets certain criteria specified in section 48 (1) (b) (ii) that require Council to consider a report addressing the prudential issues set out in subsection 2, namely that the expected capital cost of the project over the ensuing five years is likely to exceed \$4 million.
- 1.4.2 The prudential issues identified in Section 48 are:
 - (a) *the relationship between the project and relevant strategic management plans;*
 - (b) *the objectives of the Development Plan in the area where the project is to occur;*
 - (c) *the expected contribution of the project to the economic development of the local area, the impact that the project may have on businesses carried on in*

the proximity and, if appropriate, how the project should be established in a way that ensures fair competition in the market place;

- (d) the level of consultation with the local community, including contact with persons who may be affected by the project and the representations that have been made by them, and the means by which the community can influence or contribute to the project or its outcomes;*
- (e) if the project is intended to produce revenue, revenue projections and potential financial risks;*
- (f) the recurrent and whole-of-life costs associated with the project including any costs arising out of proposed financial arrangements;*
- (g) the financial viability of the project, and the short and longer term estimated net effect of the project on the financial position of the council;*
- (h) any risks associated with the project, and the steps that can be taken to manage, reduce or eliminate those risks (including by the provision of periodic reports to the chief executive officer and to the council);*
- (i) the most appropriate mechanisms or arrangements for carrying out the project."*

1.4.3 The capital estimate for the project exceeds the threshold of \$4 million nominated in the Act. Although much of the work could be considered as drainage works and would therefore be exempt from consideration under section 48, the project potentially contains commercial implications and on balance it was considered prudent to consider a report under section 48.

1.4.4 BRM Holdich has been engaged by the City Burnside to prepare a report to satisfy the requirements of Section 48.

2. RELATIONSHIP WITH RELEVANT STRATEGIC MANAGEMENT PLANS

Local Government Act, Section 48 (2) The following are prudential issues for the purposes of subsection (1):

(a) the relationship between the project and relevant strategic management plans;

2.1 Relevant Strategic Management Plans

2.1.1 Section 122 of the Act requires a council to develop and adopt strategic management plans; these are required to incorporate the extent to which a council's objectives are related to regional, State and national objectives.

2.1.2 For the purposes of this report the relationship between the Project and the following plans are considered relevant.

2.1.2.1 City of Burnside

- (a) Strategic Community Plan - Be the Future of Burnside 2012 - 2025;
- (b) Annual Business Plan and Budget 2014/2015;
- (c) Long Term Financial Plan 2014 - 2023; and
- (d) Infrastructure Asset Management Plan - Stormwater Infrastructure.

2.1.2.2 Regional

- (a) Eastern Region Alliance Regional Environmental Plan 2008 - 2013 and Regional Environmental Directives.

2.1.2.3 South Australian State Government

- (a) Government of South Australian Strategic Plan;
- (b) Water for Good;
- (c) Water Proofing Adelaide 2005 - 2025; and
- (d) Adelaide and Mount Lofty Ranges Natural Resources Management Board.

2.1.2.4 Commonwealth Government

- (a) Clean Water Plan - Water Security.

2.2 Strategic Community Plan - Be the Future of Burnside 2012 - 2025

2.2.1 Strategic Community Plan – Be the Future of Burnside 2012 - 2025 (Strategic Community Plan) is the long-term strategic plan of the City of Burnside.

- 2.2.2 The Strategic Community Plan outlines the vision, key strategic directions, the desired outcomes and their approach and success indicators. The Council Strategic Direction relevant to this Project is Strategic Direction 2 - Our protected and valued environment.
- 2.2.3 The Strategic direction is “to protect and conserve the environment, living in harmony with it to ensure that future generations can experience what we value so highly today”. The relationship of the Project to Councils strategic direction is outlined in Table One.

Table 1: Alignment of the Project to the Burnside Strategic Community Plan

Desired Outcomes	Approach	Success Indicators	Project supports the Council Plan
2.2 Sustainable use of natural resources, and minimisation of waste to address climate change	2.2.1 Implement sustainable water use practices through water conservation, capture and reuse	Include water harvesting features in asset and infrastructure projects	The stormwater harvesting project across the combined Councils is intended to provide a potential yield of 784 ML/a

- 2.2.4 The degree of alignment of the Project to the Strategic Community Plan is high.

2.3 Annual Business Plan and Budget 2014/2015

- 2.3.1 The Annual Business Plan identifies services and programs which aim to progress the desired outcomes of the Community Strategic Plan, the services that relate to the Project and their relevance are listed in Table Two.

Table 2: Relevance of the Project to Programs in City of Burnside Annual Business Plan and Budget

Services	Strategic Community Plan Desired Outcomes	Relevance
Operation Services Ensure that the City's urban spaces including; assets, parks, reserves and roadways, are fit for purpose and appropriately maintained for the use and benefit of the community.	Sustainable use of natural resources and minimisation of waste to address climate change.	The project is intended to reduce mains water use and energy consumption and provide a more environmental practice for Council Operations Services
Asset Services The City's open space, recreational facilities, buildings and waste management services are fit for purpose and cost effectively managed in an environmentally sustainable manner.	Sustainable use of natural resources, and minimisation of waste to address climate change	The project is intended to reduce mains water use and energy consumption to provide Asset Services with the ability to deliver programs cost effectively and in an environmentally sustainable manner.

- 2.3.2 The Project is not considered to have a material financial or strategic impact in the current financial year and therefore is not specifically identified within the Annual Business Plan and Budget 2014/2015.

2.4 Long Term Financial Plan

- 2.4.1 The purpose of the Long Term Financial Plan (LTFP) is to express in financial terms the activities that the Council proposes to undertake over the medium to longer term to achieve its stated objectives, it provides financial projections for planned activities over a 10 year timeframe.
- 2.4.2 The Project has not yet progressed to the point where it needs to be included in Council's LTFP.
- 2.4.3 It is intended that ERA Water will charge each Council a price for water that is directly comparable with the price charged by SA Water or a price that is lower than the SA Water price whilst recovering all of its operating costs.
- 2.4.4 In any year where ERA Water charges a price for water that is directly comparable with the price charged by SA Water the subsidiary is likely to have an Operating Deficit. When ERA Water is charging a price which recovers all of its operating costs the subsidiary is forecast to operate at breakeven and will produce neither an Operating Surplus nor an Operating Deficit.
- 2.4.5 If ERA Water was to forecast an Operating deficit or an Operating Surplus then the Burnside share of any projected Operating Surplus or Deficit would need to be reflected within the LTFP in due course.
- 2.4.6 Based on the current assumptions ERA Water is forecast to charge a lower price than SA Water. The benefit from the potential lower future cost of water is not considered to be material in the context of the current LTFP however it would be prudent to take these into account when reviewing the LTFP in the ordinary course of business.
- 2.4.7 Furthermore, as the Project is to be implemented through a regional subsidiary, ERA Water, Note 19 of the South Australian Local Government Model Financial Statements requires the City of Burnside to bring to account the equity it will have in the subsidiary. Therefore Burnside will be required to account for one-third of the net assets of the Subsidiary within its own accounts.

2.5 Asset Management Plans

- 2.5.1 The City of Burnside Infrastructure Asset Management Plan - Stormwater Infrastructure adopted February 2013 identifies the goals for Councils in managing infrastructure assets, the agreed service levels and associated cost with achieving these service levels.
- 2.5.2 Whether any assets associated with the re-use of stormwater would be reflected in this Plan or associated with an asset such as a reserve (in the case of wetland which may be constructed on a reserve for example) is open to question, however for completeness the relationship with this Plan has been considered.

- 2.5.3 According to the governance arrangements to be implemented for the Project any infrastructure created by the Project will be owned by the Regional Subsidiary. The Project will therefore not impact the Infrastructure Asset Management Plan - Stormwater Infrastructure.
- 2.5.4 In the event that the Project does not proceed and the Project principles of capturing and re-using stormwater were to be considered by Council then this Plan may require amendment in the future to reflect any impact on Council's stormwater infrastructure.

2.6 Regional Objectives

- 2.6.1 The City of Burnside is a member of ERA, a group of seven eastern metropolitan councils who voluntarily work together for the benefit of their local communities and the eastern region as a whole.
- 2.6.2 ERA has established an Environment Portfolio which seeks to demonstrate leadership in environmental sustainability.
- 2.6.3 The ERA Environment Portfolio has a stated aim to drive the following initiatives which are advanced by the Project:
- Manage water sustainably; and
 - Foster partnerships to improve environmental outcomes.
- 2.6.4 The ERA has developed a guiding framework to address environmental issues of regional importance – the ERA Regional Environmental Plan 2008-2013. The plan is under review and the new plan will be presented as a high level strategic document for 2013-18.
- 2.6.5 Each of the seven ERA Member Councils has previously formally stated their commitment to achieving sustainable water use by supporting the implementation of this Project.

2.7 South Australian State Objectives

- 2.7.1 The South Australian State objectives with respect to the sustainable use of water are articulated in a number of plans and by various agencies. The alignment of the Project with these plans is detailed below.
- 2.7.2 The Project alignment to the objective Our Environment within the State Government Strategic Plan and related vision 'We value and protect our water resources' and goal 'South Australia has reliable and sustainable water resources and is a leader in wastewater, irrigation, stormwater and groundwater management' is shown in Table Three.

(e) Governance Arrangements Risk Register

Risk #	Risk	Consequence/Impact	DO NOTHING		Description of Control Measures/Actions/Comments	RESIDUAL	
			Likelihood	Consequence		Likelihood	Consequence
1e	Federal government pulling funding	Catastrophic impacts to project	3	5	Investigate alternate sources of funding, strategy documents, agreements and charters detailing legal and financial liabilities	3	5
2e	Issues regarding ownership of the stormwater from the catchment	Major impacts to project outcomes	3	4	Strategy documents, agreements and charters detailing legal and financial liabilities	3	2
3e	Issues regarding ownership of the water in the aquifer	Major impacts to project outcomes	3	4	Strategy documents, agreements and charters detailing legal and financial liabilities	3	2
4e	Issues regarding the ownership of infrastructure (e.g. when sites of injection and extraction are within different councils) potentially resulting in councils feeling hard done by and resentment towards other councils	Major impacts to project outcomes	3	4	Strategy documents, agreements and charters detailing legal and financial liabilities	3	2
5e	Issues regarding responsibilities associated with the operation and maintenance of the scheme (e.g. system auditing)	Major impacts to project outcomes	3	4	Strategy documents, agreements and charters detailing legal and financial liabilities	3	2
6e	Issues arising from a partner withdrawing from the project	Major impacts to project outcomes	3	4	Strategy documents, agreements and charters detailing legal and financial liabilities	3	2
7e	Issues regarding from the amalgamation of councils	Major impacts to project outcomes	3	4	Strategy documents, agreements and charters detailing legal and financial liabilities	3	2
8e	Issues arising from council's wanting to trade water allocations with other councils	Major impacts to project outcomes	3	4	Strategy documents, agreements and charters detailing legal and financial liabilities	3	2
9e	Future demand for uses other than irrigation arising for which the water is not intended resulting the scheme not being able to supply future customers	Major impacts to project outcomes	3	4	May require a change in treatment measures, opportunity to introduce new technologies (e.g. monitoring equipment), may depend on changes in government, distribution network may not cater for future uses (third-pipe systems), splitting	3	2
10e	Political issues and changes in council impacting on the support of the project from council	Major impacts to project outcomes	3	4	Need to demonstrate the cost benefits associated with the scheme as opposed to SA Water costs	3	2
11e	Issues arising from conflicting council agendas	Major impacts to project outcomes	3	4	Strategy documents, agreements and charters detailing legal and financial liabilities	3	2
12e	Issues arising from the management of councils within project (e.g. responsibility, communication)	Major impacts to project outcomes	3	4	Strategy documents, agreements and charters detailing legal and financial liabilities	3	2
13e	Issues arising from the management of third party users of the water (e.g. responsibility, communication)	Major impacts to project outcomes	3	4	Strategy documents, agreements and charters detailing legal and financial liabilities	3	2
14e	Issues arising from public objection to the treatment sites	Major impacts to project outcomes	3	4	Strategy documents, agreements and charters detailing legal and financial liabilities	3	2
15e	Issues arising from a site becoming dysfunctional regarding capital invested, ownership etc	Major impacts to project outcomes	3	4	Strategy documents, agreements and charters detailing legal and financial liabilities	3	2
16e	Issues regarding responsibilities associated with capital costs and financial liability of the scheme	Major impacts to project outcomes	3	4	Strategy documents, agreements and charters detailing legal and financial liabilities	3	2
17e	Changes in the scheme and subsequent issues regarding capital which has already been invested by councils	Major impacts to project outcomes	3	4	Strategy documents, agreements and charters detailing legal and financial liabilities	3	2
18e	Increasing power costs	Major impacts to project outcomes	3	4	Consideration of alternate power supplies	3	2
Total Number of Extreme Risks				1			1
Total Number of High Risks				0			0
Total Number of Moderate Risks				0			17
Total Number of Low Risks				0			0
TOTAL NUMBER OF RISKS				1			18

(d) Distribution and Intended Use Risk Register

Risk #	Risk Category	Risk	Consequence/Impact	"DO NOTHING"			Description of Control Measures/Actions/Comments	RESIDUAL		
				Likelihood	Consequence	Risk		Likelihood	Consequence	Risk
1d	Environmental	Pipe burst and leakage of water resulting in lower than anticipated yields	Unable to meet supply demands with moderate effect on customers, temporary interruptions to irrigation and minor environmental impact	3	3	H	Monitoring of network (e.g. pressure), registering pipe network with dial before you dig, design (pipe selection), system maintenance, as constructed drawings. The steering group need to investigate reporting procedures and notification times.	2	2	M
2d	Environmental	System failure impacting the security of supply (e.g. lower than anticipated yields)	Unable to meet supply demands with moderate effect on customers, temporary interruptions to irrigation and minor environmental impact	3	3	H	Redundancy, back up generators, dual pumps, back up mains water, supply agreement terms.	2	2	M
3d	Environmental	Design flaws impacting the security of supply (e.g. lower than anticipated yields)	Unable to meet supply demands with adverse effect on customers, extended interruptions to irrigation and major environment impact	2	4	H	Engagement of consultant, communication of design philosophy between steering group and consultant, documentation and records maintained, in particular for future works and modifications.	1	2	L
4d	Environmental	Treatment failure and lower than anticipated water quality	Water quality not fit for intended use with major environmental harm	3	4	H	Monitoring, agreement with customers, back up mains water, sufficient treatment, investigate having filtration at each irrigation site, don't supply straight out of wetlands.	1	4	H
5d	Health and Safety	Cross contamination where mains water is contaminated with recycled water	Mains water not fit for intended use with catastrophic effects on customers and major impact to health and safety resulting in serious injury and hospitalisation	3	4	H	Backflow prevention, auditing, Irrigation Management Plan (IMP), staff training, pipe identification, pressure differentials between recycled water and mains pressures	1	3	M
6d	Environmental	Pumps emitting noise above the EPA regulations	Non compliance with regulations causing minor impacts to the environment through noise pollution	2	3	M	Pump housing design, pump locations, adherence to EPA regulations for noise	1	2	L
7d	Timeframe/Cost	Failure to take into account requirement for DA approval for pumps and pump housing	Time delay and cost to council's	2	3	M	Investigate need for DA approval for pumps and pump housing	1	1	L
8d	Environmental	Higher than anticipated supply demand during periods of peak demand (e.g. summer)	Unable to meet supply demands with major effect on customers, interruptions to irrigation and major environmental impact	3	4	H	Water balances, scheduling, customer agreements, need to determine the allocation of water among users	1	3	M
9d	Environmental	Failure to maintain pressure resulting in lower than anticipated yields	Unable to meet supply demands with moderate effects on customers and temporary interruptions to irrigation and minor environmental impact	3	3	M	Understanding what pressure is required, understanding pattern of use	2	1	L
10d	Environmental	Failure to maintain and operate the distribution network	Unable to meet supply demands with major effect on customers, interruptions to irrigation and major environmental impact	3	4	H	Need to allow resources in Council budgets, documentation and staff training, manuals	1	3	M
11d	Environmental/Project Management/Cost	Unauthorised scheme extensions resulting in lower than anticipated yields	Unable to meet supply demands with major effects on customers and major environmental impact, major impact to achieving project outcomes resulting in the possible closure of the project, financial cost and deviation from program budget	2	4	H	Legal agreements between councils, metering and monitoring	2	2	M
12d	Environmental/Project Management	Scheme extensions beyond the initial scheme including the introduction of new partners resulting in lower than anticipated yields	Unable to meet supply demands with major effects on customers and major environmental impact, major impact to achieving project outcomes resulting in the possible closure of the project	2	4	H	Strategy for extensions (e.g. charging for capital, marginal costs)	1	2	L
13d	Health and Safety/Social	Public exposure to recycled water and accidental drinking	Major impact to health and safety resulting in serious injury and hospitalisation, negative council and stakeholder perception and short-term damage to council and stakeholder confidence	3	4	H	Irrigation Management Plan (IMP), signage, watering times, pipe identification	1	4	H
14d	Timeframe/Cost	Damage to council infrastructure during construction	Minor impact on overall project delivery resulting in delays in achieving some project outcomes	3	2	M	Contractor safety management plan, CMP, need to enforce with the contractor	1	2	L
15d	Timeframe/Cost	Damage to public property during construction	Minor impact on overall project delivery resulting in delays in achieving some project outcomes	3	2	M	Contractor safety management plan, CMP, need to enforce with the contractor	1	2	L
16d	Environment	Clogging of irrigation systems resulting in lower than anticipated yields	Unable to meet supply demands with moderate effect on customers, interruptions to irrigation and minor environmental impact	3	3	M	Maintenance, appropriate system set up, not irrigation straight from the wetland, consider filtration at each site	2	2	M
17d	Health and Safety	Public access to storage tanks resulting in falling into tanks	Potentially significant impact to health and safety resulting in death	2	5	H	Lids on tanks, signage, need to think about tank design	1	4	H
18d	Environment	Vermin entering storage tanks and contaminating water storages	Water quality not fit for intended use with moderate effect on customers and minor environmental impacts	3	3	M	Lids on tanks, signage, need to think about tank design	2	2	M
19d	Social	Consultant putting the point of pressurisation in the incorrect location along the scheme	Councils not satisfied with the point of pressurisation at the point of irrigation due to the presence of tanks	2	2	M	Need to investigate whether to pressurise at the point of irrigation or in the storage tank immediately after the aquifer	1	2	L
Total Number of Extreme Risks						0				0
Total Number of High Risks						2				3
Total Number of Moderate Risks						3				8
Total Number of Low Risks						0				3
TOTAL NUMBER OF RISKS						5				25

(c) Aquifer Storage and Recovery Risk Register

Risk #	Risk Category	Risk	Consequence/Impact	*DO NOTHING*			Description of Control Measures/Actions/Comments	RESIDUAL		
				Likelihood	Consequence	Risk		Likelihood	Consequence	Risk
1a	Project Management	Scheme extraction allocation less than anticipated in Adelaide Plains WAP	Unable to meet supply demands and significant impact to achieving project outcomes resulting in closure of the project	3	5	H	The steering group need to start the processes for approvals from the Department of Water early (e.g. authorisation under section 128 to extract water from the aquifer and well construction permit) as the approval process can take 5 to 6 months. Even though the scheme is theoretical applying for a license early will enable the Department of Water to give the steering group feedback with regards to the likelihood of the scheme successfully being granted the necessary approvals/licenses. Work closely with State Water Allocation Planning to secure appropriate operating rules and protection	1	3	M
2c	Cost/Project Management	Clashes between funding milestones and timeframes of licensing resulting in interruption of funding	Major cost and major impact to achieving the project outcomes resulting in the possible closure of the project	2	4	H	The steering group need to start the processes for approvals from the EPA (license for injection) as the approval process can be lengthy and even though the scheme is theoretical applying for a license early will enable the EPA to give feedback to the steering group and determine things such as whose name will be on the license	1	3	M
3c	Environment/Cost	Shallow artesian conditions combined with over pressurisation resulting in discharge of groundwater to the surface	Release of groundwater to the environment resulting in minor environmental harm and damage to private and public infrastructure resulting in major financial cost to councils	3	4	H	Site specific and local, need to look for registered and unregistered bores through notification (anything prior to 1975 is potentially unregistered), consider capping flowing wells, controlled injection rates, communication with third party users of the aquifer, monitoring, control system design, multiple bores	1	3	M
4c	Environmental/Health and Safety	Shallow artesian conditions combined with over pressurisation resulting in discharge of groundwater to the surface	Creation of earthquakes due to pressurisation in the fault lines	1	1	L	Controlled injection rates, hydrogeological studies	1	1	L
5a	Environment/Project Management	Third party extraction from the aquifer resulting in lower than anticipated yields	Unable to meet supply demands with moderate effect on customers, temporary interruptions to irrigation and minor environmental impact	3	3	M	Adelaide Plains WAP, licensing process (EPA, Department of Water). Work closely with State on Water Allocation Planning to secure appropriate operating rules and protection	1	3	M
6c	Environmental	Biofouling on bores and chemical clogging from different water mixing together (e.g. iron bacteria) resulting in lower than anticipated water quality	Unable to meet supply demands with moderate effect on customers, temporary interruptions to irrigation and minor environmental impact	3	3	M	Higher level of treatment will be required for the sand bores, design, maintenance, treatment, sterilisation of equipment, multiple bores	1	3	M
7c	Environmental	Chemical clogging of wells during injection and extraction from different water mixing together (e.g. iron hydroxide coming out of solution) resulting in lower than anticipated water quality and yield	Unable to meet supply demands with moderate effect on customers, temporary interruptions to irrigation and minor environmental impact	3	3	M	Monitoring, multiple bores, preinjection treatment (e.g. pH control)	1	3	M
8c	Environmental	Physical clogging (suspended solids, micro algae) resulting in lower than anticipated water quality and yield	Unable to meet supply demands with moderate effect on customers, temporary interruptions to irrigation and minor environmental impact	3	3	M	Maintenance, treatment, sterilisation of bore equipment, multiple bores	1	3	M
9c	Project Management	Plume extending beyond property boundary and land holders above the plume not in approval of the scheme if the requirement for their approval is introduced by the EPA	Major impact to the project outcomes resulting in the possible closure of the project	3	4	H	Need to investigate whether the EPA requires for individual land owners above the plume to approve the plume. Need to take into account the water being injected is of better quality than the groundwater (e.g. undergone disinfection), modelling of plume quantities	1	3	M
10c	Environmental	Interactions with minerals in the aquifer (e.g. releasing heavy metals) contaminating the extracted water quality	Water quality not fit for intended use with major environmental harm	1	3	M	No mineralisation was identified in the bedrock, preliminary studies, extraction monitoring, depends on use of water, drilling samples are logged, treatment, preinjection treatment (e.g. pH control)	1	3	M
11c	Environmental/Project Management	Recovery efficiency and yields lower than anticipated	Unable to meet supply demands with major effects on customers, interruptions to irrigation and major environmental impact, major impact to achieving the project outcomes resulting in the possible closure of the project	3	4	H	Monitoring, preliminary investigations, predictions of recovery efficiency, don't overestimate recovery efficiencies, ensure that funding arrangements are not dependent on unrealistic yields, alternate supply, design (e.g. build up plume)	1	3	M
11c	Environmental	Contamination of groundwater by third party injection	Aquifer contaminated with contamination difficult to locate due to the characteristics of the bedrock, major environmental harm resulting in temporary shutdown of the project having adverse effects on customers	3	3	M	Future water allocation plan, licensing process (EPA, Department of Water), some monitoring upon extraction, treatment	1	3	M
12c	Environmental	Contamination of groundwater during construction of bore	Water quality not fit for use resulting in minor impacts to the environment	3	3	M	Monitoring (grab samples, not online, indicators (pH)), need to be aware that not everything is monitored all the time, drilling procedures, sterilisation of equipment	1	3	M
14c	Environmental	Contamination of groundwater during construction of bore and injection	Aquifer contaminated with contamination difficult to locate due to the characteristics of the bedrock, major environmental harm resulting in temporary shutdown of the project having adverse effects on customers	3	3	M	Monitoring in aquifers above (grab samples, not online, indicators (pH)), need to be aware that not everything is monitored all the time, drilling procedures, sterilisation of equipment, certified drilling contractors	1	3	M
15c	Environmental	Contamination of groundwater by bore clogging products	Aquifer contaminated with contamination difficult to locate due to the characteristics of the bedrock, major environmental harm resulting in temporary shutdown of the project having adverse effects on customers	3	3	M	Pre-selection, maintenance practices	1	3	M
16c	Environmental	Contamination of surrounding environment through the disposal of water generated during scouring, bore testing and drilling	Minor environmental impact to surrounding environment	3	3	M	Need to consider disposal of water, have a disposal plan in place to ensure no contamination of surrounding watercourses	1	3	M
17c	Environmental	Negative impacts to groundwater dependent ecosystems (e.g. stygofauna)	Fractures are generally too small and deep for stygofauna to exist so any impacts to stygofauna would be minor	1	1	L	Fractures generally too small and deep for stygofauna to exist	1	1	L
18c	Environmental	Negative impacts groundwater dependent ecosystems (e.g. stygofauna)	Wetlands around the scheme are not dependent on the groundwater so the impacts are insignificant	1	1	L	No wetland dependent ecosystems exist which will be impacted by the scheme	1	1	L
19c	Environmental	Low injection rates from hydraulic boundary conditions resulting in lower than anticipated yields	Unable to meet supply demands having an adverse effect on customers and long term interruptions to irrigation and major environmental impacts	3	3	M	Monitor, in particular during the first year, predict the life of the bore and allow for decrease in injection rate, need to consider issues associated with long term injection and extraction tests (about 7 days) (e.g. where to put the water), investigation bores, additional bores, add treatment to improve well yield	3	3	M
20a	Environment/Project Management	Failure of bore resulting in no extraction	Unable to meet supply demands having an adverse effect on customers and long term interruptions to irrigation and major environmental impacts	3	4	H	Multiple sites and multiple bores, drilling tests need to be undertaken for almost every bore given the heterogeneous nature of the bedrock making it difficult to have multiple bores of the same water quality, sites are linked so water can be transferred between bores	3	3	M
21c	Project Management	Presence of heritage sites in areas marked for construction/drilling	Major impact to achieving the project outcomes resulting in the possible closure of the project	3	4	H	Heritage assessments have been undertaken before drilling and will continue to be undertaken before any further drilling	1	3	M
Total Number of Extreme Risks						5				5
Total Number of High Risks						1				1
Total Number of Moderate Risks						1				1
Total Number of Low Risks						0				0
TOTAL NUMBER OF RISKS						7				7

Risk #	Component	Risk Category	Risk	Event/Impact	DO NOTHING			Description of Control Measures/Actions/Comments	RESIDUAL		
					Unlikelihood	Consequence	Risk		Unlikelihood	Consequence	Risk
109		Environmental	Vandalism (e.g. dumping cars) contaminating water quality and damaging vegetation	Effectiveness of wetland compromised, water quality not fit for intended use and below the EPA requirements for ASR, moderate effects on customers in the case of interruptions to irrigation and minor impacts to the environment	3	H		Design issue (e.g. barrier protection), Council inspections, signage	1	2	
110		Environmental	Poor management of wetland compromising the effectiveness of the wetland treatment and resulting in lower than anticipated yields and water quality	Effectiveness of wetland compromised, water quality not fit for intended use and below the EPA requirements for ASR, moderate effects on customers in the case of interruptions to irrigation and minor impacts to the environment, unable to meet supply demands and potentially moderate effect on customers and minor impacts to the environment	3	H		Need dedicated resources	1	2	
111		Cost/Environmental	Wetland leakage to surrounding environment and groundwater	Release of water to the environment resulting in minor environmental harm and damage to private and public infrastructure resulting in major financial cost to councils, minor environmental impact	2	H		Solid sediment to protect liner, buffer distances between trees and wetlands	2	1	
112		Health and Safety	Public access to wetland (e.g. swimming) resulting in public injury	Potentially significant impact to health and safety resulting in death	2	H		Design, access, batter slope, vertical edges, dettractive vegetation, signage	1	4	H
113		Social	Decrease in aesthetics appeal of wetland during construction, maintenance (e.g. plants and water removed)	Negative public support for the project due to the perception of maintenance practices (e.g. drying out the wetland to remove algae)	2	H		Develop a consultation strategy. Community awareness and consultation, residents, milestone events, interpretive signage, features and viewing areas - value adding, site open days where concept plans etc are displayed	3	1	
114		Cost	Cost of maintenance higher than anticipated	Cost to council, resulting in limiting the project scope	2	H		Need dedicated resources, budgeting early	1	1	
115		Cost	Cost of construction higher than anticipated	Cost to council, resulting in limiting the project scope	2	H		Need dedicated resources, budgeting early	1	1	
116		Cost	Cost of a wetland higher than anticipated	Cost to council, resulting in limiting the project scope	2	H		Budgeting, dedicated resources, being aware throughout the process about how much wetlands and associated components cost	1	1	
117	UV Treatment	Environmental/Cost	First flush contains peaks in turbidity and contamination	Effectiveness of UV treatment compromised, water quality not fit for intended use and below the EPA requirements for ASR, moderate effects on customers in the case of interruptions to irrigation and minor impacts to the environment, UV treatment components damaged resulting in minor cost to council	2	H		Water quality monitoring at capture point, system design and ability to shut off (automatic shutting valves), all treatments are offline	1	2	
118		Environmental/Cost	Leaf drop resulting in increased colour and turbidity in water	Effectiveness of UV treatment compromised, water quality not fit for intended use and below the EPA requirements for ASR, moderate effects on customers in the case of interruptions to irrigation and minor impacts to the environment, UV treatment components damaged resulting in minor cost to council	3	H		Monitoring of colour and turbidity, changing of lamps, monitoring of UV intensity, system expertise	1	2	H
119		Cost	Cost of maintenance	Cost to council, resulting in limiting the project scope	2	H		Need dedicated resources, budgeting in time	1	1	
120		Timeframe/Cost	A non validated UV treatment system selected and not adequate to meet the project demands	Cost to council down the track, delays in achieving project outcomes	2	H		Steering group need to undertake a cost benefit analysis of having a validated UV treatment system as opposed to a non validated system. Department of Health requirements should be taken into account during this process. There are disadvantages to having a non validated UV treatment system such as the inability to assess effectiveness of treatment, however, a non validated system is much cheaper than a validated system	2	1	H
				Total Number of Extreme Risks			20				6
				Total Number of High Risks			7				3
				Total Number of Moderate Risks			8				10
				Total Number of Low Risks			12				12
				TOTAL, 40 RISKS IN ALL			47				21

[b] Proposed Treatment Measures Risk Register

Risk ID	Component	Risk Category	Risk	Event/Impact	"DO NOTHING"		Description of Control Measures/Actions/Comments	Residual	
					Likelihood	Consequence		Likelihood	Consequence
18	Wetland	Environmental	Presence of grazers in wetlands (e.g. ducks, seagulls and other birds) contaminating the water quality with faeces and organic matter	Effectiveness of wetland compromised, water quality not fit for intended use and below the EPA requirements for ASR, moderate effects on customers in the case of interruptions to irrigation and minor impacts to the environment	3	4	Treatment, monitoring, public education (e.g. feeding), may need to consider a public control program, netting plants during establishment, public education about feeding and ducks, signage	3	3
19		Environmental	Presence of grazers in wetlands (e.g. ducks and other birds) damaging the wetland vegetation during establishment	Effectiveness of wetland compromised, water quality not fit for intended use and below the EPA requirements for ASR, moderate effects on customers in the case of interruptions to irrigation and minor impacts to the environment	3	4	Public education (e.g. feeding), may need to consider a public control program, netting plants during establishment, public education about feeding and ducks, signage	2	3
20		Ecological	Nuisance insects in wetlands (leading to high population levels (e.g. mosquitoes))	Potential health risks to the community but mainly minor negative perception of scheme by public and lack of public support for scheme	2	3	Design, monitoring, investigate membership as part of Sampson Research Programme (Flinders University) as a tool for public perception, spraying, use of appropriate biodiversity (e.g. plant species, macroinvertebrates and fish species), public education	2	3
21		Environmental	Presence of grazers in wetlands (e.g. ducks and other birds) being a public nuisance	Minor negative perception of scheme by public and lack of public support for scheme	2	3	Public education (e.g. feeding), may need to consider a public control program, netting plants during establishment, public education about feeding and ducks, signage	2	3
22		Environmental	European Carp and other introduced fish increasing turbidity and negatively impacting on water quality	Effectiveness of wetland compromised, water quality not fit for intended use and below the EPA requirements for ASR, moderate effects on customers in the case of interruptions to irrigation and minor impacts to the environment	3	4	Need to allow for a maintenance program in design process (e.g. empty wetland every two years and remove carp), fish and water quality monitoring, system design to allow for draining and removal of adult carp, communication and education, system design (e.g. rock walls)	3	3
23		Environmental	Sediment accumulation imposing negatively on water quality	Effectiveness of wetland compromised, water quality not fit for intended use and below the EPA requirements for ASR, moderate effects on customers in the case of interruptions to irrigation and minor impacts to the environment	3	4	Periodic desilting, basin design to enable ease of maintenance (e.g. solid base), inlet screen, maintenance control (e.g. not mulching on batter slopes), consider sediment disposal costs	2	3
24		Environmental	Biofilters not replaced regularly	Effectiveness of biofilters compromised, water quality not fit for intended use and below the EPA requirements for ASR, moderate effects on customers in the case of interruptions to irrigation and minor impacts to the environment	2	4	Need to monitor biofilters	1	1
25		Environmental/Project Management	Anticipated water quality not achieved by wetland and biofilter treatments	Water quality not fit for intended use and below the EPA requirements for ASR, moderate effects on customers in the case of interruptions to irrigation and minor impacts to the environment, major impact to achieving project outcomes resulting in the possible closure of the project	3	5	Maintenance for future filtration (e.g. multimedia filter)	2	3
26		Environmental	Maintenance activities including mowing and slashing contaminating water with nutrients and particulate matter	Effectiveness of wetland compromised, water quality not fit for intended use and below the EPA requirements for ASR, moderate effects on customers in the case of interruptions to irrigation and minor impacts to the environment	3	4	Water quality monitoring will be undertaken. Water treatment. Councils will need to review their management strategies, training and procedures regarding maintenance to ensure activities such as street sweeping and mowing, slashing etc are coordinated. Councils will also need to communicate with contractors undertaking maintenance activities and educate the public about conducting maintenance activities without impacting the environment. A public communication strategy for urban and rural areas within the catchment will need to be developed. Features to prevent runoff will be incorporated into the design.	2	3
27		Environmental	Maintenance activities including the use of pesticides, herbicides, fertilisers etc contaminating the water quality with chemicals	Effectiveness of wetland compromised, water quality not fit for intended use and below the EPA requirements for ASR, moderate effects on customers in the case of interruptions to irrigation and minor impacts to the environment	1	4	Water quality monitoring will be undertaken. Water treatment. Councils will need to review their management strategies, training and procedures regarding maintenance activities. Councils will also need to communicate with contractors undertaking maintenance activities and educate the public about conducting maintenance activities without impacting the environment. A public communication strategy for urban and rural areas within the catchment will need to be developed. Features to prevent runoff will be incorporated into the design.	1	2
28	Wetland	Environmental	Presence of algal blooms and toxic algae in wetlands contaminating water	Effectiveness of wetland compromised, water quality not fit for intended use and below the EPA requirements for ASR, moderate effects on customers in the case of interruptions to irrigation and minor impacts to the environment	1	4	Removal of bulk biomass, extraction control, signage, monitoring	2	3
29		Environmental	Pest plants (e.g. typha, phragmites) introduced into wetlands competing with wetland vegetation	Effectiveness of wetland compromised, water quality not fit for intended use and below the EPA requirements for ASR, moderate effects on customers in the case of interruptions to irrigation and minor impacts to the environment	1	4	Species selection, weeding program	1	2
30		Environmental	Seepage of saline groundwater into wetland increasing the salinity of the wetland	Effectiveness of wetland compromised, water quality not fit for intended use and below the EPA requirements for ASR, moderate effects on customers in the case of interruptions to irrigation and minor impacts to the environment	1	4	Water quality monitoring will be undertaken. Water treatment.	2	3
31		Environmental	Low water levels and stratification in summer resulting in anoxia and decreased water quality	Effectiveness of wetland compromised, water quality not fit for intended use and below the EPA requirements for ASR, moderate effects on customers in the case of interruptions to irrigation and minor impacts to the environment	3	4	Depth of wetland incorporated into design	1	1
32		Environmental	Climatic events (e.g. storm, drought, periods of low rainfall and high temperatures) damaging the wetland components and resulting in lower than anticipated yield and water quality	Effectiveness of wetland compromised, water quality not fit for intended use and below the EPA requirements for ASR, moderate effects on customers in the case of interruptions to irrigation and minor impacts to the environment, unable to meet supply demands and potentially moderate effect on customers and minor impacts to the environment	1	4	Maintain plants, maintain water level by recirculating from basins, biofilters, need to be irrigated	3	3

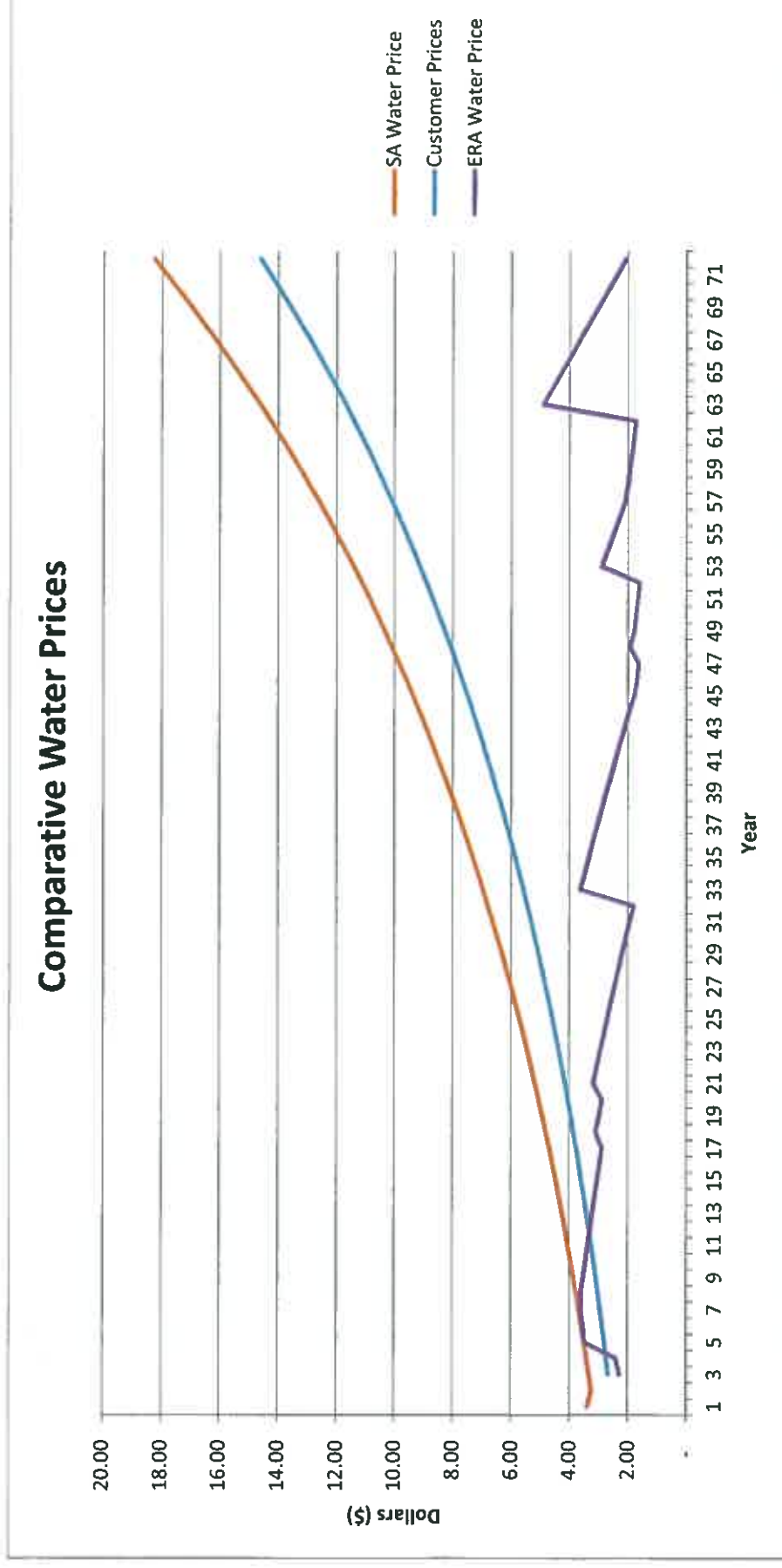
Risk #	Risk Category	Risk	Consequence/Impact	"DO NOTHING"			RESIDUAL		
				Likelihood	Consequence	Risk	Likelihood	Consequence	Risk
12a	Environmental	Leaf drop resulting in increased colour and turbidity in water	Water quality not fit for intended use and below the EPA requirements for ASR, moderate effects on customers in the case of interruptions to irrigation and minor impacts to the environment	2	4	8	3	2	6
13a	Environmental	Erosion of creek and river banks increasing the suspended solids and turbidity in catchment and reducing water quality	Water quality not fit for intended use and below the EPA requirements for ASR, moderate effects on customers in the case of interruptions to irrigation and minor impacts to the environment	2	4	8	2	1	2
14a	Environmental	Contamination of catchment with sewer overflows	Leakages, spills and runoff of contaminants (organics (e.g. herbicides, pesticides, hydrocarbons) and inorganics (e.g. toxic metals, nutrients, ammonia)) into the catchment resulting in reductions in wetland health and water quality not meeting the requirement for the scheme in regards to ASR and intended uses from an environmental and health perspective	2	4	8	2	2	4
15a	Environmental	Contamination of catchment with septic system discharges (e.g. septic tanks, CWMS)	Leakages, spills and runoff of contaminants (organics (e.g. herbicides, pesticides, hydrocarbons) and inorganics (e.g. toxic metals, nutrients, ammonia)) into the catchment resulting in decreases in wetland health and water quality not meeting the requirement for the scheme in regards to ASR and intended uses from an environmental and health perspective	2	4	8	2	2	4
16a	Environmental	Contamination of catchments by rural land uses (e.g. animal husbandry, livestock)	Increase in faecal pathogens e.g. E. coli, ammonia from animal faeces, fertilisers on grazing land, nutrients resulting in water quality not meeting the requirement for the scheme in regards to ASR and intended uses from an environmental and health perspective	2	4	8	2	1	2
17a	Environmental	Poor capture of particulate matter through GPTs and contamination of water quality	Water quality not meeting the requirement for the scheme in regards to ASR and intended uses from an environmental and health perspective as a result of GPTs not efficiently preventing water quality contaminants from entering the stormwater	3	4	12	2	2	4
18a	Environmental	Poor efficiency of capture and limitation of storages resulting in lower than anticipated yields	Unable to meet supply demands with adverse effect on customers, extended interruptions to irrigation and major environmental impact, major impact to achieving project outcomes resulting in possible closure of the project	2	4	8	1	2	2
19a	Project Management	Scheme extraction allocation less than anticipated in Western Mount Lofty Ranges WAP	Unable to meet supply demands and significant impact to achieving project outcomes resulting in closure of the project	2	4	8	1	4	4
20a	Environmental	Scheme extraction allocation less than anticipated due to the AMLNRM Board treatment of tributaries to the River Torrens	Unable to meet supply demands and significant impact to achieving project outcomes resulting in closure of the project	2	4	8	2	1	2
21a	Environmental	Third party extraction from the catchment resulting in lower than anticipated yields	Unable to meet supply demands with moderate effect on customers, temporary interruptions to irrigation and minor environmental impact	2	4	8	1	2	2
22a	Social	Negative public perception of changes in environmental flow in channels/creeks and aesthetics	Negative public support for the project due to the perception of reduced flows may reduce public support for the project	1	4	4	2	1	2
23a	Cost/Timeframe	Changes in legislation may influence the type of water quality data required in order for approval and licensing of the scheme	Water quality monitoring may need to be increased resulting in additional financial costs not originally taken into account.	2	4	8	2	1	2
Total Number of Very High Risks						2			2
Total Number of High Risks						1			1
Total Number of Moderate Risks						1			1
Total Number of Low Risks						6			6
TOTAL NUMBER OF RISKS						10			10

(a) Water Source Catchment Risk Register

Risk #	Risk Category	Consequence/Impact	"DO NOTHING"			RESIDUAL		
			Likelihood	Consequence	Risk	Likelihood	Consequence	Risk
1a	Environmental	Ambient water quality in the catchment contaminated overtime by leakages, spills and runoff from existing land uses in the catchment						
		Water quality not fit for intended use and below the EPA requirements for ASR	1	4		2	2	M
2a	Environmental	Water quality in the catchment contaminated by leakage, spill and runoff incidents from existing land uses in the catchment						
		Water quality not fit for intended use and below the EPA requirements for ASR	3	4		2	2	M
3a	Environmental	Water quality in the catchment contaminated by leakage, spill and runoff incidents from quarries (e.g. Gorge Road, Stonyfell Quarry, Western Gully - Third Creek)						
		Water quality not fit for intended use and below the EPA requirements for ASR	3	4		2	2	M
4a	Environmental	Future land uses in the catchment e.g. urban development/redevelopment of catchment areas (e.g. Glenside) extracting or changing the quantity of water in the catchment resulting in lower than anticipated water quality levels						
		Water quality not fit for intended use and below the EPA requirements for ASR	3	5		3	2	M
5a	Environmental/Project Management	Future land uses in the catchment e.g. urban development/redevelopment of catchment areas (e.g. Glenside) extracting or changing the quantity of water in the catchment resulting in lower than anticipated yield						
		Unable to meet supply demands with adverse effect on customers, extended interruptions to irrigation and major environment impact, major impact to achieving project outcomes resulting in possible closure of the project	3	4		3	2	M
6a	Environmental	Water quality in the catchment contaminated by leakage, spill and runoff incidents from construction, remediation and demolition works						
		Water quality not fit for intended use and below the EPA requirements for ASR	3	4		2	2	M
7a	Environmental	Water quality contaminated by leakages from existing sites of contamination e.g. landfill						
		Water quality not fit for intended use and below the EPA requirements for ASR	3	5		2	2	M
8a	Environmental	Climatic events (e.g. storm, drought, periods of low rainfall and high temperatures) resulting in lower than anticipated yields and water quality						
		Unable to meet supply demands with adverse effect on customers, extended interruptions to irrigation and major environment impact, major impact to achieving project outcomes resulting in possible closure of the project	3	5		2	2	M
9a	Environmental	Climatic events (e.g. storm, drought, periods of low rainfall and high temperatures) resulting in lower than anticipated water quality						
		Changes in the yield of water captured by the catchment (either increases or decreases) may impact the scheme whereby existing storages are inadequate to cope with increase in yield or the scheme is unable to meet water supply demands due to decreases in yield with potential environmental impacts to receiving environments	3	4		1	2	M
10a	Environmental	Maintenance activities including the use of pesticides, herbicides, fertilisers etc contaminating the water quality with chemicals						
		Water quality not fit for intended use and below the EPA requirements for ASR, moderate effects on customers in the case of interruptions to irrigation and minor impacts to the environment	2	4		2	1	L
11a	Environmental	Maintenance activities including slashing and mowing contaminating water with nutrients and particulate matter						
		Water quality not fit for intended use and below the EPA requirements for ASR, moderate effects on customers in the case of interruptions to irrigation and minor impacts to the environment	2	4		2	1	L

ATTACHMENT SIX – RISK WORKSHOP RISK REGISTER

ATTACHMENT FIVE – COMPARATIVE WATER PRICES



- The current CAD rate is 4.5%. For comparative purposes it should be noted that the rate on an interest only loan for a 20 year term is 4.8%.
- Debt levels rise to \$12.624 million in Year 3.
- Debt is progressively repaid when sufficient cash is available.
- Long term interest rates from Year 21 onwards are calculated at 5.69% which is the average LGFA real interest rate for the period FY2006 to FY2014 plus 2.5%, which is the rate of CPI used in the model.
- Assets replaced at the expiration of their useful life are also funded in this manner.

11. The SA Water commencing price of \$3.32 is increased by the applicable CPI rate in each year, other than in FY2017 when it is forecast to decrease by 4%.
12. Fixed Operating Costs reflect discussions that the Town of Walkerville will continue to provide the secretarial, accounting and administrative support services for the Subsidiary, and that the Executive Officer will only be engaged on a part-time basis, the costs are estimated as follows.
 - Year 1 - \$100,000.
 - Year 2 - \$101,700 (Year 1 increased by CPI).
 - Year 3 - \$126,061 (Year 2 increased by CPI plus an increase in Executive Officer costs to reflect a likely increase in workload associated with the sale of water).
 - Year 4 - \$141,198 (Year 3 increased by CPI plus an increase in administrative and audit costs).
 - Year 5 - \$144,728 (Year 4 increased by CPI).
 - Year 6 - \$174,666 (Year 5 increased by CPI plus an increase in Executive Officer costs and administrative costs).
 - Year 7 - \$212,147 (Year 6 increased by CPI plus an increase in Executive Officer costs).
 - Year 8 - \$200,993 (Year 7 increased by CPI plus an increase in administrative support costs).
 - Year 9 - \$206,018 (Year 8 increased by CPI).
 - Year 10 - \$207,033 (Year 9 increased by CPI).
13. Operational Costs are as provided by W&G, commencing at the following rate before being increased by CPI each year
 - Maintenance, \$125,000 based on Council labour maintaining the Project assets.
 - Licencing, \$15,000 per annum.
 - Electricity
 - 270ML of production, \$92,401 for the Year 3 production volume.
 - 458ML of production, \$160,970.
14. Project Financing
 - ERA Water borrows all funding requirements from the LGFA using the Cash Advance Debenture (CAD).

ATTACHMENT FOUR – FINANCIAL MODELLING ASSUMPTIONS

1. Capital Costs inclusive of network connections are \$22.850 million.
2. Construction occurs over a 12 month period.
3. Testing and commissioning of the assets occurs in Year 2. The costs of testing and commissioning are included as part of construction estimates.
4. Assets which will require replacement through the life of the Project are revalued to replacement value each year.
5. The assets are considered to have no disposal value at the end of the Project life (72 years).
6. All costs are capitalised until the scheme is at full productive capacity as shown below.
 - Year 1 - 100% of costs.
 - Year 2 - 100% of costs.
 - Year 3 - 50% of costs.
 - Year 4 - 20% of costs.
7. Water is produced for sale from Year 2 onwards in the following volumes.
 - Year 2 - 5% of production, 27ML (no sales are brought to account in Year 2).
 - Year 3 - 50% of production, 270ML.
 - Year 4 - 80% of production, 432ML.
 - Year 5 - 100% of production, 458ML.
8. Water volumes sold are based on the following assumptions.
 - Constituent Councils 214.67ML.
 - Educational institutions and other customers 143.33ML.
 - Metropolitan Council customer 100ML.
9. Water Pricing
 - ERA Water charges the Constituent Councils the lower of the price of SA Water and full cost recovery.
 - All other customers of ERA Water are charged 80% of the comparable price of SA Water.
10. CPI is forecast to be 1.7% in FY2016 and 2.5% for the remainder of the Project.

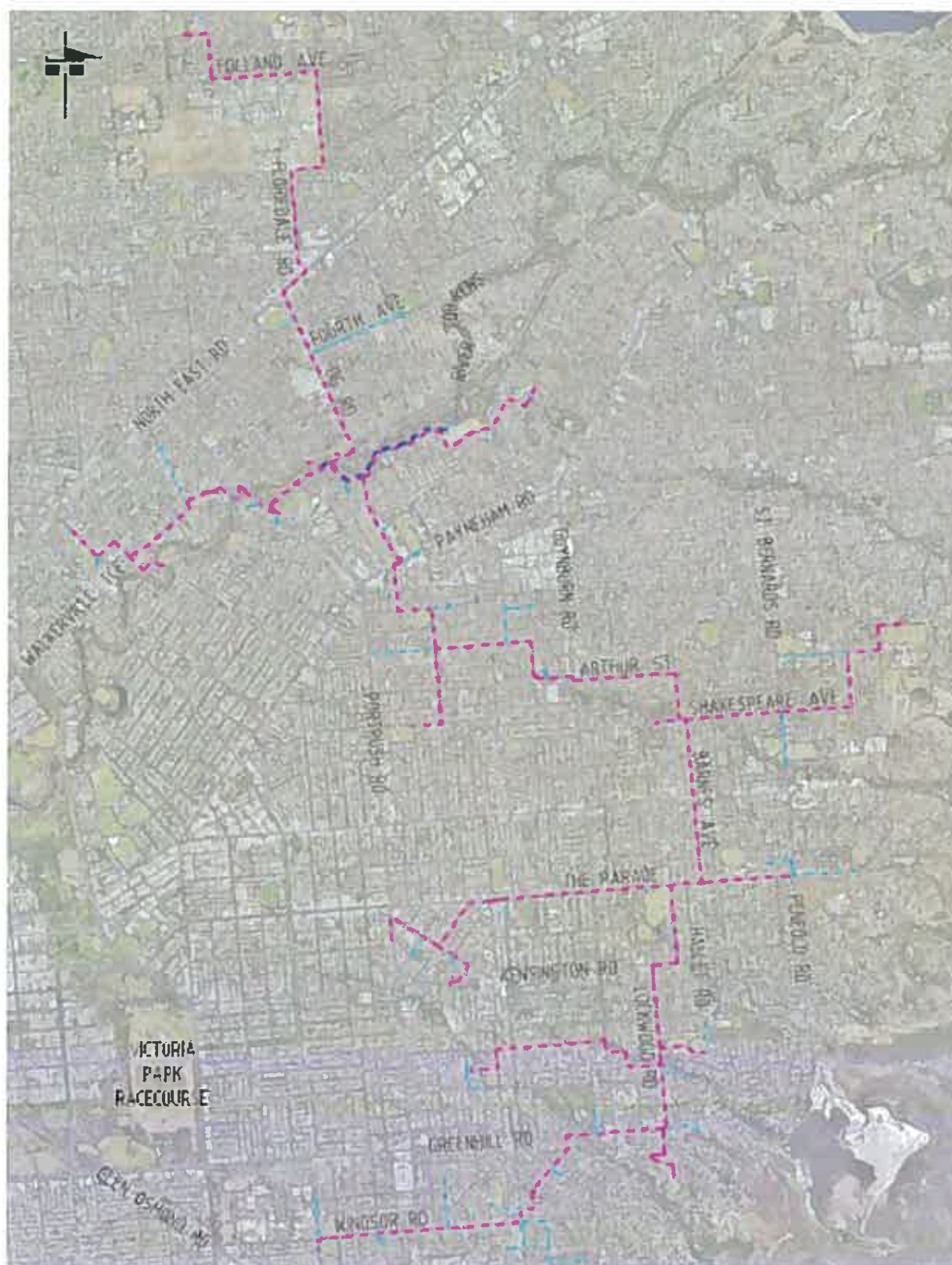
- (h) any risks associated with the project, and the steps that can be taken to manage, reduce or eliminate those risks (including by the provision of periodic reports to the chief executive officer and to the council);
 - (i) the most appropriate mechanisms or arrangements for carrying out the project.
- (3) A report is not required under subsection (1) in relation to—
 - (a) road construction or maintenance; or
 - (b) drainage works.
- (4) A report under subsection (1) must be prepared by a person whom the council reasonably believes to be qualified to address the prudential issues set out in subsection (2).
- (5) A report under subsection (1) must be available for public inspection at the principal office of the council once the council has made a decision on the relevant project (and may be available at an earlier time unless the council orders that the report be kept confidential until that time).
- (6) However, a council may take steps to prevent the disclosure of specific information in order to protect its commercial value or to avoid disclosing the financial affairs of a person (other than the council).
- (7) The provisions of this section extend to subsidiaries as if a subsidiary were a council subject to any modifications, exclusions or additions prescribed by the regulations.

ATTACHMENT THREE – LOCAL GOVERNMENT ACT, 1999 - SECTION 48

Section 48 – Prudential requirements for certain activities

- (1) A council must obtain and consider a report that addresses the prudential issues set out in subsection (2) before the council—
 - (a) engages in a commercial project (including through a subsidiary or participation in a joint venture, trust, partnership or other similar body) where the expected recurrent or capital expenditure of the project exceeds an amount set by the council for the purposes of this section; or
 - (b) engages in any project (whether commercial or otherwise and including through a subsidiary or participation in a joint venture, trust, partnership or other similar body)—
 - (i) where the expected expenditure of the council over the ensuing five years is likely to exceed 20 per cent of the council's average annual operating expenses over the previous five financial years (as shown in the council's financial statements); or
 - (ii) where the expected capital cost of the project over the ensuing five years is likely to exceed \$4,000,000.
- (2) The following are prudential issues for the purposes of subsection (1):
 - (a) the relationship between the project and relevant strategic management plans;
 - (b) the objectives of the Development Plan in the area where the project is to occur;
 - (c) the expected contribution of the project to the economic development of the local area, the impact that the project may have on businesses carried on in the proximity and, if appropriate, how the project should be established in a way that ensures fair competition in the market place;
 - (d) the level of consultation with the local community, including contact with persons who may be affected by the project and the representations that have been made by them, and the means by which the community can influence or contribute to the project or its outcomes;
 - (e) if the project is intended to produce revenue, revenue projections and potential financial risks;
 - (f) the recurrent and whole-of-life costs associated with the project including any costs arising out of proposed financial arrangements;
 - (g) the financial viability of the project, and the short and longer term estimated net effect of the project on the financial position of the council;

ATTACHMENT TWO – PROJECT SCHEME MAP



3. That Council note that the Commonwealth Department of Sustainability, Environment, Water, Population & Communities has provided a \$9.5M grant towards the project.
4. That Council's commitment to the Waterproofing the East Project is conditional on all participating Councils (Burnside, Norwood Payneham & St Peters, Campbelltown, Tea Tree Gully and the Town of Walkerville) jointly funding the construction, operation and ongoing management of the project on a prorata basis as defined within the Project Scope and provided that the Commonwealth's grant of \$9.5M is not rescinded.
5. That the governance model for the project is agreed to by the participating Councils prior to any grant funding agreement being executed with the Commonwealth.

15/12/2009 Council Report

3.2 Eastern Region Alliance Stormwater Harvesting Research Results and Funding Bid (from Operations Services Committee Agenda)

C7756

1. That the Report be received.
2. That the City of Burnside confirms its participation in the Eastern Region Alliance funding submission for development of a Aquifer Storage and Recovery scheme at Tusmore Park with associated distribution pipes to adjacent reserves.
3. That subject to confirmation of funding, Council include a provision of \$1.4 million, between the 2010/2011 and 2012/2013 financial years, in the Council's Long Term Financial Plan.

17/11/2009 Council Report

Future Options for Water in the City of Burnside

S7304

1. That the Report be received.
2. That a further report be brought to Council providing the findings of the Eastern Region Stormwater Harvesting Options Study.
3. That funding for a study be considered in the 2010/11 Annual Business Plan, in order to robustly evaluate the social, environmental and financial viability of the water options included in this report; prioritise them and develop them to a 'project ready' stage, sufficient to seek funding support from all possible sources.
4. That the Council writes to the Prime Minister, Premier, Federal and State Ministers for Local Government and Federal and State Leaders of the Opposition seeking the establishment of a grants program to assist Councils in the conversion of ovals and reserves to more efficient irrigation methods.

3. That the consultation process soliciting feedback on the proposed option consisting of the following elements is endorsed:
 - 3.1. A brochure with a feedback form delivered to residents within 300m of the edge of Tusmore Park;
 - 3.2. Signage within Tusmore Park;
 - 3.3. Advertising in local papers;
 - 3.4. A presence on Council's web site including a feedback form; and
 - 3.5. An Open House style workshop within Tusmore Park.

29/1/2013 Council Report

ERA Aquifer Storage and Recharge Project (14.5)

C9003

1. That the Report be received.
2. That pursuant to Section 43 of the *Local Government Act, 1999*, Council endorse the establishment of a Regional Subsidiary with Campbelltown City Council, City of Norwood Payneham & St Peters, City of Tea Tree Gully and the Corporation of the Town of Walkerville (participating Councils) to provide a collaborative long-term joint undertaking to oversee, fund and to provide physical and administrative infrastructure to viably capture and treat stormwater within the combined are of the constituent Councils in order to reduce the long-term reliance on SA Water mains water supply.
3. That the CEO of the Corporation of the Town of Walkerville (Project Sponsor) on behalf of the Eastern Region Alliance 'Waterproofing the East' project, be authorised to negotiate and sign the funding agreement with the Commonwealth for \$9.5M and that the signing of said agreement is not reliant on the final Charter being endorsed by the participating Project Councils (as identified in item 2 of this resolution).
4. That a draft Charter of the Regional Subsidiary be prepared for the consideration and unanimous agreement of the participating Councils.

25/9/2012 Council Report

Waterproofing the East (14.1)

C8874

1. That the Report be received.
2. That Council endorse the re-scoped 'Hub based' Waterproofing the East Project Scope.

ATTACHMENT ONE – COUNCIL RESOLUTIONS

31/03/15 Special Meeting of Council

Eastern Region Alliance – Waterproofing the East (5.1)

C10109

1. That the Report be received.
2. That the Chief Executive Officer write to the Town of Walkerville and the City of Norwood Payneham and St Peters advising that should they form a subsidiary under Section 43 of the Local Government Act 1999 and proceed with the proposed Eastern Region Alliance Water project as previously defined, the City of Burnside will commit to being a customer for a period of 10 years to the scheme and will agree to purchase a minimum of 110ML of water per annum from the scheme at a price to be negotiated but which must always be less than SA Water prices.
3. That notwithstanding part 2 of this resolution, Council:
 - 3.1 supports 'in principle' the establishment of an ERA Water Regional Subsidiary with the other City of Norwood, Payneham and St Peters and the Town of Walkerville pursuant to Section 43 of the Local Government Act 1999;
 - 3.2 requires the Section 48 Prudential Report prepared for the City of Burnside be revised to take into consideration the withdrawal of the City of Campbelltown from the Scheme and that this revised Report be presented to the City of Burnside as soon as possible for Council's consideration in respect of joining the proposed Eastern Region Alliance Water Regional Subsidiary; and
 - 3.3 after considering the revised Section 48 Prudential Report, and the risk analysis and financial modelling summary included in the revised Report, determines whether it will or will not join the proposed Eastern Region Alliance Water Regional Subsidiary pursuant to Section 43 of the Local Government Act 1999.

25/2/2014 Council Report

Waterproofing East Adelaide Aquifer Storage and Recovery – Tusmore Biofilter Location Options (14.7)

C9615

1. That the Report be received.
2. That the biofilter treatment site configuration within Tusmore Park being in the northwest corner of Hanson Reserve and as defined as Option 3 in the report titled "Waterproofing East Adelaide Aquifer Storage and Recovery – Tusmore Biofilter Location Options" in the Council agenda, 25 February 2014 is endorsed as the preferred option for consultation with the community on a proposed development of a biofilter within Tusmore Park.

Indicator	Outcome
Average ERA Water Price	\$2.73
Peak Debt	\$12.624m
NPV at 5.21% (World Bank adjusted for LGFA)	\$9.339m
NPV at 3.19% (LGFA rate)	\$20.386m

9.14 The Project feasibility study sought to identify and mitigate risk from the outset, this has been formalised in a Risk Register which has 108 Scheme risks only one of which (Commonwealth Funding) is rated as Very High, the highest categorisation. We have identified a number of other potential risks that will require mitigation but the three additional risks we consider should be rated as Very High are as follows.

9.14.1 Securing long term commitments from the ERA Water Councils to take specified volumes of water particularly on a 'take or pay' basis.

9.14.2 The long term risks associated with membership of a regional subsidiary, allied to the lack of financial certainty over exit arrangements.

9.14.3 Securing the sale of additional volumes of water to customers other than the Councils over the life of the Project.

9.15 There are also a number of financial risks which need to be considered and mitigated, the most significant of these are as follows.

9.15.1 Any significant increases in Fixed Operating Costs.

9.15.2 Delays in bringing the Project into production due to technical difficulties or construction delays or both.

9.15.3 The possibility that the price of SA Water increases at a lower rate than forecast, particularly as recent media coverage has suggested that the current price is too high.

9.16 The City of Burnside should ensure that on commencement the appropriate mitigation strategies are implemented for the risks associated with the Project and that these are progressively updated through a risk register or as part of regular project management meetings as the Project is implemented.

9.17 Procurement to date has been undertaken by the Town of Walkerville and has been consistent with Council policy. As the Project will be implemented by ERA Water, the City of Burnside should ensure that appropriate arrangements for the procurement and delivery of the Project are implemented, consistent with Council's policy.

- 9.9 Consultation and communication of the Project has been extensive and in accord with the City of Burnside Community Engagement (Public Consultation) Policy. As the Project progresses there will be a need to develop engagement strategies to fulfil the requirements of the Commonwealth Funding Deed.
- 9.10 The Project financial modelling is based on equivalent annual value (EAV) which calculates a breakeven price for water which on average over the life of the Project should be lower than the SA Water price for the Project in order to be considered financially viable.
- 9.11 The key assumptions are the volume of water sold, capital expenditure, Fixed Operating Costs, Operational Costs, and the Discount Rate.
- 9.11.1 The total volume of water sold is 458ML (84.8% of the estimated yield). 214.67ML (46.9%) is for the ERA Water Councils on a 'take or pay' basis and an additional 243.3ML of water is sold to other customers.
- 9.11.2 Approximately 90% of the \$22.850 million in capital costs have been subjected to a competitive process and fixed prices have been received.
- 9.11.3 Fixed Operating Costs are estimated at \$150,000. These are considered to be materially understated if ERA Water is attempting to sell significant volumes of water to multiple customers however, they appear adequate for the early years of operation. The financial model is highly sensitive to increases in Fixed Operating Costs and these have been increased to a more realistic level in our analysis.
- 9.11.4 Operational Costs are estimated at \$300,970 and appear reasonable provided maintenance is undertaken by the ERA Water Councils within their own area, otherwise these costs may rise and negatively impact financial viability.
- 9.11.5 The discount rate of 4% applied in the financial model is higher than the average real interest rate of 3.19% reported by the Local Government Finance Authority for FY2006 to FY2014. However, according to World Bank data, over the past 39 years the average real interest rate in Australia has been above 4% in 28 of the 39 years, and over that time it has averaged 5.41%.
- 9.12 Based on these assumptions the model produces an EAV of \$2.26 which is considerably lower than the current SA Water price of \$3.32. The sensitivity of the EAV to changes in the key assumptions in the financial model can be seen as follows. For an increase of:
- 9.12.1 20% in Operational Cost the EAV would rise to \$2.39;
- 9.12.2 \$50,000 in Fixed Operating Cost would see the EAV rise to \$2.37; and
- 9.12.3 \$150,000 in Fixed Operating Cost would see the EAV rise to \$2.59.
- 9.12.4 The EAV is \$2.55 if the World Bank real interest rate is used as the discount rate.
- 9.13 The Project financial model is constructed at a high level, our own financial modelling was undertaken at a more detailed level to ensure Council is informed on the timing impacts of the operations of the subsidiary. This modelling is based on the Project financial model but has also, out of necessity, made certain assumptions about the funding of the Project, the future price of SA Water and other key variables, the outcomes are summarised below.

9. CONCLUSION

- 9.1 This report has been prepared to meet the requirements of Section 48 of the Act and to provide Council with a comprehensive understanding of the prudential issues relating to the Eastern Region Stormwater Project, known as Waterproofing Eastern Adelaide.
- 9.2 The Project is a \$22.850 million stormwater harvesting scheme developed by the Cities of Burnside and Norwood Payneham & St Peters and the Corporation of the Town of Walkerville to produce 540ML of water for re-use. A new regional subsidiary, ERA Water, is to be established by the Councils under Section 43 of the Act to undertake the Project. Under this Charter the Councils have an equitable share in the entity.
- 9.3 The Project is consistent with the City Burnside strategic direction and desired outcomes as outlined in its Strategic Community Plan, Be the Future of Burnside 2025. The Project would also contribute towards achieving a number of regional, national and State objectives.
- 9.4 The Project has not yet progressed to the point where it needs to be included in Council's Annual Business Plan and Budget or the LTTP. If the Project proceeds and achieves the forecast sales volumes of water, then ERA Water will supply water to Burnside at a lower price than the comparable price of SA Water, this is not considered to be material but should be taken into account when reviewing the LTTP in the ordinary course of business.
- 9.5 All assets acquired through the Project are to be owned by ERA Water and there will therefore be no impact on the City of Burnside Infrastructure and Asset Management Plan.
- 9.6 Within the Council area the Project involves the laying of a pipe network and the construction of an underground water storage tank. The Development Act Regulations provide exemptions for the laying of the pipe network. A Development Application has been lodged for the works associated with the underground storage tank and as these are relatively minor works we see no reason Council could not be the relevant planning authority to consider this Development Application.
- 9.7 The Project will make a significant positive contribution to local and regional economic development above and beyond the capital investment, this economic impact is summarised below.

Impact	Direct	Indirect	Consumption	Total
Output (M)	\$22.850	\$23.247	\$16.150	\$62.247
Employment (Jobs)	26	73	63	162
Wages and salaries (M)	\$4.427	\$5.119	\$3.657	\$13.203
Value-added (M)	\$8.210	\$9.112	\$8.252	\$25.574

- 9.8 ERA Water will be required by the Essential Services Commission of South Australia, the independent economic regulator for the water industry, to apply the National Water Initiative Principles relating to cost recovery, pricing and transparency in its pricing of water for sale, this should ensure the operations are not unfairly subsidised to the detriment of any potential competitors.

of Conduct for Employees, Staff and Associates at all times during the conduct of procurement processes.

8.4.4.4 Risk Management ensures that appropriate risk management practices are in place for procurement activities including risk identification, assessment, and implementation of controls.

8.4.4.5 Professional Integrity and Probity ensure that the highest ethical and professional standards are observed in Council's business dealings. Council aims to achieve integrity in its procurement activities through accountable and transparent processes. Council respects the rights of contractors and suppliers, including the right to confidentiality and the expectation to be treated fairly and without bias at all stages of the procurement process.

8.4.4.6 Compliance with Statutory Obligations refers to the obligation to comply with all legal and common law obligations.

8.4.4.7 Social, Economic and Environmental Sustainability – Council is committed to maximising the positive impact of its activities to benefit the local community, its economy, and the environment. Where all other considerations are equal, Council may give preference to a local contractor/supplier to ensure local employment opportunities, and economic stability and/or growth. In addition, in order to minimise Council's impact on its environment, Council will where all other factors are equal, seek to purchase to achieve the following:

- environmentally friendly or recycled products;
- conservation of natural resources;
- integrate principles of waste minimisation and energy reduction; and
- provide leadership to local business and the community in promoting the use of environmentally sensitive Goods and Services.

8.4.4.8 Financial Responsibility ensures that Council employees procure Goods, Works or Services where there is an approved and allocated budget for that purchase, and where a Council employee with the appropriately delegated financial authority approves the purchase.

8.4.5 ERA Water will need to give consideration to the content of the Procurement Policy when formulating its own policies.

8.4 Procurement Implications

- 8.4.1 The major expenditures incurred on the Project to date appear to have involved the engagement of various service providers to prepare reports or provide advice, these are summarised in Table 12 along with the procurement method we are advised was employed.

Table 12: Procurement Summary

Work Undertaken	Procurement method	Rational and Policy Compliance
Stormwater Harvesting Feasibility Study	EOI and Tender	Value \$150,000+ Complies with Council Policy
Preparation of Section 43 Charter	3 Written Quotations	Value between \$15,000 – up to \$100,000 Complies with Council Policy
Section 48 report	3 Written Quotations	Value between \$15,000 – up to \$100,000 Complies with Council Policy, of at least 3 written quotes

- 8.4.2 The City of Burnside Procurement Policy would appear to have been complied with for the delivery of the Project to date.
- 8.4.3 The procurement implications to be satisfied for the City of Burnside are generally contained in the Procurement Policy, last reviewed 26 June 2014, which provides direction for relevant procedures that will contain specific criteria for contracting, competitive tendering and other service provision measures and the purchasing of goods and services, as required by Section 49 of the Local Government Act 1999.
- 8.4.4 The following key principles underpin all procurement activities at the City of Burnside.
- 8.4.4.1 Value for Money achieves the best outcome for the most appropriate price. This includes taking into account fitness for purpose, whole of life cost, timeliness, and flexibility to adapt to the needs of the requirement, quality, sustainability, intangible costs/benefits, service, support and warranty.
 - 8.4.4.2 Open and Fair Competition is ensured by providing equitable and appropriate access to Council's procurement activities. Council recognises the commercial and economic benefits of open and effective competition. Council will encourage healthy competition in the markets from which it purchases.
 - 8.4.4.3 Ethical Behaviour and Fair Treatment is necessary to ensure an appropriate purchase using public money. Council employees have a responsibility to act honestly and impartially and behave with fairness, independence, openness, integrity and professionalism to ensure probity in a procurement process. Council employees will observe Council's Code

8. PROJECT DELIVERY

Local Government Act, Section 48 (2) The following are prudential issues for the purposes of subsection (1):

(i) the most appropriate mechanisms or arrangements for carrying out the project.

8.1 Overview

8.1.1 ERA Water is established for the purpose of owning and operating the assets to be acquired through the Project. This Authority will be required to ensure the policies and procedures it adopts are consistent with and satisfy the requirements of individual member Council's own policies.

8.1.2 The Project has two distinct phases:

8.1.2.1 Civil works, the construction of the distribution systems and wetlands; and

8.1.2.2 On-going operations and maintenance.

8.2 Construction Options

8.2.1 There are several options available for carrying out the civil works or construction phase of the Project, each of which has different advantages and disadvantages depending on the circumstances of a particular project. These methods include:

- Construct only;
- Design and Construct;
- Managing Contractor or Early Contractor Involvement;
- Design, Build, Maintain (DBM);
- Design, Build, Operate, Maintain (DBOM); and
- Build, Own, Operate, Transfer (BOOT).

8.2.2 ERA Water is responsible for delivery of the Project and should therefore assess the relative merits of each procurement option before determining the most suitable methodology for the Project.

8.3 On-going Operations

8.3.1 The on-going operations of the Project assets are to be delivered by ERA Water which will be responsible for selecting the most appropriate means of service delivery.

8.3.2 Maintenance on ERA Water assets will be undertaken by Council staff.

the reliance on future rain events and the nature of the fractured rock aquifer.

7.1.13.3 Any delay in bringing the scheme to productive capacity would result in an increase in debt levels which would increase the price of water. However, as the Project is forecasting sales of 84.8% of the yield and 69.4% of the harvest there is some mitigation for this risk.

7.1.14 The City of Burnside Risk Management Policy, adopted March 2008, applies the risk management process as detailed in the standard AS/NZS ISO 31000:2009 Risk Management – Principles and Guidelines.

7.1.15 This Policy should be used by ERA Water as the basis for risk management throughout the design, construction and administration of the Project unless there is a higher standard used by another of the ERA Water Councils and then that ought to be applied.

7.1.16 The Risk Register for the Project was developed consistent with City of Burnside Risk Management Policy.

7.2 Risk Mitigation

7.2.1 The ERA Water Constituent Councils have identified a requirement to nominate strategic and operational Project Managers. The Project Managers will be required to further develop, manage and monitor the risk register associated with the Project, reporting on key risks to the key governing stakeholders as outlined in the ERA Water Charter.

7.2.2 The Project Managers should be encouraged to employ management systems to:

- ensure compliance with standards, legislation, impacting plans and funding requirements;
- provide quality outcomes;
- facilitate document control; and
- regulate cost management.

7.2.3 Consistent with good project management practice risk management should be a standing agenda item at any Project Management meetings during the construction phase of the Project.

7.2.4 Reporting protocols should also be established for the Project to ensure the Chief Executive Officer and, where appropriate, the individual Councils are apprised of areas of risk.

7.2.5 The City of Burnside should ensure that the mitigation strategies identified for the risks associated with the Project are implemented and that these are progressively updated as the Project is implemented.

- 7.1.11.4 We note that 300ML of demand has been identified from educational institutions (155ML), commercial customers (45ML) and other local government authorities (100ML) who are located along the Project pipe network. In order to achieve the forecast sales 81% of these customers would need to commit to take water from the Project or other customers would need to be identified.
- 7.1.11.5 Notwithstanding that there has been a positive response to this opportunity to date there are no formal binding commitments in place for the sale and purchase of water. Furthermore, although the Department for Education and Child Development has provided a letter of support for schools to connect to the Project, - until such support is formalised contractually, this remains a significant risk to the financial viability of the Project.
- 7.1.11.6 Further, it is quite conceivable that the potential customers who have been identified will have very different requirements for water over the timeframe of the Project and indeed that some of the schools or open spaces will disappear over time.
- 7.1.11.7 A failure to secure the forecast demand volumes would mean that ERA Water may operate in deficit for a period of time or the Constituent Councils may pay a higher price for water than would be payable to SA Water, this risk is highest in the early year of operation due to debt servicing obligations.
- 7.1.11.8 Mitigations for this risk could include adding external private sector expertise to the Board to ensure ERA Water is operated as far as possible along commercial lines.
- 7.1.12 Regulatory Regime
 - 7.1.12.1 We consider it highly unlikely that ESCOSA will find the current pricing methodology used in the financial model of charging other customers 80% of the comparable price of SA Water to be acceptable in medium term.
 - 7.1.12.2 ERA Water will therefore be required to demonstrate it is charging a price reflective of full cost recovery, we acknowledge that this may result in a price which is not dissimilar to the price used in the model but there are likely to be additional regulatory compliance costs associated with any change that will need to be accounted for.
- 7.1.13 Timing of Yield Forecasts
 - 7.1.13.1 We have some concerns with the timing of the yield forecasts to bring the scheme into productive use given the experiences of other local authorities undertaking projects of a similar nature and with regard to the potential for bore failure over time.
 - 7.1.13.2 This aspect of risk is beyond our area of expertise but it would seem that assuming the productive capacity of the scheme is maintained over the entire 70 year life of the Project is an area of some risk particular given

annual demand at the commencement of the drought cycle. The “mixing zone” is where saline groundwater and fresh recycled stormwater are mixed in the aquifer and accounted for in the 20% licence credit to the aquifer required by DENR licence. These factors are accounted for in the W&G design.

- 7.1.9.4 The proposed mitigation strategies for this risk include undertaking a statistical analysis of the forecast customer demand at the start of production and reviewing this over time to provide customer protection against 1:50 year droughts. Based on this analysis the Project will seek to store two times (2 x) the forecast annual demand volumes as part of the operating procedures. This will be done by utilising the surplus production capacity in the design, particularly during the early years of the Project when the saleable yield in year three is 40.9% of the estimated harvest, 65.5% in year four and 81.8% from year five onwards when the Project is in full production.

7.1.10 Long Term Membership of a Regional Subsidiary

- 7.1.10.1 We consider the long term risks associated with membership of a regional subsidiary, comprised of four Councils, should also be rated as Very High, as there are a number of examples in South Australia where regional subsidiaries have not withstood the test of time and in fact have been wound-up.
- 7.1.10.2 Our concerns arise as the financial viability of the Project is dependent on each of the Council's agreeing to purchase specified volumes of water and there are no binding agreements in place to commit to these volumes. In addition, the ERA Water Charter does not provide any financial certainty regarding the costs which may arise in the event one or more Council resolves to exit the subsidiary at some time in the future.
- 7.1.10.3 Mitigation strategies that could be considered to address this risk would include the Constituent Councils of ERA Water entering into contractual commitments to take the specified volumes of water, and the reviewing the provisions of the Charter to determine if greater certainty can be provided.

7.1.11 Sale of Significant Volumes of Water

- 7.1.11.1 The financial viability of the Project relies upon the sale of water to third parties.
- 7.1.11.2 This is not inconsistent with the wide ranging objects and purposes of the Charter which include that the Subsidiary should ‘maximise economic, environmental and social benefits to the community’ along with being ‘financially self-sufficient as far as possible’.
- 7.1.11.3 However, we consider the securing of the sale of additional significant volumes of water to customers other than the Council's for the life of the Project to be a risk which should be rated as Very High.

Table 11: Project Residual Risk Categorisation

Key Risk	Very High	High	Moderate	Low	Total
Water source catchment		2	14	7	23
Proposed treatment measures		5	10	12	27
Aquifer Storage and recovery		3	9	9	21
Distribution and intended use		3	8	8	19
Governance arrangements	1		17		18
Total	1	13	58	36	108

- 7.1.7 We note this was a preliminary assessment of residual risk undertaken to approximate the effectiveness of implementing general control measures, accordingly further discussion will be required to identify control measures for the risks identified in the workshop and subsequently.
- 7.1.8 Further to the preliminary risk assessment we have addressed in detail the following key risks.
- 7.1.9 Climate Issues
- 7.1.9.1 Risks associated with climatic events were dealt with in the original risk assessment, however given the potential significance of the risk insulating the Project from drought and climate change has been further analysed, particularly in relation to the climate change and urban infill and the ability to supply water to customers in the event of drought. Given the significance of the issues this is expanded upon below.
- 7.1.9.2 According to analysis undertaken by the CSIRO the growth of impervious area, occurring as a result of urban infill and increased residential density, and the predicted volume of direct runoff over the next 50 years in metropolitan Adelaide will approximately balance with the predicted reductions in rainfall due to climate change.
- 7.1.9.3 The City of Salisbury (Salisbury) undertook an analysis of a particular northern catchment on the likelihood of the annual rainfall during droughts to calculate the statistical likelihood of the worst case of low flow events in order to model how much water was required in storage for customers to give 1:50 year protection. According to this work the longest period of droughts has averaged between seven and eight years over the last 120 years. Based on this the design criteria for an ASR system needs to reflect the demand quantities per annum which in turn influences the storage volumes required to ensure enough water is stored to meet customers demand in the aquifer with annual top ups from stream flows. The analysis showed that this can statistically occur even in times of drought to assists in ensuring the customer demand is met over a seven to eight year period of drought. In the case of the catchment analysed by Salisbury the quantity of water required in the aquifer over and above the loss to the “mixing zone” was found to be approximately double that of the

7. PROJECT RISKS AND MITIGATION STRATEGIES

Local Government Act, Section 48 (2) The following are prudential issues for the purposes of subsection (1):

- (h) *any risks associated with the project, and the steps that can be taken to manage, reduce or eliminate those risks (including by the provision of periodic reports to the chief executive officer and to the council);*

7.1 Risk Management

7.1.1 This report assesses the risk management actions taken or being considered for the Project. It is not the purpose of the report to prepare a comprehensive risk management plan, however a level of assessment has been undertaken on the identified risks and the mitigations that have been developed.

7.1.2 The Project financial risks are considered in Section Six of this report.

7.1.3 The Stormwater Harvesting Feasibility Study for the Project sought to minimise the overall project risks in the scheme, this is reflected in the selection of sites for treatment, bores and source water which were considered to be the most efficient and low risk.

7.1.4 As part of the Stormwater Harvesting Feasibility Study, a risk workshop was undertaken on 12 October 2011 to identify and assess the risks for components of the proposed scheme. The following components of the scheme were assessed at the workshop:

- Water source catchment;
- Proposed treatment measures;
- Aquifer storage and recovery;
- Distribution and intended use; and
- Governance arrangements.

7.1.5 The workshop participants included the Steering Group, consultant team and representatives from the Adelaide and Mount Lofty Ranges Natural Resource Management Board, South Australian Environment Protection Agency, Department of Water and CSIRO. The Risk Register developed at this workshop is included as Attachment Six.

7.1.6 The risk workshop assessed potential environmental, health, social and governance risks based on their likelihood and magnitude of consequence.

Table 11 shows the number of risks identified for each area assessed and the residual risk rating post consideration of effective control measures. The only risk that remained at the highest level of risk categorisation (very high) after treatment, related to the risk of the Commonwealth Government not providing any funding.

6.3.8 In order to ensure its financial goals are achieved the City of Burnside has prepared key financial indicators in its Long Term Financial Plan in relation to:

- Operating Surplus Ratio;
- Net Financial Liabilities Ratio;
- Interest Cover Ratio;
- Asset Sustainability Ratio; and
- Asset Consumption Ratio.

6.3.9 The key financial indicators are as shown below.

Key Financial Indicators	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Operating Surplus Ratio (%)	1	2	3	1	3	4	5	7	6	7
Net Financial Liabilities Ratio (%)	38.9	50.3	49.7	49.1	47.3	43.7	37.8	31.5	25.4	18.8
Interest cover Ratio (%)	0.2	1.2	1.9	1.9	1.9	1.8	1.6	1.4	1.1	0.9
Asset Sustainability Ratio (%)	86	127	94	91	92	93	92	94	90	92
Asset Consumption Ratio (%)	70	70	69	69	68	68	67	66	66	65

6.3.10 The operations of ERA Water are not forecast to have a material impact on the City of Burnside financial position over the 10 year timeframe of the LTFP as total budget expenditure is over \$39.5 million and the lower cost of water during this period is estimated at \$350,000. Therefore, the Project is not considered to have any material impact on the achievement of the key financial indicators above.

- 6.3.4 The financial viability of the Project can be seen to be closely correlated to the discount rate applied.
- 6.3.5 The financial viability of the Project is considered from the perspective of whether it can produce and sell water at a breakeven price which is the same as SA Water charges or lower.
 - 6.3.5.1 At a discount rate of 3.19% the Project is considered to be financially viable if it sells 255ML, which is 40.33ML more than the ERA Water Councils have committed to.
 - 6.3.5.2 At a discount rate of 5.21% the Project is not considered to be financially viable unless it sells 326ML which is 111.33ML more than the ERA Water Councils have committed to.
- 6.3.6 The Project financial model is constructed at a high level, our own financial modelling was undertaken at a more detailed level to ensure Council is informed on the timing impacts of the operations of the subsidiary. This modelling is based on the Project financial model but has also, out of necessity, made certain assumptions about the funding of the Project, the future price of SA Water and other key variables. These assumptions are shown in Attachment Four.
- 6.3.7 Based on the sale of 458ML of water, our detailed financial modelling produces the following outcomes.
 - 6.3.7.1 The ERA Water Constituent Councils are forecast to pay a lower price for water than the forecast SA Water price in each year of the Project.
 - 6.3.7.2 The forecast ERA Water price averages \$2.73 over the Project life, whereas the forecast SA Water price for the same period is \$8.79. A comparison with the SA Water price is shown at Attachment Five.
 - 6.3.7.3 The Net Present Value of the difference in the price paid to ERA Water compared to paying SA Water prices is estimated to be \$20.386 million at a discount rate of 3.19% and \$9.339 million at a discount rate of 5.21%.
 - 6.3.7.4 It should be noted that the potential metropolitan Council customer has indicated a willingness to become a customer of ERA Water at a price which is approximately 11% higher than has been included in the financial model. If this higher price was reflected in the financial modelling it would increase the Net Present Value of the Project to \$22.103 million at a discount rate of 3.19% and \$10.265 million a discount rate of 5.21%. Further, the ERA Water average price to Constituent Councils would decrease to \$2.31.

2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
2.75	5.15	3.85	2.60	2.90	2.75	4.30	2.60	1.85	2.25	2.50

- 6.3.2.7 In this context the discount rate used in the financial model has only been higher than the rate reported by the LGFA once in the past nine years.
- 6.3.2.8 However, according to the World Bank from 1975 to 2013 the real interest rate in Australia has been above 4% in 28 of those 39 years, and over this time it has averaged 5.41%.
- 6.3.2.9 It should be noted that over the period for which comparable data exists, the World Bank average real interest rate is 3.94% whereas the LGFA average rate is 3.36%. Using the LGFA rates to adjust the World Bank rate produces a long term real rate of 5.21%.
- 6.3.2.10 In our view the risk profile of this Project is higher than for 'normal' Council business due to the reliance on external customers to underpin the financial model and therefore applying a rate higher than the average LGFA real interest rate is appropriate.
- 6.3.2.11 Given the Project is to be funded by debt the weighted average cost of capital could be linked to the interest rate on borrowings for the Project, adjusted for inflation expectations (the Reserve Bank of Australia target range is 2% to 3%).
- 6.3.2.12 The Local Government Finance Authority has quoted nominal interest rates of 4.5% for a loan term of 20 years (the longest term on offer). This implies a real interest rate of 2.0% over the 20 year term. We note this implied real interest rate is lower than the rate used in the financial model and is significantly less than the average real rate reported by the World Bank over the past 39 years.
- 6.3.3 Table 10 shows the impact on the Project price of water using various discount rates. The discount rates used are the average LGFA real interest rate (3.19%), the rate used in the Project model (4%) and the World Bank average real rate adjusted to the LGFA rate (5.21%). For comparative purposes it has been calculated that a minimum sales volume of 282ML would be required for the model to produce a price of water which is comparable with that of the SA Water price, this is 67.33ML more than the Constituent Councils have committed to.

Table 10: Project Financial Model Water Prices at Various Discount Rates

Sales Volume	Discount Rate %		
	3.19	4.0	5.21
Project Financial Model (458ML)	\$2.10	\$2.26	\$2.51
282ML	\$3.07	\$3.32	\$3.72

- 6.2.10 These borrowings will only be repaid from the operations of the Project if the revenue from the sale of water is higher than all the cash costs associated with the Project. Based on the Project financial modelling this will occur.
- 6.2.11 The Project will create an interdependent relationship between the City of Burnside and the other members of the Section 43 Authority possibly extending beyond the 70 year economic life of the Project assets, to ensure that it remains a viable alternate long term source of water supply, when compared to the existing mains water supplied by SA Water. This is a particularly relevant issue if any projected sales targets are not met or if costs exceed estimates, as in that situation each Council will be required to bring to account their share of any Operating Deficit, contribute additional funds or effectively underwrite additional debt facilities to ensure that all operating and capital costs are met.
- 6.2.12 Further, it should be noted that the Councils will be liable on a joint and several basis for the ERA Water debt.

6.3 Financial Viability

- 6.3.1 The Project financial modelling is based on equivalent annual value (EAV) which calculates a breakeven price for water which on average over the life of the Project should be lower than the SA Water price in order for the Project to be considered financially viable.
- 6.3.2 A key determinant of the breakeven price in the financial model is the discount rate.
 - 6.3.2.1 The discount rate is the interest rate used in a discounted cash flow analysis to determine the present value of future cash flows.
 - 6.3.2.2 The discount rate in a discounted cash flow analysis takes into account not just the time value of money but also the risk or level of uncertainty of future cash flows. The greater the uncertainty the higher the discount rate.
 - 6.3.2.3 Selecting an appropriate discount rate is therefore a significant decision. Many private sector companies use their weighted average cost of capital (the cost of equity and the cost of debt) if the project risk rating is similar to that of the business.
 - 6.3.2.4 It is acknowledged that it is difficult to accurately determine a real cost of capital for Councils. A discount rate for project evaluation needs to have regard to expected long-run real interest rates over the 70 year life of the Project.
 - 6.3.2.5 The financial model is based on a 4% discount rate which is proposed as a reasonable estimate of the long term “real” cost of capital for Councils. Real interest rates are nominal interest rates adjusted for inflation.
 - 6.3.2.6 The Local Government Finance Authority of South Australia (LGFA) has published Real Interest Rates for local government for the period FY2006 to FY2014 (the average for this period is 3.19%), with forecasts for FY2015 and FY2016. These rates are shown below.

- 6.2.4 The Operating Cost provisions appear reasonable based on the current costs incurred by the City of Tea Tree Gully and on the assumption that Council staff will undertake the maintenance works required within their own Council area and on-charge this as a cost to ERA Water.
- 6.2.5 The key assumptions in the Project financial model which impact the recurrent and whole-of-life costs include the following.
- Discount rate 4%.
 - The capital cost is estimated at \$22.850 million.
 - All capital is debt funded by the Section 43 Authority with full repayments of principal and interest made from operations.
 - All assets are depreciated in accordance with their useful life. The useful life of various asset classes is Pipes 70 years, Treatment earthworks 70 years, Sunk costs 70 years, Stormwater structures 50 years, Bores, valves, buildings and electrical 30 years, Pumps/fitting 15 years and Treatment Plants 10 years.
 - The volume of water harvested is of which 540ML is available for sale but the volume sold is limited to 458ML.
- 6.2.6 CPI is applied in the financial model on the price charged for water and on operational costs at the rate of 3.5%. We note that the CPI rate used is higher than the Reserve Bank of Australia target range for this index, which is 2% to 3%.
- 6.2.7 Funding for the Project is from contributions by the Commonwealth Government (\$9.5 million), from the AMLRNRM Board (\$2.0 million) and with the balance from local government, in the form of ERA Water. As the ERA Water Constituent Councils are choosing to contribute funds through borrowings with costs capitalised (added to borrowings) until the Project is in full production this contribution will be approximately \$12.624 million on our estimates.
- 6.2.8 The funding grant from the Commonwealth Government and AMLRNRM is to be provided over the two phases of the Project as shown in Table Nine.

Table 9: Project Funding Contributions

Project Phase	Commonwealth	AMLRNRM	Total
Design and Approvals	\$1.4m		\$1.4m
Construction Phase	\$8.1m	\$2.0m	\$10.1m
Total	\$9.5m	\$2.0m	\$11.5m

- 6.2.9 The contribution from ERA Water is therefore assumed to be borrowed at prevailing market interest rates offered by the Local Government Finance Authority at the time.

- 6.1.24 Assuming there are no significant technical or climate related issues it is forecast that the Project will produce more water than is required by the Constituent Councils in three years from commencement of construction. As a consequence we believe it will be extremely difficult to secure customers to commit to the purchase of water before the Councils are required to commit to undertake the Project, this demand risk requires mitigation.
- 6.1.25 Provided the ERA Water members commit, then the demand risk lies in securing customers for the available water at a price which is less than that charged by SA Water or other providers of recycled water.
- 6.1.26 The demand risk would be mitigated if the ERA Water members make a long term commitment to pay for the volumes of water they have identified in the preparation of the financial model and their demand rises above these forecast levels. Furthermore the ERA Water members must also commit to not act in a way that inhibits the Project from ever operating in the manner intended. At present we see the lack of contractual certainty to commit to these volumes of water as a risk we would rate as Very High.

6.2 Recurrent and Whole-of-Life Costs, Financial Arrangements

- 6.2.1 The commencing recurrent costs of the Project are Fixed Operating Costs of \$150,000 per annum and Operational Costs of \$300,970.
- 6.2.2 The Fixed Operating Cost is an administrative cost allowance of \$150,000 which is intended to cover the employment costs of an Executive Officer, a 0.25FTE Technical Officer and the operations of a Section 43 Authority. We believe this cost is likely to be significantly understated once the subsidiary moves to sell water into the marketplace and an actual cost in the range of \$250,000 to \$300,000 would be more realistic to cover:
- Employment package of a suitably qualified and experienced Executive Officer, including motor vehicle expenses;
 - The infrastructure required to provide administrative functions (i.e. financial accounting system, IT hardware and software, staff accommodation, etc.); and
 - Governance costs relating to the Board of ERA Water including annual external audit costs, Audit Committee costs, preparation of regulatory reports (e.g. Strategic Management Plan, Annual Business Plan and Budget, Annual Report, LTFP, Asset Management Plan etc.).
- 6.2.3 The Operating Costs for the Project are forecast to be \$300,970, these are intended to cover:
- Maintenance of the treatment facilities and bores;
 - Electricity costs based on \$0.23 per Kwh; and
 - Licencing.

Table 7: Project sensitivity to changes in Fixed Operating Costs

Sales Volume	Fixed Operating Cost		
	\$150,000	\$200,000	\$300,000
Project Financial Model (458ML)	\$2.26	\$2.37	\$2.59
340ML	\$2.88	\$3.02	\$3.32

6.1.22 The Operational Cost estimates in the financial model are \$300,970, this is intended to cover maintenance, electricity and licences.

6.1.22.1 The maintenance cost of \$125,000 per annum is a provision based on each of the ERA Water Councils providing labour to attend to maintenance requirements within their Council area and on-charging the subsidiary for this cost. In the event that ERA Water is required to contract out this service the provision may be insufficient.

6.1.22.2 There does not appear to be an allowance for call-outs for repairs and maintenance or reactive maintenance arising from unplanned works or for backflow testing required by legislation, including such an allowance would increase the overall Operational Cost.

6.1.22.3 The cost of electricity is included at the rate of \$0.23 per kWh. It is expected that most irrigation will occur at night which will incur an off-peak tariff, however there will be both on and off peak power cost in operating the network (injection will occur 24 hours per day and network transfers will occur during the day). The tariffs for power purchased through LGA Procurement are peak - \$0.288 per kWh and off-peak \$0.148, with additional fees for standing charges and meter reading. According to W&G 67% of pumping will occur off-peak. Therefore, the rate of \$0.23 per kWh appears to be an adequate provision. We note that increasing the cost of power to \$0.28 per kWh (the peak rate) would add over 10% to the Operational Cost.

6.1.22.4 The provision for licence costs of \$15,000 appears to be reasonable.

6.1.23 The sensitivity of the financial model breakeven price of Project water to changes only in the Operational Cost is shown in Table Eight. For comparative purposes it has been calculated that if Operational Costs were to increase by 20% then a minimum sales volume of 299ML would be required for the model to produce a price of water which is comparable with that of the SA Water price, this is 84.33ML more than the Constituent Councils have committed to.

Table 8: Project Price Sensitivity to Increases in Operational Costs

Sales Volume	Operating Cost		
	Project Model	10% Increase	20% Increase
Project Financial Model (458ML)	\$2.26	\$2.32	\$2.39
299ML	\$3.18	\$3.25	\$3.32

- 6.1.18 Council should ensure a detailed risk assessment is undertaken on these identified financial risks to ensure the Project benefits warrant the level of risk associated with the Project.
- 6.1.19 Due to the sensitivity of the Project financial model, the impact of the following financial risks are outlined and expanded upon below.
 - 6.1.19.1 Increases in Fixed Operating (administrative) Costs.
 - 6.1.19.2 Increases in Operational (maintenance and operating) Costs.
- 6.1.20 The revised Project financial model includes a provision of \$150,000 for Fixed Operating Costs, this has been increased from the original financial model provisions of \$75,000 or \$125,000 which were provided for comparative purposes.
 - 6.1.20.1 These provisions are intended to cover the employment costs of an Executive Officer on a 0.75 FTE basis, a 0.25 FTE Technical Officer and the operations of a Section 43 Authority, with a Council officer administering the financial management of the Authority.
 - 6.1.20.2 All of the costs of operating the Section 43 Authority need to be properly identified and accounted for in the Project financial model. In our experience, these costs include staffing, administrative and financial support, accommodation, technology and communications, office expenses, costs of legislative compliance and independent audit requirements.
 - 6.1.20.3 Based on our experience and knowledge of the current costs of operating a Section 43 Authority we believe the provisions in the financial model are inadequate over the life of the Project and a more realistic estimate of the Fixed Operating Costs would be in the order of \$250,000 to \$300,000 per annum once the subsidiary is established particularly if it is attempting to sell a significant volume of water and service a number of additional customers.
 - 6.1.20.4 We accept that it is possible for a Section 43 Authority with the responsibilities for ERA Water to operate with a lower operating cost for a period of time particularly during the construction and commissioning phases and whilst the Project is not producing significant volumes of water for sale.
 - 6.1.20.5 However, it would be prudent to give consideration to mitigating this risk by securing a long term fixed price for the delivery of these services through a tender or outsourcing process, or by arrangement with an ERA Water constituent Council.
- 6.1.21 The sensitivity of the financial model breakeven price of Project water to changes in the Fixed Operating Cost is shown in Table Seven. For comparative purposes it has been calculated that if Fixed Operating Costs were to double then a minimum sales volume of 340ML would be required for the model to produce a price of water which is comparable with that of the SA Water price, this is 125.33ML more than the Constituent Councils have committed to.

- 6.1.17.8 The cost of connecting schools and other customers to the network acts a financial deterrent to them connecting to the scheme. As the cost of connecting reserves is excluded from the financial model, if this cost cannot be passed on to customers it will increase the price of Project water.

Mitigation: Work within the existing regulatory regime to ensure that water can be supplied at a lower cost than the comparable price of SA Water in order to provide sufficient incentive for customers to absorb the cost of connection.

- 6.1.17.9 Increases in the required amount of the debt facility, or an increase in interest rates, result in increased operating costs related to servicing the debt facility.

Mitigation: Secure long term fixed interest rates.

Mitigation: Obtain fixed price tenders where possible to limit potential cost overruns, ensure effective project and cost management is in place.

- 6.1.17.10 Loss of income from lower demand or lower water volumes than forecast.

In this context we note that the City of Burnside demand will decrease by 15ML if the schools (or other customers) do not commit to taking water from the Project.

We note that the 'take or pay' basis of the financial arrangements will compel a Council to a certain volume of water, this may be more or less than is required by a Council in the ordinary course of operations.

- 6.1.17.11 Delays in reaching full production resulting in higher operational costs.

Mitigation: Implement effective project management and ensure the appropriate technical expertise is engaged.

We note that other projects of a similar nature have yet to produce meaningful volumes of water more than 5 years after construction. If this were to occur the Project would be required to take on higher debt levels than forecast which would ultimately lead to an increase in the projected operating deficit, an increase in the number of years the subsidiary is forecast to operate in deficit for, and a higher cost of water arising from the increase in the cost base. In all probability a combination of all of these would occur.

- 6.1.17.12 Ability to secure customers for the life of the Project.

Mitigation: Enter into long term contracts with potential customers.

We note that it is extremely unlikely that any customers can be secured for the 70 year estimated life of the Project.

6.1.16 The revenue projections in the financial model for the Project are based on a comparison with the SA Water price (Tier 2) for the supply of potable mains water of \$3.32/kL in FY2015. The model shows that on average the Project delivers water at a price which is significantly lower than the comparable price of SA Water. In fact, based on the assumptions in the model the price of ERA Water is lower than the price of SA Water in each year of the model.

6.1.17 There are a number of financial risks associated with the Project which have been identified at a high level, these are outlined below together with any identified mitigation strategy.

6.1.17.1 Changes in the regulatory regime.

6.1.17.2 Sovereign risk that ownership rights of stormwater will be asserted by the State Government.

6.1.17.3 SA Water prices for potable water are lower than used for comparative purposes in the financial model i.e. future increases are less than the rate of inflation used in the financial model resulting in a lower projected price and the potential for the subsidiary to operate at a deficit.

6.1.17.4 Ability to meet supply obligations to customers in the event of system failure or breakdown.

Mitigation: Ensure the network can be supplied by SA Water in the event of failure. We note that such an event could mean that ERA Water is obliged to provide water at a higher cost than the price it is receiving from customers.

Mitigation: Ensure supply contracts contain a provision which ensures ERA Water is not compelled to provide a specified volume of water.

6.1.17.5 ERA Water debt facilities are provided on a joint and several basis.

6.1.17.6 Higher capital expenditure during the construction phase.

Mitigation: Obtain fixed price commitments and the use of competitive tender processes.

We note that a considerable component of the cost of the Project is incurred in laying a pipe network and there is a risk that the contractor may strike rock, we are advised that this risk has been capped at \$1.5 million which is a significant mitigation. Further, approximately 90% of the Project capital cost has been confirmed through a procurement process.

6.1.17.7 The Construction contingency of 20% may be inadequate.

Mitigation: Obtain fixed price tenders where possible.

- 6.1.13.1 Although SA Water is responsible for setting specific prices (such as supply and usage charges) for residential and non-residential customers; those prices must comply with the average revenue caps in the Commission's Final Revenue Determination.
- 6.1.13.2 According to the most recent Determination, in 2014/15 and 2015/16 the average revenue will be allowed to increase with the annual change in CPI only.
- 6.1.13.3 It should be noted that the Chairman of SA Water has recently publically called for a 3 per cent to 5 per cent reduction in the price of SA Water for FY2017 with increases linked to the consumer price index after that.
- 6.1.14 The timing impacts associated with revenue projections as the Project moves into full production are shown below along with key revenue assumptions.
- 6.1.14.1 \$6 million of the grant income is treated as revenue.
- 6.1.14.2 Construction and commissioning occurs over two years, with water produced for sale from year three onwards. The total volume of water sold in year three is 270ML, in year four it is 432ML and in year five (full production) it is 458ML.
- 6.1.14.3 The available volume of water is 'sold' firstly to the ERA Councils at a price which is directly comparable with the price charged by SA Water or which is lower than the forecast SA Water price when the subsidiary is able to recover all of its operating costs and net of any income received from the sale of water.
- 6.1.14.4 Water is sold to other customers at a price which equates to 80% of the forecast SA Water price. The forecast SA Water price is based on the SA Water (Tier 2) price for the supply of potable mains water (\$3.32/kL in 2014/2015). This price is increased by 1.7% in FY2016 (the forecast increase in the consumer price index), decreased in FY2017 by 4% (the mid-point of the range referred to by the Chairman of SA Water (see 6.1.13 above) and then increased in accordance with forecast movements in the consumer price index used in the model i.e. 2.5% per annum.
- 6.1.15 Revenue projections for the first five years of the Project are shown in Table Six.

Table 6: Project Annual Revenue Projections Years 1 to 5

Revenue Source	Year 1	Year 2	Year 3	Year 4	Year 5
Operating Grants	6.000				
ERA Councils	0.000	0.000	0.489	0.516	0.747
Educational Institutions & Other customers	0.000	0.000	0.147	0.390	0.400
Metropolitan Council	0.000	0.000	0.000	0.202	0.279
Total	6.000	0.00	0.636	1.108	1.426

- 6.1.5 Water usage by the City of Burnside over the past four years is shown below. The demand identified in Table Five above, of 110ML, has been achieved only once over this four year period and is less than the average volume of water used over this same period (94.5ML).

2009/10	2010/11	2011/12	2012/13
77 ML	84 ML	106 ML	111 ML

- 6.1.6 Therefore, it should be noted that in some previous years a lower volume of water has been used than would now be required to be paid for under the proposed 'take or pay' arrangements through ERA Water.
- 6.1.7 The second source of revenue for the Project is from potential customers who are supplied with the surplus water that is not required for re-use by the Councils.
- 6.1.8 Based on the identified demand from Constituent Councils, the Project will have up to 325.33ML per annum of harvested and treated water available for sale to customers.
- 6.1.9 Located along the Project pipe route there are nine public schools, eight private schools, the University of South Australia Magill campus, four private sector customers and one non-ERA metropolitan Council who could be serviced by the planned distribution network. The potential consumption for these customers has been estimated at 300ML, as follows.
- 6.1.9.1 DECS schools 73ML;
- 6.1.9.2 Private Schools and University of South Australia 82ML; and
- 6.1.9.3 Commercial customers 45ML.
- 6.1.9.4 Non-ERA metropolitan Council 100ML.
- 6.1.10 The cost of connecting these customers to the Project distribution network has not been included in any financial modelling.
- 6.1.11 The volume of water required by the metropolitan Council has been provided by senior officers, who have expressed interest in becoming a customer based on FY2015 prices of up to \$3.00/kL.
- 6.1.12 The actual demand from the remainder of the potential customers has not yet been quantified, neither are there contractual agreements in place with DECD, the individual schools, the University or any commercial customer. We note that although it is anticipated that DECD will provide a letter of support for schools to connect to the Project in 2016 it is highly unlikely that the Project will produce any surplus water for sale to customers until 2018 (at the earliest).
- 6.1.13 ESCOSA is responsible for the economic regulation of water and sewerage services in South Australia.

6. FINANCIAL ASSESSMENT

Local Government Act, Section 48 (2) The following are prudential issues for the purposes of subsection (1):

- (e) *if the project is intended to produce revenue, revenue projections and potential financial risks;*
- (f) *the recurrent and whole-of-life costs associated with the project including any costs arising out of proposed financial arrangements;*
- (g) *the financial viability of the project, and the short and longer term estimated net effect of the project on the financial position of the council;*

6.1 Revenue Production, Revenue Projections and Potential Financial Risks

6.1.1 There are two sources of revenue to be generated by the Project.

6.1.2 The first source is the price to be charged by ERA Water to the Constituent Councils. We are advised that this is a 'take or pay' commitment to a specified volume of water for a particular Council at a price which is directly comparable with, or lower than, the price charged by SA Water whilst the subsidiary recovers all of its costs e.g. the cost of borrowings, depreciation, maintenance, administration etc. associated with the Project.

6.1.3 The two Project treatment sites will harvest 660ML and yield 540ML with a distribution network servicing identified demand of 214.67ML/a from the ERA Water Constituent Councils. There is also potential irrigation demand of approximately 300ML identified in the Department of Education and Child Development (DECS) schools, private schools, the University of South Australia, industrial customers and other local authorities who are located on the distribution network.

6.1.4 As shown in Table Five demand from Constituent Councils has been revised down from the original Feasibility Study estimate to 214.67ML/a, or 39.8% of the available harvested yield.

Table 5: Water demand by ERA Council to be serviced from Project

ERA Council	Net annual mains irrigation ¹ (ML/a)	Water demand Feasibility Study (ML/a)
City of Burnside	145	110 ²
City of Campbelltown	100	0
City of Norwood Payneham & St Peters	114	76.67
City of Tea Tree Gully	119	0
Town of Walkerville	15	28
Total	494	214.67

¹ Net annual mains irrigation is mains irrigation less areas supplied from existing bores

² City of Burnside demand is based on DECS commitment to take water, otherwise this will be reduced to 95ML

5.1.4 Consultation on the Project to date has taken the following forms.

5.1.4.1 Elected Members – various formal meetings of Council from 2009 onwards as evidenced by the resolutions of Council contained in Attachment One – Council Resolutions.

5.1.4.2 Community – Council's website is linked to the ERA website which has considerable information on the Project with links to key documents. Information was provided on consultation opportunities and events, along with an on-line feedback form. A Community Information Day was held on 23 March 2014 at Tusmore Park.

5.1.4.3 Government agencies - participating councils have been working with the Federal Government's Department of Sustainability, Environment, Water, Population and Communities, the AMLRNRM Board, SA Water, Environmental Protection Agency, State Government Department of Environment, Water and Natural Resources and Department of Health as well as the relevant State and Federal Ministers, on the various aspects of the Project.

5.1.5 The City of Burnside has provided information to the community consistent with its Community Engagement (Public Consultation) Policy.

5.1.6 ERA Water will be required to give consideration to adopting a formal consultation strategy to ensure that any specific consultation requirements of the Commonwealth Funding Deed are fulfilled.

5.1.7 The City of Burnside should ensure that the ERA Water consultation strategy is consistent with the Community Engagement (Public Consultation) Policy.

5.2 Community Influence and Contribution

5.2.1 There is sufficient evidence to suggest that there has been an acceptable level of consultation with the local community.

5. COMMUNITY CONSULTATION

Local Government Act, Section 48 (2) The following are prudential issues for the purposes of subsection (1):

- (d) *the level of consultation with the local community, including contact with persons who may be affected by the project and the representations that have been made by them, and the means by which the community can influence or contribute to the project or its outcomes;*

5.1 Level of Consultation

- 5.1.1 The City of Burnside Community Engagement (Public Consultation) Policy, adopted 20 October 2009, is guided by Section 50 of the Local Government Act, and is reflective of the International Association for Public Participation's *Public Participation Spectrum*.
- 5.1.2 The Public Participation Spectrum identifies a range of ways of engaging with the community, using techniques which vary in their purpose, potential impact on the community and the requisite tools required. It goes beyond legislative requirements, providing opportunities for community engagement through a continuum of engagement ranging from informing to consulting to involving communities.
- 5.1.3 The Community Engagement (Public Consultation) Policy identifies a range of methods to inform, consult or involve the community depending on a range of factors, these methods include:
- Advertising in Messenger Press or other newspaper;
 - Distribution of leaflets / newsletters;
 - Email notifications;
 - Messenger Column;
 - Council website;
 - On-site signage;
 - Media releases;
 - Promotional displays at Civic Centre and/or other Council venues;
 - Social media communications;
 - Focus magazine; and
 - Other magazine articles.

- 4.3.6.1 Part 4 of the Clause 7 Statement describes the competitive neutrality obligation on local government. The statement requires that Local Government significant business activities are subject to the same rules and regulations as private businesses in order to ensure that publicly owned businesses do not enjoy any net competitive advantage simply because they are publicly owned.
- 4.3.6.2 Competitive neutrality is about ensuring that the significant business activities of publicly owned entities compete fairly in the market.
- 4.3.6.3 The application of competitive neutrality principles is about transparent cost identification and pricing in a way which removes or neutralises the net cost advantages arising from public ownership when compared to private sector operators. These principles do not apply to those activities which are non-business or non-profit activities.
- 4.3.6.4 If the operations of ERA Water are considered to constitute a significant business activity deemed to be significant within the definitions of Clause 7 then ERA Water would need to give consideration to whether competitive neutrality principles will need to be applied to their operations.

- 4.2.4.3 A consumption effect of \$8.252 million, as a proportion of these wages and salaries are typically spent on consumption and a proportion of this expenditure is captured in the local economy.
- 4.2.5 The total economic impact of the development of the Project is summarised in Table Four.

Table 4: Regional Output Activity from the Waterproofing Eastern Adelaide Project

Impact	Direct	Indirect	Consumption	Total
Output (M)	\$22.850	\$23.247	\$16.150	\$62.247
Employment (Jobs)	26	73	63	162
Wages and salaries (M)	\$4.427	\$5.119	\$3.657	\$13.203
Value-added (M)	\$8.210	\$9.112	\$8.252	\$25.574

4.3 Fair Competition

- 4.3.1 The Project will create an alternate supply of water to those currently provided in the region by the public sector provider.
- 4.3.2 The Regional Subsidiary intends to sell water harvested from the Project that is surplus to their identified needs of the ERA Councils, this will effectively result in an increase in competition in the market.
- 4.3.3 The water industry is regulated by the Essential Services Commission of South Australia (ESCOSA), an independent economic regulator, established under the Essential Services Commission Act 2002. The Essential Services Commission Act specifies the objective of ESCOSA is the:
- “protection of the long term interests of South Australian consumers with respect to the price, quality and reliability of essential services”*
- 4.3.4 ESCOSA is responsible for industry licencing, consumer protection and retail pricing. It must be noted that ESCOSA has stated that it is important for all water retailers, regardless of size and scale, to ensure that prices and revenues are sufficient to recover the prudent and efficient cost of providing those services.
- 4.3.5 ESCOSA will require ERA Water to apply the National Water Initiative Principles relating to cost recovery, pricing and transparency in its pricing of water for sale, this should ensure the operations are not unfairly subsidised to the detriment of any potential competitors.
- 4.3.6 ERA Water will also need to assess whether their operations constitute a “significant business activity” in accordance with the Clause 7 Statement of the Competition Principles Agreement and the Government Business Enterprises (Competition) Act 1996 which provides the framework for implementing National Competition Policy by local government entities in South Australia.

4.2 Economic Impact

- 4.2.1 Total output from the Project, including all direct, industrial and consumption effects, is estimated to increase by up to \$68.104 million. This represents a Type 2 Output multiplier of 2.724 and is comprised of the following.
 - 4.2.1.1 The total value of the construction investment of \$22.85 million.
 - 4.2.1.2 A rise of \$23.247 million in the demand for intermediate goods and services from a direct increase in output from the construction investment, including the flow on effects as demand for local goods and services increases.
 - 4.2.1.3 The consumption effects from the creation of jobs in the economy arising from the increases in direct and indirect output which are estimated to be \$16.150 million.
- 4.2.2 Based on the Project estimated capital expenditure the construction output should result in an increase of up to 162 jobs from a Type 2 employment multiplier of 6.321, as detailed below.
 - 4.2.2.1 The direct effect is estimated to create up to 26 jobs.
 - 4.2.2.2 The indirect or flow on effect is estimated to result in the gain of a further 73 jobs.
 - 4.2.2.3 The consumption effect is estimated to boost employment by 63 jobs.
- 4.2.3 The estimated impact on wages and salaries is by up to \$13.203 million, representing a Type 2 multiplier of 2.983, the components are detailed below.
 - 4.2.3.1 The increase from the direct effect is estimated at \$4.427 million.
 - 4.2.3.2 The indirect or flow on effect is estimated at \$5.119 million, which represents a Type 1 Wages and Salaries multiplier of 2.157.
 - 4.2.3.3 The consumption effects under this scenario are expected to further boost employment in sectors such as retail therefore further increasing wages and salaries by an estimated \$3.657 million.
- 4.2.4 The impact on value added is estimated to increase by up to \$25.574 million, this represents a Type 2 Value-added multiplier of 3.115 and is comprised of the following.
 - 4.2.4.1 A direct impact of \$8.210 million.
 - 4.2.4.2 An indirect or flow-on effect in terms of local purchases of goods and services is anticipated of \$9.112 million, this represents a Type 1 Value-added multiplier of 2.110.

4. CONTRIBUTION TO ECONOMIC DEVELOPMENT

Local Government Act, Section 48 (2) The following are prudential issues for the purposes of subsection (1):

- (c) *the expected contribution of the project to the economic development of the local area, the impact that the project may have on businesses carried on in the proximity and, if appropriate, how the project should be established in a way that ensures fair competition in the market place;*

4.1 Contribution to Economic Development

4.1.1 Economic development can be defined as efforts that seek to improve the economic well-being and quality of life for a community by creating and/or retaining jobs and supporting or growing incomes and the tax base. The contribution to economic development of the local area will, primarily, come from the following sources:

- Construction activity;
- Employment, in the construction phase; and
- Potential increased economic viability arising from security of water supply.

4.1.2 For modelling purposes, the design and construction activity of the Project is estimated to have a capital cost of \$22.85 million, this will generate economic and employment multiplier benefits to the broader economy from the economic activity that will be generated during the construction phase.

4.1.2.1 The economic impact assessment undertaken to identify the potential jobs and incomes that may be associated with the Project is based on a measure of the value added and employment associated with the investment. This is consistent with the predominant measure of national economic activity, Gross Domestic Product.

4.1.2.2 The expenditures associated with this development will have direct economic effects, indirect effects of related purchases in the broader economy and induced effects of spending on goods and services by the employees of the companies providing goods and services to the Project.

4.1.2.3 In particular, the economic assessment considers the following impacts:

- Output;
- Employment;
- Wages and Salaries; and
- Value-added.

4.1.3 Based on the relevant economic multipliers the impact of the expenditure associated with the construction of the Project has been derived by the City of Onkaparinga using Input-Output methodology, a common tool for measuring secondary and tertiary economic effects.

- Tables that list the conditions which are applicable to complying development, and
- Mapping, showing the broad distribution of land uses and movement patterns throughout the council area.

3.3 Council Wide Section

3.3.1 The relevant principles within the Council wide section of the Development Plan relating to the Project are:

3.3.1.1 Environmental Protection; and

3.3.1.2 Public Utilities and Infrastructure.

3.3.2 The relevant objectives and principles of development control for these policies will need to be taken into account when applying for Development Approval.

3.4 Development Zone

3.4.1 The Langman Recreation Reserve is located in Waterfall Gully Road and is within the boundaries of the Residential Zone, Policy Area 27.

3.4.2 The construction of a biofiltration system is not a form of development which is contemplated in this Zone.

3.4.3 The objective and principles of development control for this zone and Policy Area are additional to those expressed for the whole of the council area. These should have been taken into account in the application for Development Approval.

3. OBJECTIVES OF THE DEVELOPMENT PLAN

Local Government Act, Section 48 (2) The following are prudential issues for the purposes of subsection (1):

(b) *the objectives of the Development Plan in the area where the project is to occur;*

3.1 Development Approval

- 3.1.1 The Project involves the creation of infrastructure for stormwater harvesting and distribution across the council areas of Burnside, Campbelltown, Norwood Payneham & St Peters, and Walkerville.
- 3.1.2 Council Development Applications are required for most building works. A Development Application for the Project is made to the Council in whose area the works are to be undertaken and outlines the scope of works and provides estimates of construction costs etc.
- 3.1.3 Within the Council area the Project involves the laying of a pipe network and the construction of a 250ML capacity underground water storage tank at Langman Recreation Reserve.
- 3.1.4 Under Schedule 3 Clause 2 (1) (a) of the Development Act Regulations the laying of the pipe network does not constitute development for the purposes of the Development Act.
- 3.1.5 A Development Application was lodged on 30 January 2015 for two underground water storage tanks at Langman Recreation Reserve. These works which are considered to be relatively minor works and we see no reason that Council should not be the relevant planning authority.

3.2 City of Burnside Development Plan

- 3.2.1 Development in the City of Burnside is governed by the Development Plan – Burnside (City), pursuant to Section 33 of the Development Act 1993, consolidated 30 January 2014.
- 3.2.2 The Development Plan covers matters including land division, design and appearance, environmental, amenity, heritage and conservation, trees and vegetation, movement and parking of vehicles, utilities and infrastructure, hazards, zoning issues and guidelines.
- 3.2.3 The current Development Plan is structured as follows:
 - A Council wide section containing general policy that applies across the area;
 - Overlays;
 - Zones, these provisions give greater certainty and direction about where certain forms of development should be located and identifies generally envisaged forms of development. The objectives and design requirements for development in the particular area are also expressed.

2.8 National Objectives

2.8.1 The National Water Initiative (NWI) is a national blueprint for water reform originally agreed in 2004 by the Council of Australian Governments to increase the efficiency and sustainability of Australia's water use. The NWI establishes four sets of principles relating to:

- Recovery of capital expenditure;
- Setting urban water tariffs;
- Recovering the cost of water planning and management; and
- Recycled water and stormwater reuse.

2.8.2 Feasibility study funding was received from the Commonwealth Government under the National Urban Water and Desalination Plan; Stormwater Harvesting and Reuse Grants Round 2 which had the objectives of reducing the use of potable water and increasing urban water supply security.

2.8.3 The Commonwealth Government has adopted a Clean Water Plan, which is described as having community-based and practical environmentalism at its core. The Plan incorporates a sustainable plan for the Murray-Darling Basin, a Water Security Plan and protection of the Great Barrier Reef. These are shown in the graphic below.



2.8.4 The Waterproofing Eastern Adelaide Project is closely aligned with the principles established in the National Water Initiative and the Water Security aspect of the Clean Water Plan, considering measures to harvest stormwater.

Table 3: Project Alignment with the South Australian Strategic Plan

State Objectives	Project supports the State Plan	Degree of Alignment
Our Environment		
Vision - We value and protect our water resources		
Goal - South Australia has reliable and sustainable water resources and is a leader in wastewater, irrigation, stormwater and groundwater management		
73. Recycled stormwater South Australia has the system capacity to harvest up to 35 GL of stormwater per annum by 2025	The Project provides the capacity to harvest 494 ML/a of stormwater	High
75. South Australia's water resources are managed within sustainable limits by 2018.	The Project captures and reuses stormwater thereby improving the sustainability of the State's water resources.	High

- 2.7.3 The State Government released the 'Water for Good' plan in 2009 to plan for the State's water future to 2050, this plan aimed to reduce reliance on rivers, reservoirs and aquifers by developing new water sources and by working smarter with the available sources of water.
- 2.7.4 The Project is in line with the goals outlined in 'Water for Good' which predicted a target for Adelaide's stormwater reuse of 20GL/a by 2013 and 60GL/a by 2050.
- 2.7.5 Water Proofing Adelaide is part of the South Australian Government's blueprint for sustainable water management. There were three sections to the program, supported by 63 key strategies.
- 2.7.5.1 Management of our existing resources;
- 2.7.5.2 Responsible water use; and
- 2.7.5.3 Additional water supplies.
- 2.7.6 Securing additional water supplies is evident in 23 of the 63 strategies.
- 2.7.7 It is evident that the objectives and strategies of the Water Proofing Adelaide will be supported and advanced through the Project.
- 2.7.8 The Adelaide and Mount Lofty Ranges Natural Resources Management Board has set a stormwater reuse target for Adelaide of 75%.
- 2.7.9 The Project supports the AMLRNRM aim by collecting water from the top end of the catchment and reusing it.